

# 1999

**CAMBRIDGE PUBLIC HEALTH ASSESSMENT:**

**A Report from the Cambridge Health Alliance**



**VOLUME 2**

**Cambridge Health Information**



Cambridge Health Alliance

1493 Cambridge Street • Cambridge, MA 02139 • 617.503.2300

January 15, 1999

Robert W. Healy  
City Manager  
City Hall  
Cambridge, MA 02138

Dear Mr. Healy,

The Cambridge Health Alliance proudly submits the 1999 Public Health Assessment: A Report from the Cambridge Health Alliance, Vol I and II. These documents represent the third annual installment to the City Council, and provide a comprehensive review of the work of the Alliance as well as an analysis of the public health of the City of Cambridge.

Volume I provides extensive descriptive information about the programs and services of the Alliance. Special emphasis is placed on activities to address priority areas identified by the Joint Public Health Board. Emphasis is also given to programs addressing the needs of populations at higher health risk, including children, men of color, and elders. Volume II includes updated and expanded quantitative information on the priority health areas, as well as areas of traditional public health concern. This year, a section on environmental health has been added.

Considerable attention has been given to exploring and evaluating new ways to present the information so that it will be useful to the various users. We expect that readers will find this year's two volume submission both substantive in content and user-friendly as well. Lynn Schoeff, Director of Community Health and Ellen Kramer, Director of the Health Information Unit, led this year's assessment project and did a superb job in compiling and synthesizing the work of many contributing writers. I am also grateful to Harold Cox, our Chief Public Health Officer, who worked tirelessly on this project.

Our overall goal is to provide the City with information that will help us better understand the public health concerns facing our community as well as provide data that will inform public health policy and programming. We look forward to engaging the City Council, City administration, and the citizens of Cambridge in a dialogue about this information so that we can continue to fulfill our mission which is to improve the health of our city.

Sincerely,

John G. O'Brien  
Chief Executive Officer



Affiliated  
with  
Harvard  
Medical  
School



## Table of Contents

<i>Acknowledgements</i> .....	<i>i</i>
<i>City Council and City Manager</i> .....	<i>ii</i>
<i>Boards</i> .....	<i>iii</i>
<b>Preface</b> .....	<b>v</b>
<b>Chapter 1: Demographics</b> .....	<b>1</b>
<b>Chapter 2: Access to Healthcare</b> .....	<b>17</b>
<b>Chapter 3: Violence Prevention</b> .....	<b>29</b>
<b>Chapter 4: Environmental Health</b> .....	<b>71</b>
<b>Chapter 5: HIV/AIDS and STDs</b> .....	<b>91</b>
<b>Chapter 6: Substance Abuse: Alcohol, Tobacco, and Drugs</b> .....	<b>111</b>
<b>Chapter 7: Health Promotion/Disease Prevention</b> .....	<b>137</b>
<b>Chapter 8: Maternal Infant Health</b> .....	<b>157</b>
<b>Chapter 9: Mortality</b> .....	<b>175</b>
<b>Chapter 10: Other Communicable Disease (Reportable)</b> .....	<b>189</b>
<b>Appendix: Data Sources</b> .....	<b>199</b>

## Listing of Tables and Figures

### Chapter 1: Demographics

Table 1-1	Demographic Characteristics
Figure 1-1	Cambridge Population Trends and Projections by Age Group
Figure 1-2	Public School Enrollment by Race and Ethnicity
Figure 1-3	Children Attending Public Schools 1996-97
Figure 1-4	Children by Age and Race in Cambridge
Figure 1-5	Ratio of Children to Adults by Race
Figure 1-6	Ratio of Children to Adults by City
Table 1-2	Cambridge Estimated Recent Immigrant Population
Figure 1-7	Cambridge Neighborhood Map
Figure 1-8	Neighborhood Population Density
Figure 1-9	Median Household Income by Neighborhood
Figure 1-10	Foreign Born Residents by Neighborhood
Figure 1-11	Residents Speaking Languages Other than English at Home
Figure 1-12	Racial Composition by Neighborhood



## Chapter 2: Access to Healthcare

Table 2-1	Year 2000 Objectives, Massachusetts And Cambridge Rates
Table 2-2	Leading Preventable Hospitalization Conditions by Age Group
Figure 2-1	Asthma Hospitalizations by Age and Year
Figure 2-2	Elders Among Individuals Hospitalized for Preventable Conditions
Figure 2-3	Bacterial Pneumonia Hospitalization Rates 65+ Years of Age
Figure 2-4	Dental Health Screening Program
Figure 2-5	Children Fully Immunized at 2 Years of Age
Figure 2-6	Uninsured in Massachusetts

## Chapter 3: Violence Prevention

Table 3-1	Year 2000 Objectives, Massachusetts And Cambridge Rates
Table 3-2	Sharp Instrument Injury Rates
Figure 3-1	Trends in Violent Crime
Figure 3-2	Violent Crime
Figure 3-3	Violent Crime by Time of Day
Figure 3-4	Domestic Crimes
Figure 3-5	Percent of Crimes that are Domestic Incidents
Figure 3-6	Offender-Victim Relationship in Domestic Violence Incident
Figure 3-7	Violence-Related Injuries
Figure 3-8	Violence-Related Injuries by Type of Wound
Figure 3-9	Violence-Related Injuries by Age
Figure 3-10	Violence-Related Injuries by Sex
Figure 3-11	Violence-Related Injuries by Race/Ethnicity
Figure 3-12	Violence-Related Injuries by Location of Incident
Figure 3-13	Trends of Injury Deaths
Figure 3-14	Injury Deaths
Figure 3-15	Homicide and Suicide vs. Unintentional Injury Deaths
Figure 3-16	Homicide by Age and Sex
Figure 3-17	Suicide Rates by Age
Figure 3-18	Suicide Rates by Sex
Figure 3-19	Motor Vehicle-Related Deaths by Age
Figure 3-20	Injury Hospitalization Due to Falls by Age
Figure 3-21	Motor Vehicle Injury Hospitalization by Age
Figure 3-22	Self-Inflicted Injury Hospitalization by Age
Figure 3-23	Violence-Related Events



- Figure 3-24 Violence-Related Events
- Figure 3-25 Indicators of Violence Among Middle School Students
- Figure 3-26 Indicators of Violence Among High School Students
- Figure 3-27 Percent of Students Who Carry Weapons
- Figure 3-28 Type of Weapons Carried by Students
- Figure 3-29 Physical Fights by Grade Level
- Figure 3-30 Physical Fighting with Whom?
- Figure 3-31 Worry About Physical Fights Among Middle School Students
- Figure 3-32 Worry About Physical Fights Among High School Students
- Figure 3-33 Reported Domestic Disturbances by Neighborhood
- Figure 3-34 Aggravated Assaults by Neighborhood
- Figure 3-35 Reported Restraining Order Violations by Neighborhood
- Figure 3-36 Street Robberies by Neighborhood

#### **Chapter 4: Environmental Health**

- Figure 4-1 Unhealthful Days/Year by City
- Figure 4-2 Ozone Levels by City (1988-96), Second Highest Daily Maximum
- Figure 4-3 Air Quality by Month (1997), Eastern Massachusetts
- Figure 4-4 Total Enteric Illnesses, Cambridge (1988-97)
- Figure 4-5 Reportable Enteric Illnesses, Cambridge (1988-97)
- Figure 4-6 Common Reportable Enteric Illnesses, Cambridge (1988-97)
- Figure 4-7 Zoonotic Diseases, Cambridge (1988-97)
- Figure 4-8 Poison Control Calls/1000 Residents, Cambridge and Somerville
- Figure 4-9 Agents Responsible for Poisonings in the US, 1997
- Figure 4-10 Locations of Poisoning in the US, 1997
- Figure 4-11 Screening Rates for Blood Lead Levels
- Figure 4-12 Elevated Blood Lead Levels
- Figure 4-13 De-Leading Notifications (1992-98), Cambridge and Somerville
- Figure 4-14 Sanitation Violations (1992-98), Cambridge
- Figure 4-15 Bacteria Levels in the Charles River
- Figure 4-16 Bacteria Levels in the Charles River

#### **Chapter 5: HIV/AIDS and STDs**

- Table 5-1 Year 2000 Objectives, Mass. And Cambridge Rates
- Table 5-2 Cumulative AIDS Cases in Selected Massachusetts Cities and Towns
- Table 5-3 Total Reported AIDS Cases as of 9/1/98
- Figure 5-1 AIDS in Cambridge, Somerville, and Massachusetts



- Figure 5-2 AIDS by Transmission Mode  
Figure 5-3 AIDS by Year of Diagnosis and Selected Risk  
Figure 5-4 AIDS by Year of Diagnosis and Sex  
Figure 5-5 AIDS by Age Group  
Figure 5-6 AIDS by Race/Ethnicity  
Figure 5-7 AIDS/HIV-related Mortality Rates  
Figure 5-8 Condoms at Last Sexual Intercourse  
Figure 5-9 Syphilis Morbidity Rates  
Figure 5-10 Gonorrhea Morbidity Rates  
Figure 5-11 Chlamydia Morbidity Rates  
Figure 5-12 Chlamydia in Cambridge  
Figure 5-13 Chlamydia in Cambridge  
Figure 5-14 Chlamydia in Cambridge

## **Chapter 6: Substance Abuse: Alcohol, Tobacco, and Drugs**

- Table 6-1 Year 2000 Objectives, Massachusetts And Cambridge Rates  
Figure 6-1 Alcohol and Drug-Related Deaths  
Figure 6-2 Alcohol and Drug-Related Deaths by Race  
Figure 6-3 Alcohol and Drug-Related Hospital Discharges  
Figure 6-4 Alcohol and Drug-Related Admissions  
Figure 6-5 Alcohol and Drug-Related Admissions by Sex and Substance  
Figure 6-6 Alcohol and Drug-Related Admissions by Race and Substance  
Figure 6-7 Current Substance Use Among Students by Grade  
Figure 6-8 Tobacco Use Among High School Students  
Figure 6-9 Alcohol Use Among High School Students  
Figure 6-10 Marijuana Use Among High School Students  
Figure 6-11 Current Tobacco Use by Sex  
Figure 6-12 Current Alcohol Use by Sex  
Figure 6-13 Current Marijuana Use by Sex  
Figure 6-14 Current Tobacco Use Among Cambridge High School Students by Race  
Figure 6-15 Current Alcohol Use Among Cambridge High School Students by Race  
Figure 6-16 Current Marijuana Use Among Cambridge High School Students by Race  
Figure 6-17 Current Substance Use by Middle School Students  
Figure 6-18 Current Illegal Drug Use by High School Students  
Figure 6-19 Current Substance Use by High School Students  
Figure 6-20 Substance Use: Smokers versus Non-Smokers  
Figure 6-21 Smoking Prevalence and Tobacco Related Deaths

**Chapter 7: Health Promotion/Disease Prevention**

Table 7-1	Year 2000 Objectives, Massachusetts And Cambridge Rates
Figure 7-1	WIC Program Recipients
Figure 7-2	Use of Food Pantries in Cambridge by Race
Figure 7-3	Cambridge Food Pantry Use by Age
Figure 7-4	High School Students Who Went Hungry for Lack of Money
Figure 7-5	High School Students Who Went Hungry for Lack of Money by Race
Figure 7-6	High School Students Who Report Eating Breakfast
Figure 7-7	Daily Consumption of Fruits and Vegetables
Figure 7-8	Daily Consumption of Five or More Servings of Fruits and Vegetables
Figure 7-9	Weight Control Practices of Students
Figure 7-10	Body Mass Index Screening
Figure 7-11	Overweight Children by Age
Figure 7-12	Prevalence of Overweight Adults
Figure 7-13	Physical Activity of Massachusetts H.S. Students
Figure 7-14	Physical Activity of H.S. Students by Grade
Figure 7-15	Physical Activity of H.S. Students by Sex

**Chapter 8: Maternal & Infant Health**

Table 8-1	Year 2000 Objectives, Massachusetts And Cambridge Rates
Figure 8-1	Births to Cambridge Residents
Figure 8-2	Births by Race/Ethnicity, Cambridge
Figure 8-3	Low Weight Births by Race/Ethnicity
Figure 8-4	Births to Women with Publicly Financed Care by Race/Ethnicity
Figure 8-5	Births to Women with Inadequate* Prenatal Care by Race/Ethnicity
Figure 8-6	Births to Teens
Figure 8-7	Births to Teens by Race/Ethnicity
Figure 8-8	Breastfeeding Rates at Discharge from Hospital
Figure 8-9	Birth Trends by Mother's Age
Figure 8-10	Tobacco Use During Pregnancy Reported by Mother
Figure 8-11	Risk of Pregnancy for High School Students
Figure 8-12	Percent of Those Sexually Active Not Always Using Reliable Contraception
Figure 8-13	Pregnancy and Childbearing in High School Girls
Figure 8-14	Sexual Intercourse by Grade
Figure 8-15	Sexual Intercourse by Sex

**Chapter 9: Mortality**

Table 9-1	Year 2000 Objectives, Massachusetts And Cambridge Cause-Specific Mortality Rates
Table 9-2	Leading Causes of Mortality by Age
Table 9-3	Leading Causes of Death by Race/Ethnicity and Sex
Figure 9-1	Leading Causes of Death
Figure 9-2	Heart Disease, Cancer, and Stroke Deaths by Year
Figure 9-3	Influenza/Pneumonia, COPD, and Diabetes Deaths by Year
Figure 9-4	Heart Disease Mortality
Figure 9-5	Cancer Mortality
Figure 9-6	Stroke Mortality
Figure 9-7	Death Before Age 75 by Sex and Race
Figure 9-8	Leading Types of Cancer Deaths

**Chapter 10: Other Communicable Disease (Reportable)**

Table 10-1	Year 2000 Objectives, Massachusetts and Cambridge Rates
Figure 10-1	Reportable Communicable Disease
Figure 10-2	Vaccine Preventable Disease
Figure 10-3	Enteric Communicable Disease
Figure 10-4	Enteric Communicable Disease
Figure 10-5	Reportable Communicable Disease
Figure 10-6	Tuberculosis Incidence Rates
Table 10-2	New Tuberculosis Cases



## Acknowledgments

Volume 2 of the *1999 Cambridge Public Health Assessment: A Report from the Cambridge Health Alliance*, was prepared by the Health Information Unit, established in 1995 as a collaboration between The Health of the City and The Cambridge Public Health Commission with support from the Pew Charitable Trusts. The Unit conducts community health assessment, collects and disseminates health data, improves the quality of data resources, and supports public health activities. We appreciate your feedback and information regarding additional data sources that could be useful.

Health Information Unit of the  
Cambridge Health Alliance  
1493 Cambridge Street  
Cambridge, MA 02139

Voice: 617-498-1480, ext. 208 or 209  
Fax: 617-498-1514

Ellen Mara Kramer, ScD  
Director, Health Information Unit

Juhee Kim, MS  
Data Analyst, Health Information Unit

Brenda Mahnken, MS  
Data Manager, Health Information Unit

David H. Bor, MD  
Director, Health of the City

1999

CAMBRIDGE PUBLIC HEALTH ASSESSMENT



A Report from the Cambridge Health Alliance

### **Cambridge City Council and City Manager**

The Cambridge Health Alliance would like to acknowledge the leadership of the City of Cambridge for their advocacy of and commitment to Public Health.

Francis H. Duehay, Mayor

Anthony D. Galluccio, Vice Mayor

Michael P. Sullivan

Kathleen L. Born

Kenneth E. Reeves

Timothy J. Toomey, Jr.

Henrietta Davis

Sheila Doyle Russell

Katherine Triantafillou

Robert W. Healy, City Manager



### Cambridge Health Alliance Board of Trustees

Richard deFilippi, PhD, Chair\*

Robert H. Arnold

William Craig

John Francis

Camara Jones, MD, MPH, PhD

David Osler, MD

Karen Routt

Eugene Brune\*

Elaine DeRosa

Mary Ann Hart, RN\*

James Maloney

Estelle Paris, RNC

Ellen Semonoff\*

Terry Cline, PhD\*

Gerard P. Donahoe

Ralph Hergert\*

John O'Brien, CEO

Neil Rosenburg

\*Executive Committee Members

### Cambridge Health Alliance Joint Hospital Board

Terry Cline, PhD, Chair

Barbara Ackermann

Melvin Chalfen, MD

Elaine DeRosa

Margaret S. Joyce

Estelle Paris, RNC

Daniel Berkowitz, MD

Audrey Cunningham

Paul Erickson, MD\*

Pearl Morrison

Ellen Semonoff

Carol Cerf

Richard deFilippi, PhD

Ralph Hergert

John O'Brien, CEO

Jonathan Stearns

\*Medical Staff President

### Cambridge Public Health Subcommittee Board

Mary Ann Hart, RN, Chair

Barbara Ackermann

Terry Cline, PhD

Elaine DeRosa

Camara Jones, MD, MPH, PhD

Carol Cerf

Linda Cundiff, RN, MSN

Laurie Tennant-Gadd

John O'Brien, CEO

Melvin Chalfen, MD

Richard deFilippi, PhD

Jill Herold

Estelle Paris, RNC

### Joint Public Health Board

Jack Hamilton, Co-Chair

Carol Cerf

Elaine DeRosa

Frances Gayron

Genita Johnson

Estelle Paris, RNC

Mary Ann Hart, RN, Co-Chair

Melvin Chalfen, MD

Karen Edlund, RN

Myrland Guillaume

Camara Jones, MD, MPH, PhD

Linda Cornell

Laurie Tennant-Gadd

Jill Herold

Margaret Mamigonian

### Neville Manor Board

Neil Rosenburg, Chair

Terry Cline, PhD

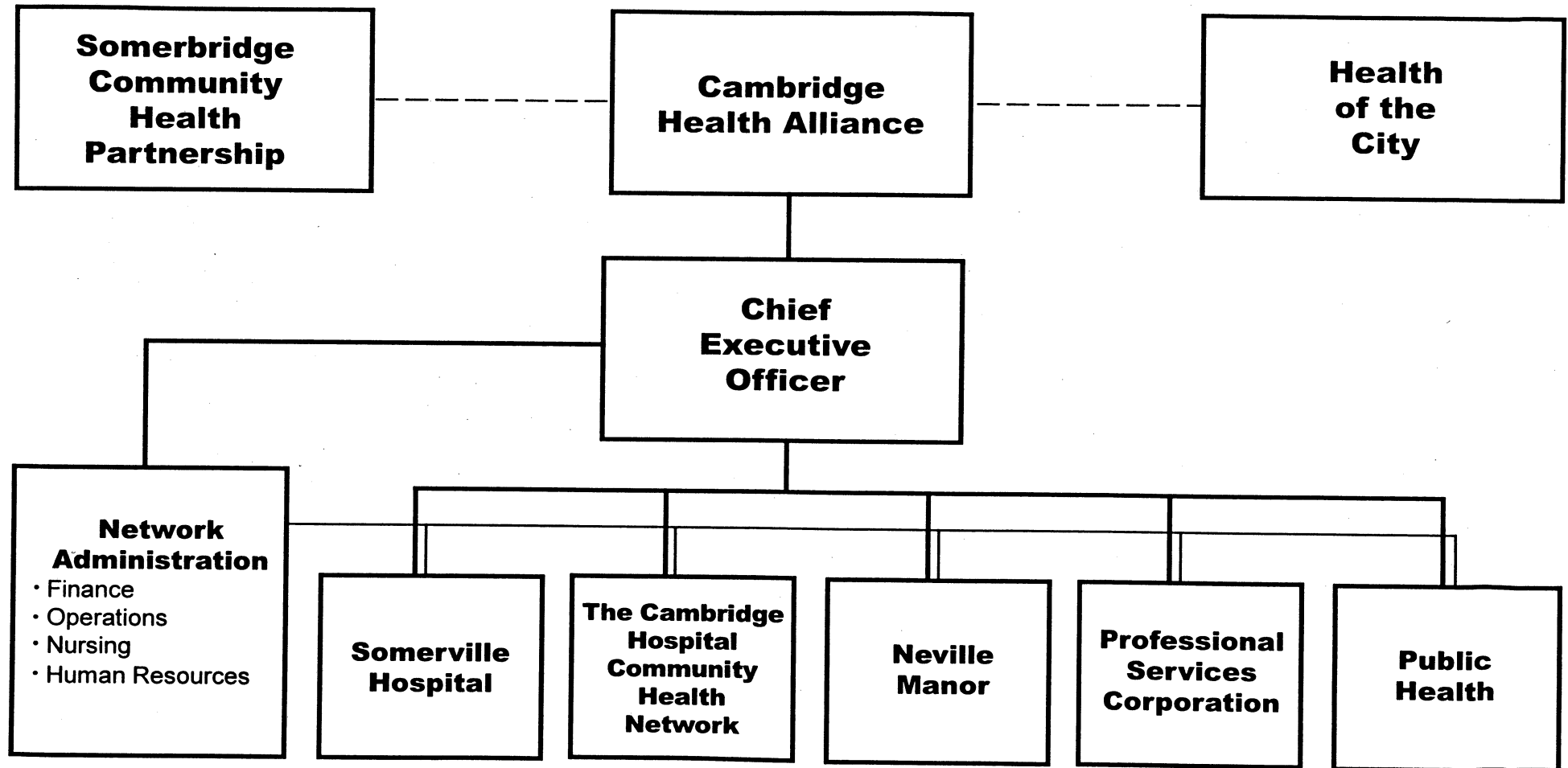
John O'Brien, CEO

William Craig

Estelle Paris, RNC

John Francis

# Cambridge Health Alliance Network Organizational Structure





## Preface

Volume 2 of the *1999 Cambridge Public Health Assessment: A Report from the Cambridge Health Alliance*, provides a snapshot of the current health issues for the City of Cambridge. We have reorganized this volume, the second in a series, to address the priority areas chosen by the Cambridge Health Alliance last year:

- Access to Health Care
- Violence
- Environmental Health
- HIV/AIDS
- Substance Abuse
- Health Promotion/Disease Prevention (selected topics)

We also include areas of traditional concern to public health: demographics, births, deaths, and communicable diseases. This volume remains a work-in-progress. Future editions will reflect changes in community concerns, new programs and policies, and evolving efforts in gathering information.

What is health? The World Health Organization has stated that:

*“Health is the extent to which people are able to realize aspirations, to satisfy needs and to change or cope with the environment.”*

This definition may seem unusual at first glance. Rather than a clinical perspective that focuses on curing disease in the individual, the focus is on promoting well-being for a community. To provide a context for the data from Cambridge, we frequently include information from other cities and towns, the Commonwealth of Massachusetts, and the nation. We also provide the U.S. Public Health Service health promotion and disease prevention goals expressed in Healthy People 2000. Wherever possible, data is presented for a series of years to give the reader a chance to see changes in health over time.

In this volume, we report on data that is routinely and reliably collected. We do not collect the data ourselves. The source of the information is reported at the bottom of each figure or table. Although the information was selected to reflect community concerns, some readers may not find their particular concerns addressed. Others will find their questions only partially answered. Our hope is that this work will stimulate many to delve deeper, to reflect on their own health and the health of their community, and to engage in the process of health improvement.



## 1. Demographics

**Table 1-1**

### DEMOGRAPHIC CHARACTERISTICS

	number	percent
<b>Population Trends<sup>1</sup></b>		
1980	95,322	
1990	95,802	+0.5
2000	102,562	+7.1
2010	110,489	+7.7
<b>Number by Sex<sup>1</sup></b>		
Male	49,817	49.5
Female	50,746	50.5
<b>Age Distribution<sup>1</sup></b>		
Under 5 years	4,288	4.3
5-14 years	7,466	7.4
15-44 years	61,524	61.2
45-64 years	17,061	17.0
65-85 years	8,669	8.6
85 years and over	1,555	1.6
<b>Race and Ethnicity<sup>1</sup></b>		
White	67,085	66.7
Black	16,046	16.0
Hispanic Origin	8,016	8.0
Other	9,416	9.4
<b>Medicaid Recipients<sup>2</sup></b>		
Aged 65+	1,223	16.3
Families	3,401	45.3
Disabled	2,610	34.8
Other	275	3.6



## DEMOGRAPHIC CHARACTERISTICS, *Continued*

### Medicaid Recipients by Race <sup>2</sup>

	number	percent
White	4,306	57.4
Black	2,102	28.0
Hispanic Origin	746	9.9
Asian	186	2.5
Other	168	2.3

### Unemployed Individuals <sup>3</sup>

	number	percent
1990	2,153	3.8
1991	3,133	5.7
1992	3,008	5.4
1993	2,508	4.4
1994	2,148	3.8
1995	1,861	3.2
1996	1,428	2.5

### Transitional Aid to Families with Dependent Children (TAFDC) Recipients<sup>4</sup>

	number	percent
Black	171	45
White	121	32
Latino	82	21
Asian	6	2
Other	1	0

### Children Attending Public Schools<sup>5</sup>

	number	percent
White	3084	41.0
Black	2580	34.3
Hispanic	1075	14.3
Asian	752	10.0
Native American	35	0.5
Total	7523	85.4
Not attending public school	1286	14.6



## DEMOGRAPHIC CHARACTERISTICS, *Continued*

Primary Language of Public School Students <sup>6</sup>	number	percent
English	5366	69.9
Spanish	721	9.4
Haitian Creole	505	6.6
Portuguese	293	3.8
Chinese	182	2.4

### Household Incomes as % of Boston Metropolitan

Area Median <sup>7</sup>	number	percent
Total Number	39405	100
50% or Less of Median Income	11388	28.9
51-80% of Median Income	7999	20.3
81-120% of Median Income	7446	18.9
Over 120% of Median Income	12570	31.9

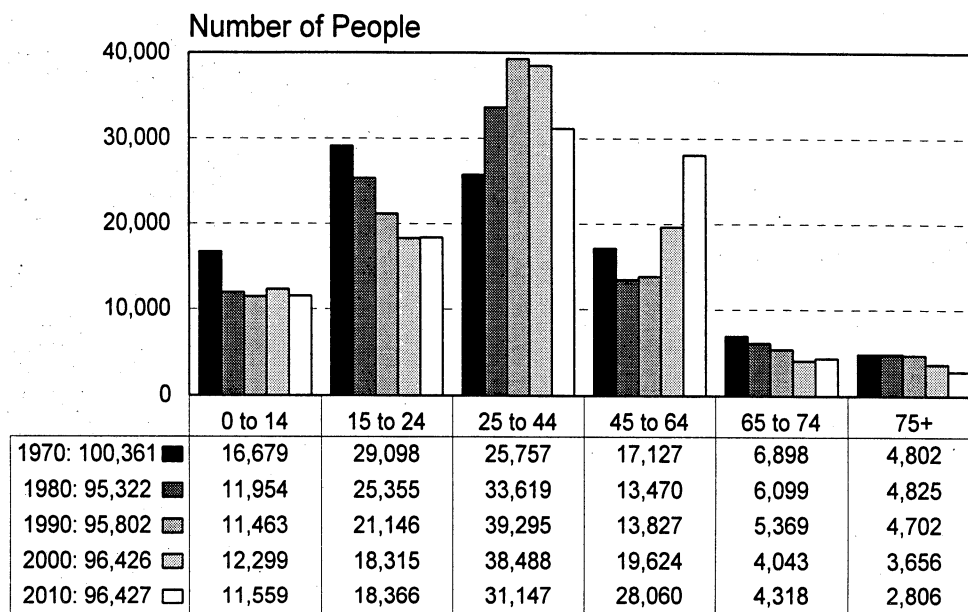
Homeless Persons <sup>8</sup>	number	percent
Total Number	552	100
Living in shelters for the homeless	380	68.8
Unsheltered	172	31.2
Person under 18	62	11.2
Young adults age unknown	2	0.4
Sex: Adult Men	286	51.8
Adult Women	134	24.3
Unknown	68	12.3

1. 1996 Projections from Massachusetts Institute for Social and Economic Research.
2. 1996 Medicaid (Mass Health), MassCHIP, Mass. DPH, v2.0 r168.0, Aug 26, 1998.
3. Employment and Training (DET Survey Results), MassCHIP, Mass. DPH, v2.0 r168.0, Aug 26, 1998.
4. Welfare Reform Task Force Report by Susan Mintz, Aug 20, 1998.
5. Cambridge Public Schools, School District Profile 1997-98, Mass. DOE. Percent of students who attend public school is for the year 1996-97.
6. 1997 Department of Education, Accountability and Evaluation Services, and Bureau of Family and Community Health, Office of Refugee and Immigrant Health, Mass. DPH. Percents are based on public school enrollment of 7,679 students for the 1996-97 school year.
7. U.S. Census, STF3 Report, 1990; Census of Boston CMSA Population & Housing, 1990. Median household income of 1989 Boston Primary Metropolitan Statistical area was \$40,491.
8. Cambridge Census of Homeless Number, July 23, 1998



**Figure 1-1**

### Cambridge Population Trends and Projections by Age Group



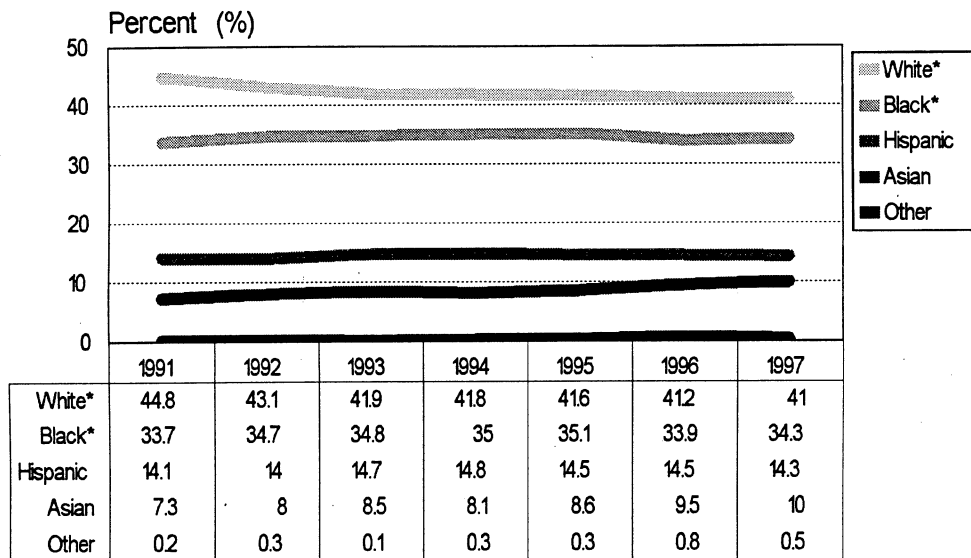
Source: 1970, 1980, and 1990 populations are from U. S. Census; 2000 and 2010 Population estimates are from Data Center of the Metropolitan Area Planning Council, 1996.



**Figure 1-2**

### Public School Enrollment by Race

Cambridge: 1991-97



\* Non-Hispanic

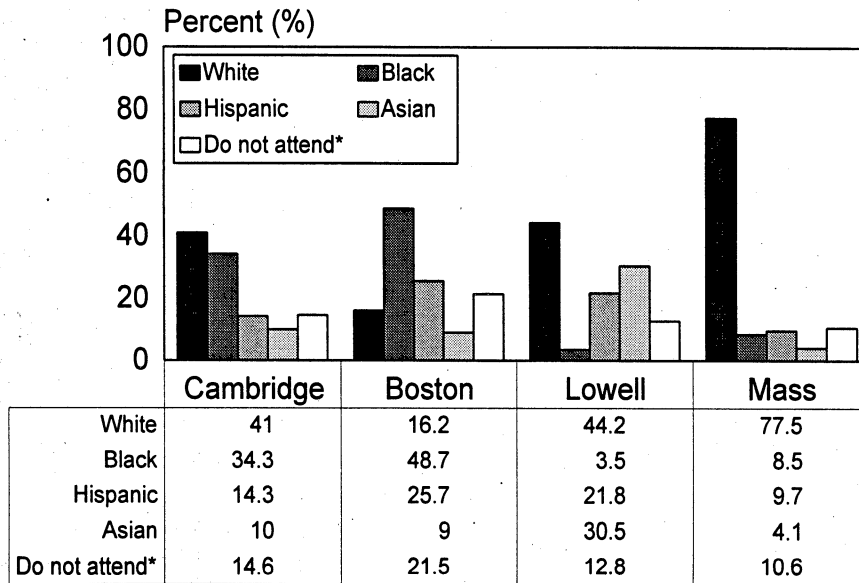
Source: Cambridge Community Profile 1997, School District Profile 1997-98, MA Dept. of Education, 1996.



**Figure 1-3**

## Children Attending Public Schools

Cambridge, Boston, Lowell, and Massachusetts: 1996-97



Source: Cambridge Public Schools, School District Profile 1997-98, Mass Dept. of Education.

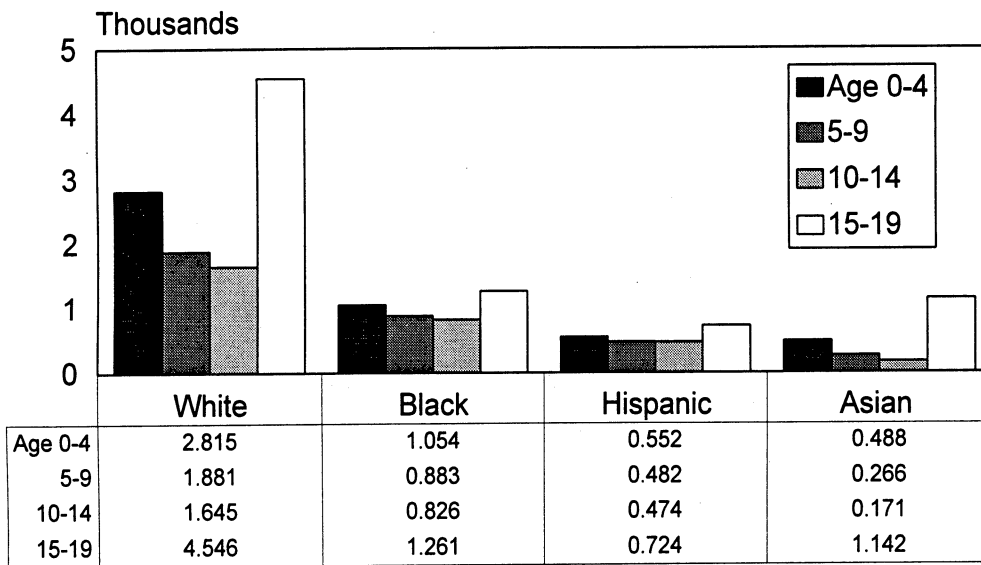
\* Percent of students who do not attend public school.



**Figure 1-4**

### Children by Age and Race

Cambridge: 1990 U.S. Census



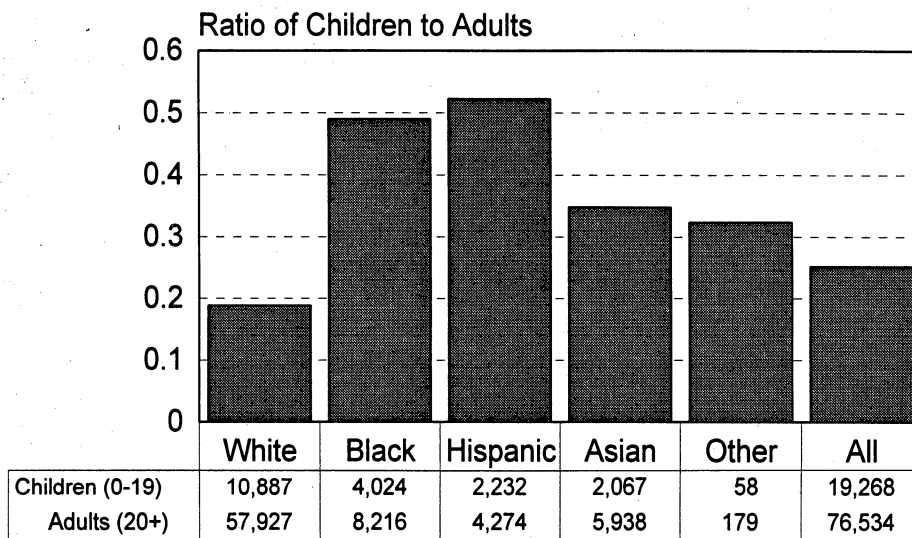
Source: 1990 U.S. Census



**Figure 1-5**

## Ratio of Children to Adults by Race

Cambridge: 1990 U.S. Census



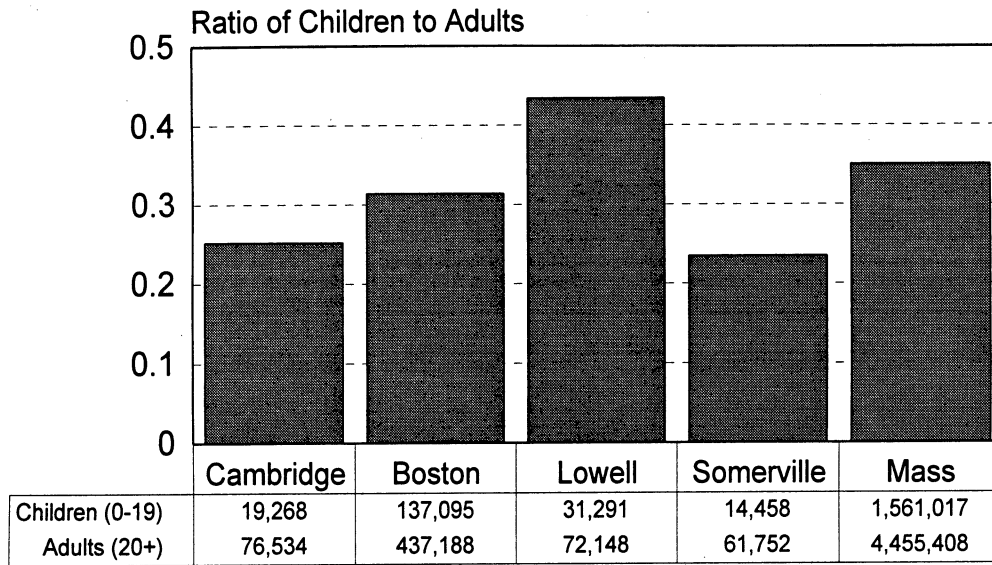
Children: <20 years old; adults =>20 years old

Source: 1990 U.S. Census, MassCHIP, Mass DPH, V2.0 r168.0, Oct 15, 1998



**Figure 1-6**

**Ratio of Children to Adults by City**  
1990 U.S. Census



Children: <20 years old; adults =>20 years old

Source: 1990 U.S. Census, MassCHIP, Mass DPH, V2.0 r168.0, Oct. 15, 1998

**Table 1-2****Cambridge Estimated Recent Immigrant Population, 1997<sup>1</sup>**

Native Language	Estimated Recent Immigrant Population	
	Number	Percent
Spanish <sup>2</sup>	3,760	3.9
Haitian Creole	2,730	2.8
Portuguese	1,516	1.6
Chinese Dialects	970	1.0
South Central Asian Languages	570	0.6
African Languages	436	0.5
Korean	426	0.4
Other West European Languages	376	0.4
Other Asian Languages	326	0.3
Arabic, Hebrew & Other Middle Eastern	246	0.3
East European Languages	216	0.2
Cape Verdean	190	0.2
All Other Languages	166	0.2
Southeast Asian Languages	120	0.1
<b>Total</b>	<b>12,040</b>	<b>12.6</b>

<sup>1</sup> This analysis is based on PLINE (Primary Language Is Not English) figures supplied by the Massachusetts Office of Refugees & Immigrants. This office estimates that the total immigrant population is approximately five times the number of PLINE students attending local schools; this does not reflect long-term immigrants and the term “recent immigrant” is used. These figures do not include immigrants whose native language is English, such as those who arrive from Ireland, England, or Canada.

<sup>2</sup> Spanish speakers include Puerto Ricans and other American citizens.

Note: This estimation does not reflect students attending college/universities in Cambridge.

Source: Cambridge School Dept., 1997; Massachusetts Office of Refugees & Immigrants 1996; Cambridge Community Development Dept., 1997.



Figure 1-7

# Cambridge Neighborhood Map

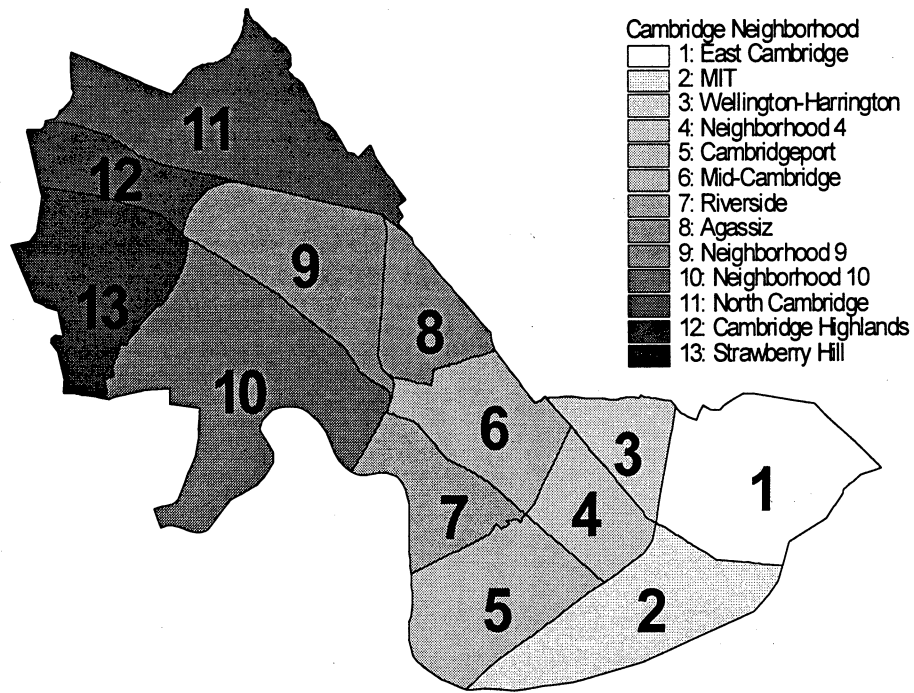




Figure 1-8

# Neighborhood Population Density\*

Cambridge: 1990 U.S. Census

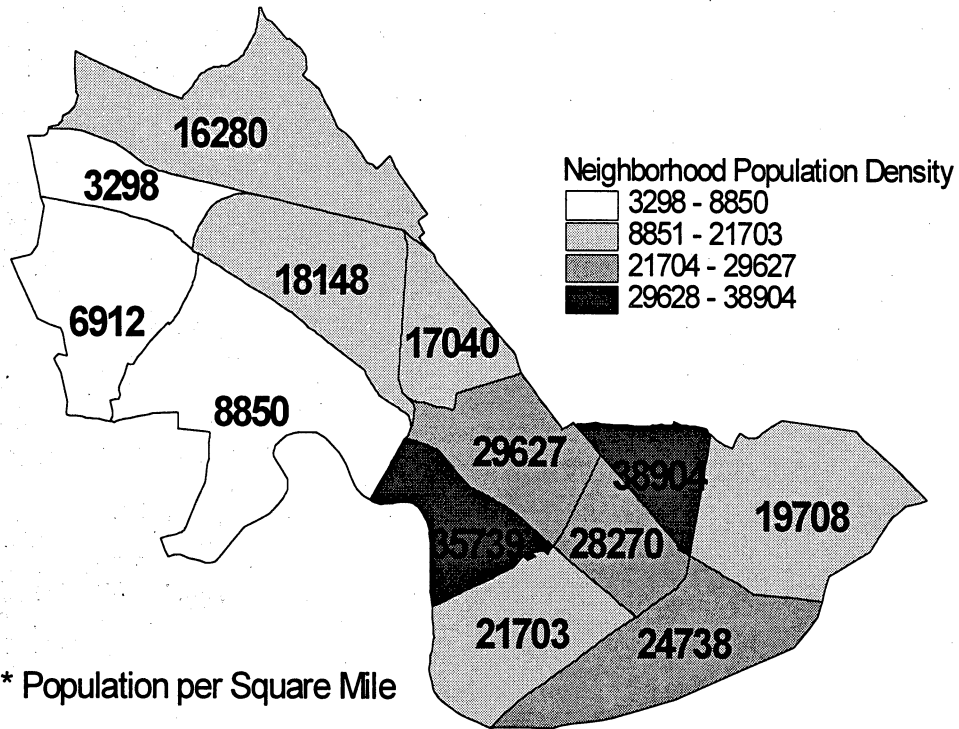




Figure 1-9

## Median Household Income by Neighborhood

Cambridge: 1990 U.S. Census

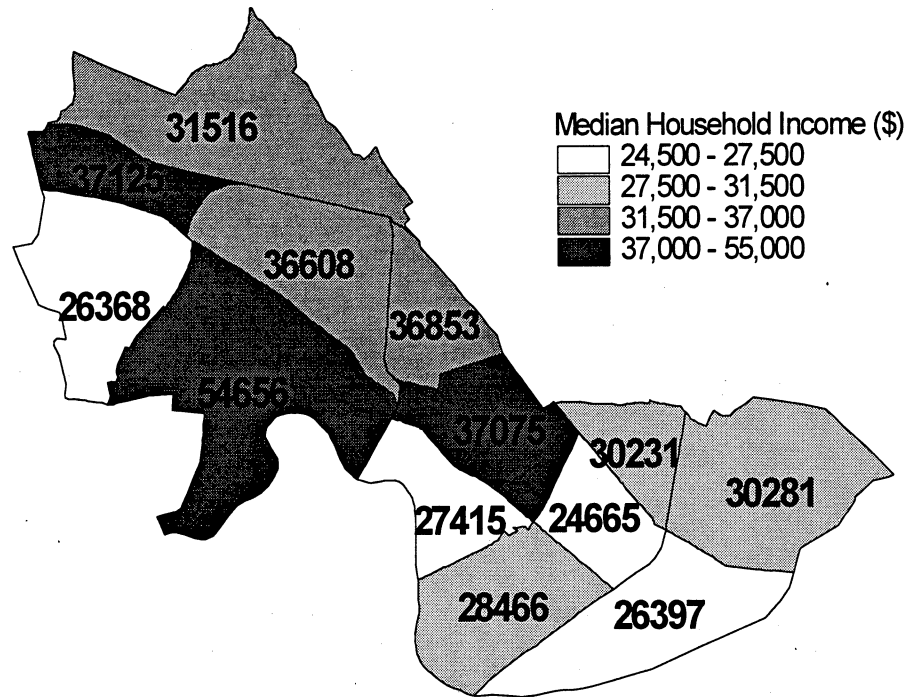




Figure 1-10

# Foreign Born Residents by Neighborhood

Cambridge: 1990 U.S. Census

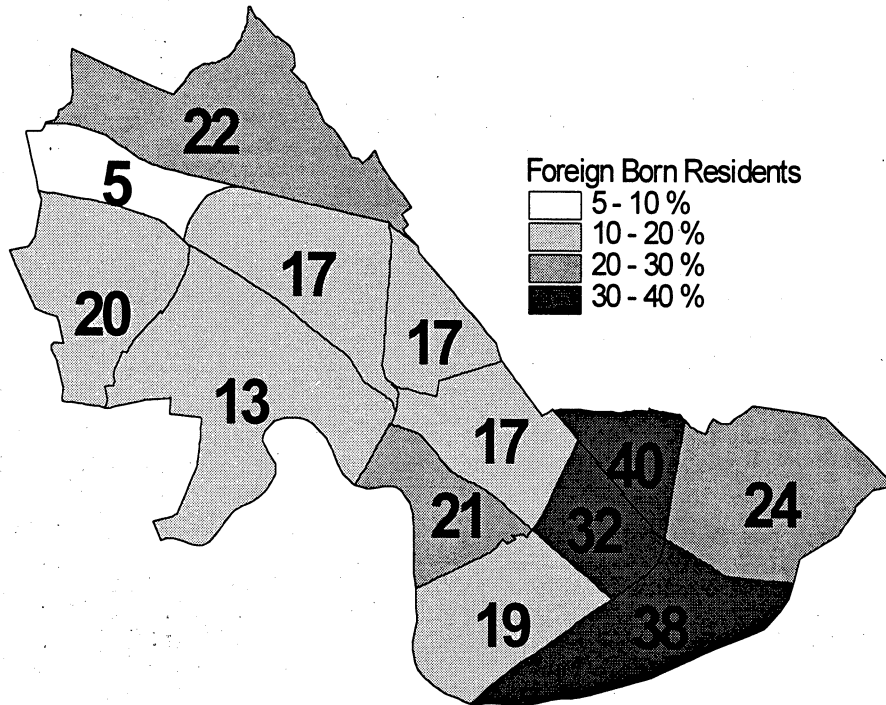




Figure 1-11

# Residents Speaking Languages Other Than English At Home

Cambridge: 1990 U.S. Census

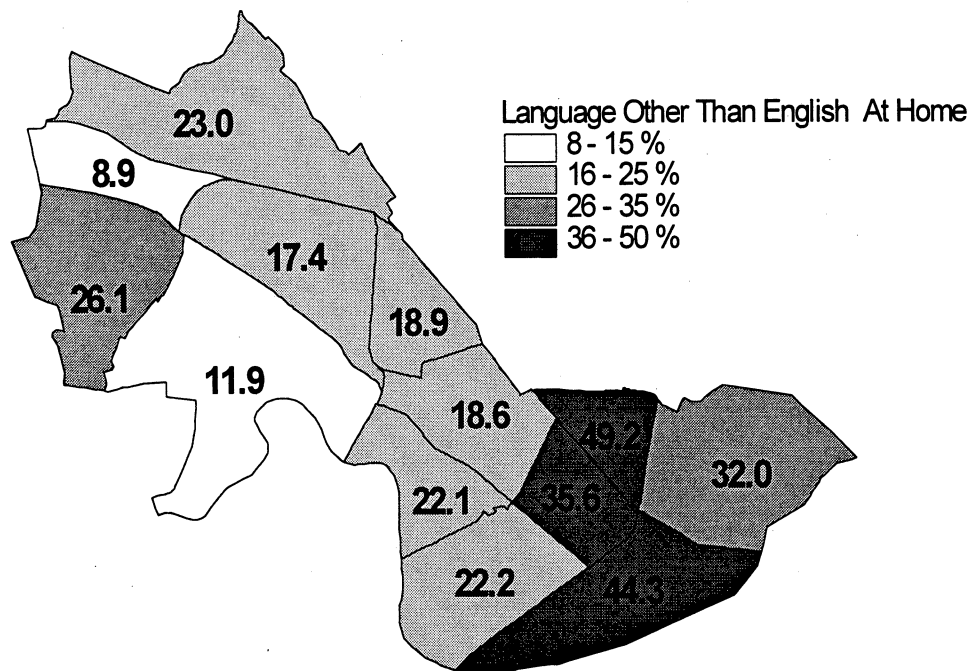
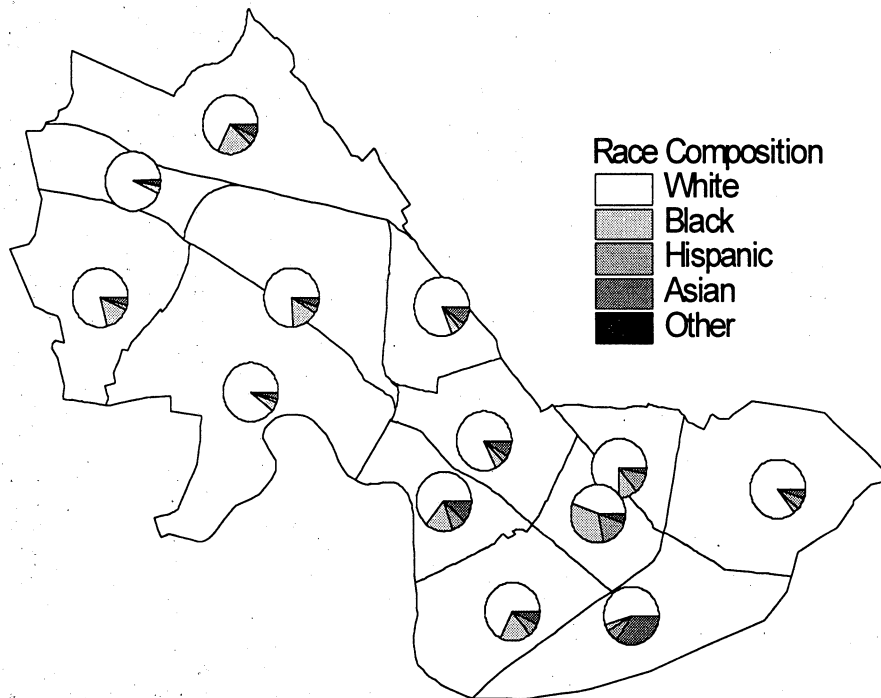




Figure 1-12

# Racial Composition by Neighborhood

Cambridge: 1990 U.S. Census





## 2. Access to Healthcare

To meet the Healthy People 2000 Objective, 95% of the population should have a specific source of ongoing primary care for coordination of their preventive and episodic health care. A recent Institute of Medicine report on Access to Health Care in America defined access as “the timely use of personal health services to achieve the best possible health outcomes.” Having adequate access to health care services can significantly influence health outcomes. Limitations in access to care extend beyond simple causes such as shortage of health care providers or facilities. Even where health care services are readily available, individuals may not have a usual source of health care or may experience barriers to care due to financial or insurance restrictions, a lack of providers who speak the relevant languages or who are available at night or on weekends, etc.

In 1996, 18% of Americans had no usual sources of health care.<sup>1</sup> That is, 46 million Americans did not have a specific doctor’s office, clinic, health center, or other place where they would usually go if they were sick or needed advice about their health. In Massachusetts,<sup>2</sup> 776,000 people, 12.4% of the total population, were uninsured in 1996. This is an increase of 95,000 people since 1995. Some preliminary data from 1997<sup>3</sup> suggests that the number of uninsured may have decreased to 755,000. In a survey of Massachusetts adults only, about 11% lacked health insurance in 1996. Those at highest risk for not having medical coverage included males, adults age 18 to 24 years old, Hispanics, those with lower income, less education, or who were self-employed or unemployed.

### Indicators:

- **Preventable hospital admissions:** Because lack of primary care for particular medical conditions can lead to hospitalization, it is possible to measure preventable hospitalization rates as a way of assessing primary care delivery. That is, certain conditions, if treated in a timely fashion with adequate primary care and managed properly on an out-patient basis, should not advance to the point where hospitalization is required.
- **No medical insurance coverage:** Lack of medical insurance is a prominent barrier to receiving health care. Among American families who experienced barriers to health care, 60% cited inability to afford medical care and 20% specifically cited insurance related problems.



- **Management of chronic conditions:** Access to appropriate care can prevent progression to more serious disease, hospitalization, and premature death.
- **Routine health and screening practices:** These health promotion/disease prevention clinical practices provide important information about or access to quality primary care.
- **Children with untreated dental cavities:** Untreated dental disease can be an indicator of lack of knowledge about or access to dental care and may also identify families who cannot get medical care for themselves and their children.
- **Immunization rates among children:** Immunization is an effective way to reduce health risks among children. It is an indicator of access to primary care.

<sup>1</sup> Medical Expenditure Panel Survey, October 1997. Agency for Health Care Policy and Research.

<sup>2</sup> Sagar, A and D Sclar. Access and Affordability Monitoring Project. Boston University School of Public Health. Bureau of Census annual Current Population Survey.

<sup>3</sup> Access & affordability monitoring, BUSPH, 1997.

### Table 2-1

#### YEAR 2000 OBJECTIVES, MASSACHUSETTS AND CAMBRIDGE RATES

	HP 2000 Goal	Mass. Rate	Cambridge Rate
Percent of fully immunized children under 2	90%	74% <sup>1</sup>	74% <sup>2</sup>
Children with untreated cavities (percent of children in each age group)	20% (age 6-8)	*	57% <sup>3</sup> (grades 1-4)
Blood pressure checked in the past 2 years	90%	96% <sup>4</sup>	*
Action taken to control hypertension			
Among Black males (age 25-34)	80%	*	*
Among White males (age 25-34)	80%	*	*

\* = Data not available



**YEAR 2000 OBJECTIVES, MASSACHUSETTS AND CAMBRIDGE RATES,  
CONTINUED**

	HP 2000 Goal	Mass. Rate	Cambridge Rate
Percent of women who have had a mammogram and clinical breast exam in the past 2 years			
All adult women	60%	52% <sup>4</sup>	*
Adult women age 50+	60%	74% <sup>5</sup>	*
Pap test			
ever received	95%	91% <sup>4</sup>	*
received in the past 3 years	85%	82% <sup>4</sup>	*
Ever received proctosigmoidoscopy	40%	32% <sup>4</sup>	*
Tested for osteoporosis			
Women	*	25% <sup>4</sup>	*
Fecal occult blood testing in the past two years	50%	31% <sup>4</sup>	*
Flu shot (age 65+)	*	66% <sup>4</sup>	*
Pneumonia vaccination (age 65+)	*	53% <sup>4</sup>	*
No medical insurance coverage <sup>6</sup>	0%	12.5% <sup>7</sup>	*
Unable to see provider due to cost during past 12 months	*	7%	*

\*= Data not available



## YEAR 2000 OBJECTIVES, MASSACHUSETTS AND CAMBRIDGE RATES, CONTINUED

	HP 2000 Goal	Mass. Rate	Cambridge Rate
Uninsured for:			
5+ years	*	22% <sup>4</sup>	*
2-5 years	*	20% <sup>4</sup>	*
1-2 years	*	17% <sup>4</sup>	*
< 1 year	*	41% <sup>4</sup>	*
Main reason for being uninsured			
Lost/changed jobs	*	35% <sup>4</sup>	*
Couldn't afford premium	*	34% <sup>4</sup>	*
No coverage from employer	*	13% <sup>4</sup>	*
No dental insurance			
Regular dental visit	70%	*	*
Time since last visit to dentist			
within past year	*	74% <sup>4</sup>	*
more than one year	*	26% <sup>4</sup>	*

\* = Data not available

<sup>1</sup> Immunization Program, Mass. Dept. of Public Health, 1995

<sup>2</sup> Health and Human Services, Mass. Dept. of Public Health 1997

<sup>3</sup> Children's Dental Screening Program, Cambridge Public Health Dept., 1997-98

<sup>4</sup> 1997 Behavioral Risk Factor Survey System, Mass. Dept. of Public Health

<sup>5</sup> Health Risks and Preventive Behavior Among Massachusetts Adults, 1996 Results from the Behavioral Risk Factor Surveillance System Chronic Disease Surveillance Program, Massachusetts Department of Public Health, July 1998

<sup>6</sup> Questions asked whether respondents had "any kind of health care coverage, including health insurance, prepaid plans such as HMOs (health maintenance organizations), or government plans such as Medicare," and "was there a time in the past 12 months when you needed to see a doctor, but could not because of the cost?" and, how long they have been without coverage?

<sup>6</sup> Access and Affordability Monitoring Project, Boston University School of Public Health

**Table 2-2**
**LEADING PREVENTABLE HOSPITALIZATION CONDITIONS  
BY AGE GROUP**

CAMBRIDGE RESIDENTS, 1994-96

Age Group	Condition	Number	%
0-5 years	Asthma	83	32
	Kidney/Urinary Infection	27	11
	Dehydration	33	13
	Bacterial Pneumonia	31	12
	Other	83	32
	TOTAL	257	100
6-17 years	Asthma	72	48
	Bacterial Pneumonia	16	11
	Cellulitis	15	10
	Kidney/Urinary Infection	13	9
	Other	35	23
	TOTAL	151	100
18-64 years	Bacterial Pneumonia	222	16
	Cellulitis	153	11
	Congestive Heart Failure	133	10
	Asthma	133	10
	Kidney/Urinary Infection	126	9
	Diabetes	98	7
	Chronic Obstructive Pulmonary Disease (COPD)	91	7
	Angina	55	4
	Other	369	27
	TOTAL	1380	100



## LEADING PREVENTABLE HOSPITALIZATION CONDITIONS BY AGE GROUP, *CONTINUED*

CAMBRIDGE RESIDENTS, 1994-96

Age Group	Condition	Number	%
65+ years	Congestive Heart Failure	733	27
	Bacterial Pneumonia	516	19
	Kidney/Urinary Infection	355	13
	COPD	310	11
	Dehydration	217	8
	Cellulitis	126	5
	Asthma	101	4
	Angina	100	4
	Diabetes	88	3
	Other	166	6
	TOTAL	2712	100

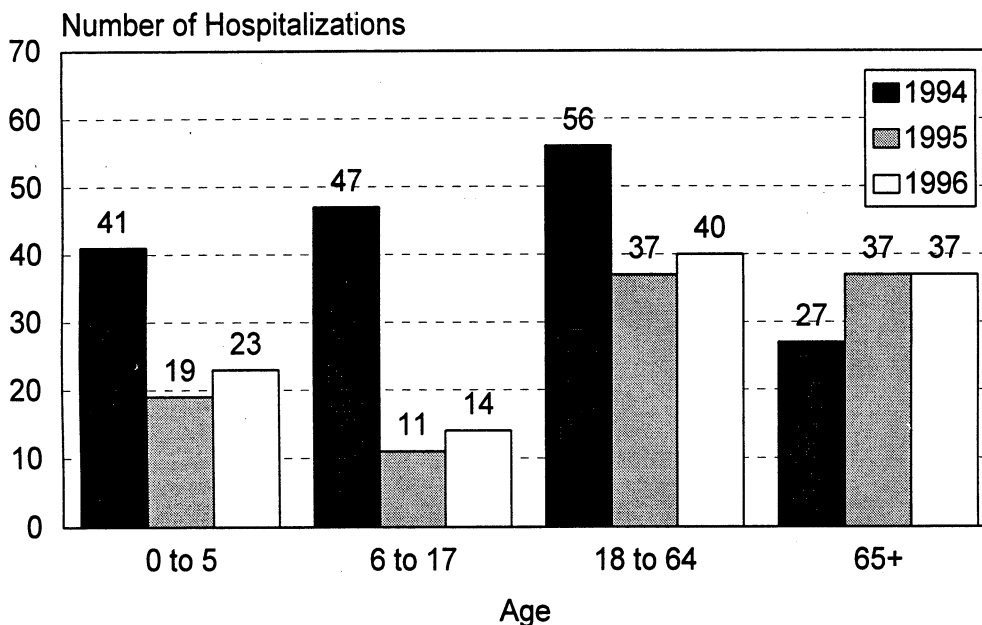
Preventable hospitalizations are for selected diagnostic conditions that, if treated and properly managed in an ambulatory care setting, can potentially be avoided. See Preventable Hospitalizations in Massachusetts, January 1994, a report of the Massachusetts Division of Health Care Finance and Policy.

Source: Uniform Hospital Discharge Data Set/Mass. Division of Health Care Finance and Policy, 1994-96.

**Figure 2-1**

## Asthma Hospitalizations by Age and Year

Cambridge Residents: 1994-96



Source: Uniform Hospital Discharge Data Set/Division of Health Care Finance and Policy

### *Example of how to read this figure:*

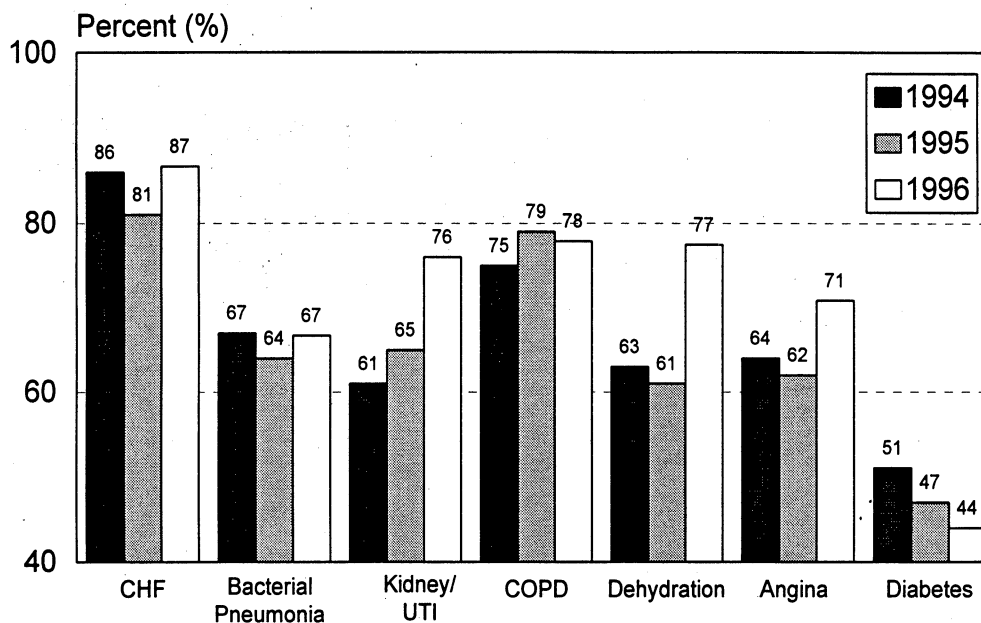
Many more adults than children are hospitalized for asthma, because adults outnumber children; however, children are actually at greater risk for hospitalization. The three years of data do not provide enough information to discern whether there has been improvement in prevention of asthma hospitalization or whether 1994 was an unusual year, in terms of lower levels of environmental triggers for asthma (for example, molds, cockroaches, pollen, influenza).



**Figure 2-2**

### Elders\* Among Individuals Hospitalized For Preventable Conditions

Cambridge Residents: 1994-96



\*Elders = Individuals age 65 and older

Source: Uniform Hospital Discharge Data Set/Division of Health Care Finance and Policy

***Example of how to read this figure:***

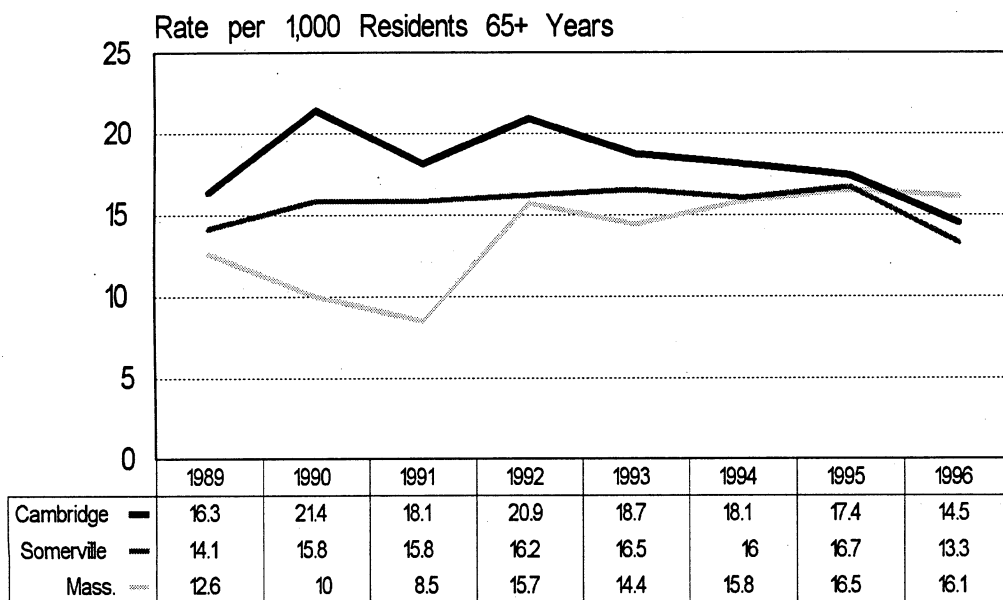
Elders experienced more frequent hospitalizations for urinary tract infections, dehydration, and angina in 1996 compared with the previous two years. Many of these hospitalizations should be preventable through effective primary care.



**Figure 2-3**

### Bacterial Pneumonia Hospitalization Rates 65+ Years of Age

Cambridge, Somerville, and Massachusetts Residents: 1989-96



Source: Uniform Hospital Discharge Data Set/Division of Health Care Finance and Policy

***Example of how to read this figure:***

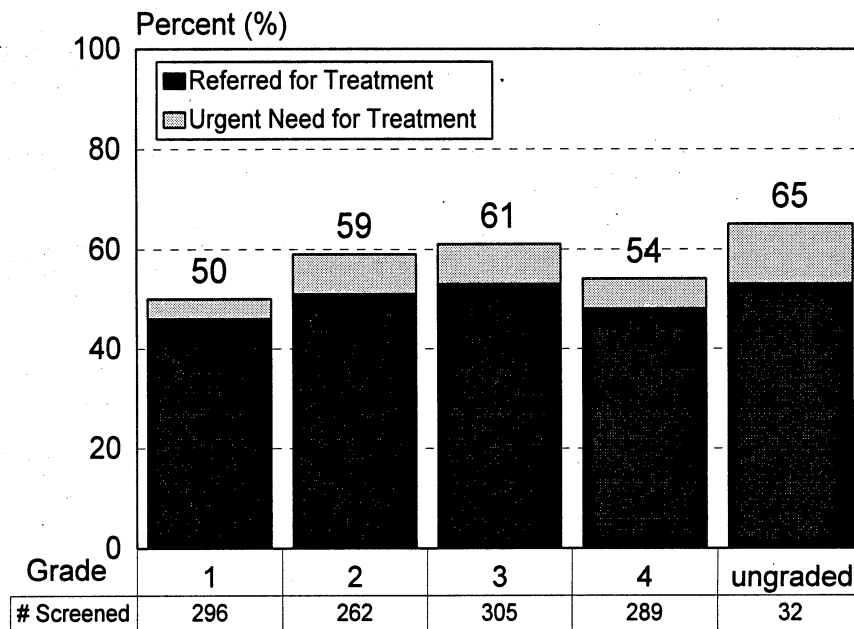
There has been a general decrease in hospitalizations for pneumonia among the elderly in Cambridge. Preventive measures like influenza and pneumococcal vaccination, early treatment of bronchitis, and reduced cigarette smoking may have played a role.



**Figure 2-4**

## Dental Health Screening Program

Cambridge Elementary Schools: 1997-98



Total children screened=1,184

Source: Children's Dental Screening Program, Cambridge Public Health Dept., 1997-98.

*Example of how to read this figure:*

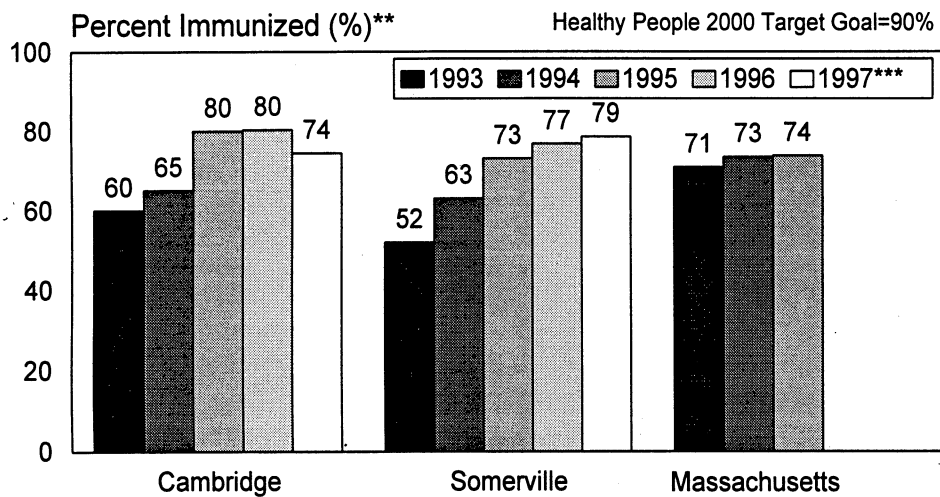
More than half of Cambridge school children, grades 1-4, had untreated cavities and were referred for dental care.



**Figure 2-5**

### Children Fully Immunized\* at 2 Years of Age

Cambridge and Somerville Community Health Centers: 1993-96



\*Full immunization at 24 months : 4 doses of Diphtheria, Pertussis, and Tetanus, 3 of Oral Polio, and 1 of Measles, Mumps, Rubella vaccine.

\*\*Mean percent for the health centers that provide pediatric care (5 in Cambridge and 3 in Somerville)

\*\*\* 1997 data should not be compared with the results of prior assessments because the number of sites selected was small and the sites were not randomly selected, Health and Human Services, Mass DPH.

Source: Immunization Action Project of Cambridge, Chelsea, and Somerville; and Communicable Disease Surveillance Program, Mass. DPH

**Example of how to read this figure:**

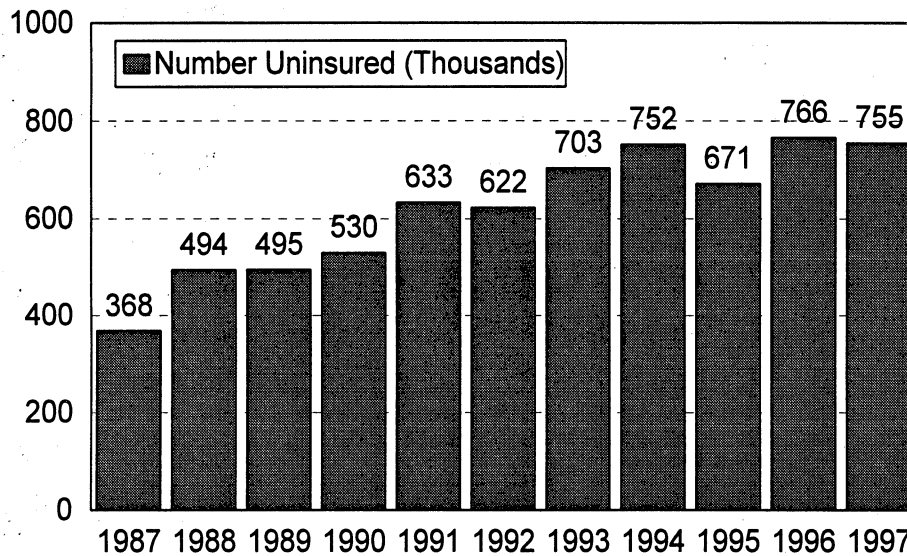
From the initiation of the Immunization Action Program, the rate of full immunization of 2 year olds increased in Cambridge (60 to 80%) and Somerville (52% to 77%), while state-wide rates remained nearly constant.



**Figure 2-6**

## Uninsured in Massachusetts

1987-97



Source: Access and Affordability Monitoring Project, BUSPH

***Example of how to read this figure:***

The number of residents who do not have any type of medical insurance rose consistently from 1987 through 1994, and then plateaued through 1997.



### 3. Violence Prevention

- The rate of homicide for Cambridge is lower than the state of Massachusetts overall.
- In Cambridge, the number of violent crimes has decreased over the past decade.
- During 1997 there were 911 arrests made by Cambridge police for domestic incidents. 574 restraining orders were filed during this same time period, of which 10.5% were violated.
- Approximately 10% of Cambridge middle school students and 9% of high school students reported having witnessed violence in the home over the past year. Children who witness violence are at risk for becoming victims or perpetrators of violence.

#### Indicators:

- **Violent crime statistics:** Many incidents of domestic violence are never reported; however, Police Department data provides a partial picture of acute instances of domestic violence. Domestic crimes include all offenses committed against family members, spouses and ex-spouses, roommates, romantic partners, and former romantic partners.
- **Calls for assistance for domestic violence:** This is a measure of family dysfunction and is strongly correlated with child abuse.
- **Number of children abused or neglected:** Child abuse and neglect is linked to immediate stresses on families, unemployment, drug and alcohol abuse, and is more prevalent in single parent families. It is linked to many social problems in later life, including teen pregnancy, crime, and drug and alcohol abuse.
- **Injuries from weapons (guns and sharp instruments):** The Massachusetts Department of Public Health's weapon-related injury surveillance system collects data on those treated at local emergency departments for gunshots and stabbing. This system provides a partial picture of weapons injury as it only includes injuries treated at an emergency department and in-hospital deaths.
- **Deaths due to homicide:** The Uniform Crime Reported Program defines murder as the willful (non-negligent) killing of another human being and does not include negligence, suicide, or accidents.



- **Criminal restraining order statistics:** An adult or minor who is being abused by a spouse, partner, or someone in a dating relationship can file for a 209A restraining order. The court may order the batterer to refrain from abuse, to refrain from contacting the individual who is being abused, and to pay child support.
- **Weapons-carrying among adolescents:** School safety is an increasingly important issue and is addressed in the National Education Goals. Weapons-carrying is an indirect indicator of gang affiliation.
- **Children and teens who witness family violence in the home:** Witnessing family violence threatens a child's physical and emotional safety, causes children to worry whether the incident was his or her fault, raises concerns about trying to stop the violence and whether it might occur again. Paradoxically, aggressive behavior is a well-documented result of witnessing violence.

**Table 3-1****YEAR 2000 OBJECTIVES, MASSACHUSETTS AND CAMBRIDGE RATES**

	HP 2000 Goal	Mass. Rate	Cambridge Rate
Homicide (age-adjusted rate per 100,000)	7.2	3.9 <sup>1</sup>	2.3 <sup>1</sup>
Males	*	5.9 <sup>1</sup>	3.4 <sup>1</sup>
Females	*	2.0 <sup>1</sup>	1.3 <sup>1</sup>
Weapon-related violent injuries (per 100,000)	*	27.7 <sup>2</sup>	16.7 <sup>2</sup>
Gunshot	*	5.3 <sup>2</sup>	4.2 <sup>2</sup>
Sharp Instrument	*	22.4 <sup>2</sup>	12.5 <sup>2</sup>
Violent crimes reported to police <i>murder, rape, robbery, and assault</i> (per 100,000)	*	623.4 <sup>3</sup>	(n=572) 597.1 <sup>4</sup>
Rape reported to police <i>rapes and attempted rapes</i> (per 100,000)	*	26.4 <sup>3</sup>	(n=24) 25.1 <sup>4</sup>

\*=Data not available


**YEAR 2000 OBJECTIVES, MASSACHUSETTS AND CAMBRIDGE RATES,  
CONTINUED**

	HP 2000 Goal	Mass. Rate	Cambridge Rate
Reports by police for domestic incidents (total annual number)	*	*	907 <sup>4</sup>
Restraining orders filed for domestic violence	*	*	574 <sup>5</sup>
Restraining orders violated (percent of total restraining orders filed)	*	*	10.5% <sup>4</sup>
Ever physically or sexually hurt by intimate partner			
Women 18+ years	*	14% <sup>6</sup>	*
Men 18+ years	*	3% <sup>6</sup>	*
Children present at domestic violence call	*	*	23% <sup>7</sup>
Children involved in restraining order (estimated annual number)	*	*	290 <sup>7</sup>
Children who witnessed violence in family			
Students in grades 6-8 (in past year)	*	*	10.1% <sup>8</sup>
Students in grades 9-12 (in past year)	*	*	8.8% <sup>9</sup>
Child abuse and neglect (per 1,000 children less than 18 years)	*	49 <sup>10</sup>	39 <sup>10</sup>
Weapon-carrying in school			
Students in grades 6-8 (in past year)	*	*	8.9% <sup>8</sup>
Students in grades 9-12 (in past month)	*	*	8.0% <sup>9</sup>

\*=Data not available



- <sup>1</sup> 1992-96 average annual rate. MassCHIP, Massachusetts DPH, v2.0 r168.0, June 9, 1998
- <sup>2</sup> 1997 rate. Weapon-Related Injury Surveillance System (WRISS), Massachusetts DPH, 250 Washington Street Boston, MA 02106. Rate calculations use 1990 U. S. Census data.
- <sup>3</sup> 1997 rate. Crime Reporting Unit, Massachusetts State Police. Numbers based on crimes reported by local police.
- <sup>4</sup> 1997 Annual Crime Report, Cambridge Police Crime Analysis Unit. Cambridge Police Department. Rate calculations use 1990 U. S. Census data.
- <sup>5</sup> Cambridge Police Department, 1997
- <sup>6</sup> Massachusetts Behavioral Risk Factor Survey (BRFS), Massachusetts DPH, 1996
- <sup>7</sup> Operations Safe Home, Edward J. Byrne Memorial Grant Program, Cambridge Police Dept. Nov. 6, 1995
- <sup>8</sup> Middle Grades Health Survey, Cambridge Public School Department, 1997
- <sup>9</sup> Teen Health Survey, Cambridge Public School Department, 1998
- <sup>10</sup> Child Maltreatment Statistics, Massachusetts Department of Social Services, 1996

**Table 3-2****SHARP INSTRUMENT INJURY RATES**

Cities/Towns with Populations over 70,000, reported in 1995-97

City/Town	Reported Cases			Rate (per 100,000)		
	1995	1996	1997	1995	1996	1997
Lawrence	67	77	81	95.4	109.7	115.4
Brockton	126	99	91	135.8	106.7	98.1
Boston	704	586	440	122.6	102.0	76.6
Springfield	207	133	106	131.9	84.7	67.5
Worcester	114	101	104	67.2	59.5	61.3
Fall River	33	48	55	35.6	51.8	59.3
Lynn	74	50	48	91.1	61.5	59.1
New Bedford	68	55	45	68.1	55.0	45.0
Lowell	37	36	44	35.8	34.8	42.5
<b>Somerville</b>	<b>29</b>	<b>34</b>	<b>22</b>	<b>38.1</b>	<b>44.6</b>	<b>28.9</b>
<b>Cambridge</b>	<b>24</b>	<b>23</b>	<b>16</b>	<b>25.1</b>	<b>24.0</b>	<b>16.7</b>
Quincy	18	23	14	21.2	27.1	16.5
Newton	3	3	2	3.6	3.6	2.4
<b>Massachusetts 2210</b>	<b>1946</b>	<b>1665</b>	<b>36.7</b>	<b>32.3</b>	<b>27.7</b>	

Data Source: Weapon-Related Injury Surveillance System (WRISS), Mass. Dept. of Public Health. Cases reported by hospitals and are not adjusted for underreporting. Rates are based on the 1990 U.S. Census.

*Example of how to read this figure:*

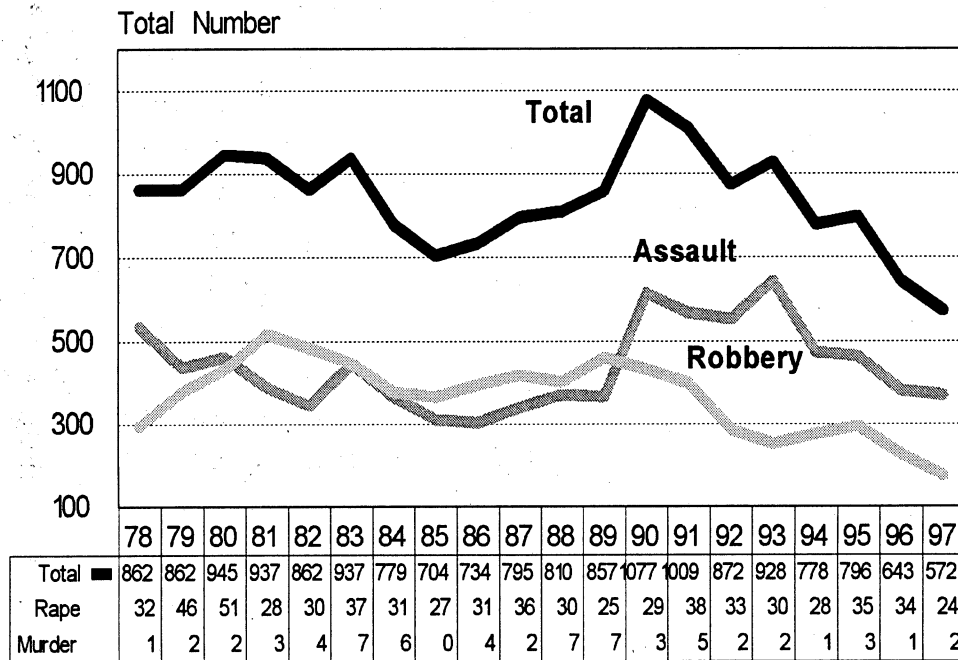
Cambridge ranked 11<sup>th</sup> in violence-related gunshot and sharp instrument injury rates at 16.7/100,000 among Massachusetts cities and towns with a population over 70,000 in 1997.



**Figure 3-1**

### Trends in Violent Crime

Murder, Rape, Robbery, and Assault in Cambridge: 1978-97



Data Source: Uniform Crime Report Statistics, 1997 Annual Crime Report, Cambridge Police Department  
 Note: Rape and murder reported in table only.

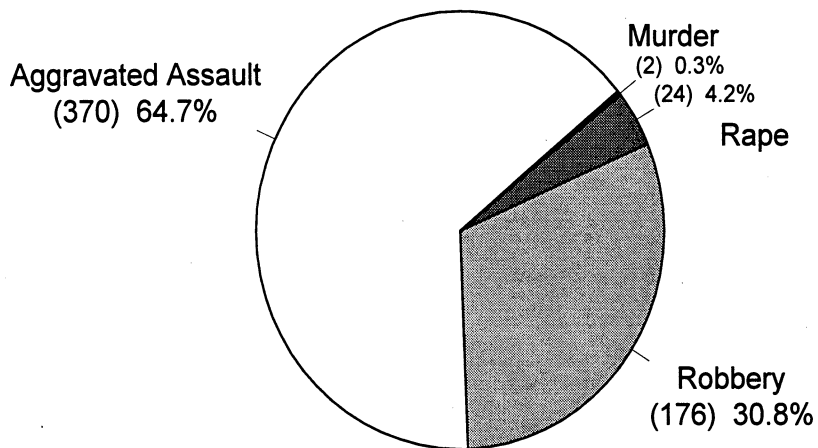
**Example of how to read this figure:**

Between 1978 and 1997 violent crime in Cambridge peaked at 1077 crimes in 1990 and fell steadily to 572. Since 1990, violent crime has shown a steady 47% decrease.

**Figure 3-2**

## Violent Crime

Murder, Rape, Robbery, and Assault in Cambridge: 1997



Total number of violent crimes for 1997 = 572

Data Source: 1997 Annual Crime Report, Cambridge Police Department.

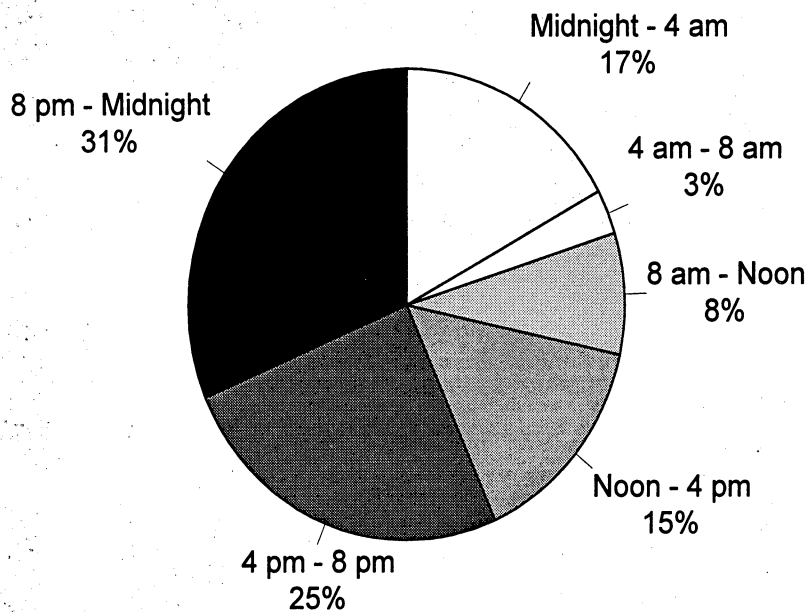
*Example of how to read this figure:*

In Cambridge in 1997 the most common form of violent crime was aggravated assault, accounting for 64.7% of violent crime.

**Figure 3-3**

### Violent Crime by Time of Day

Murder, Rape, Robbery, and Assault in Cambridge: 1997



Total number of violent crimes for 1997 = 572

Data Source: 1997 Annual Crime Report, Cambridge Police Department.

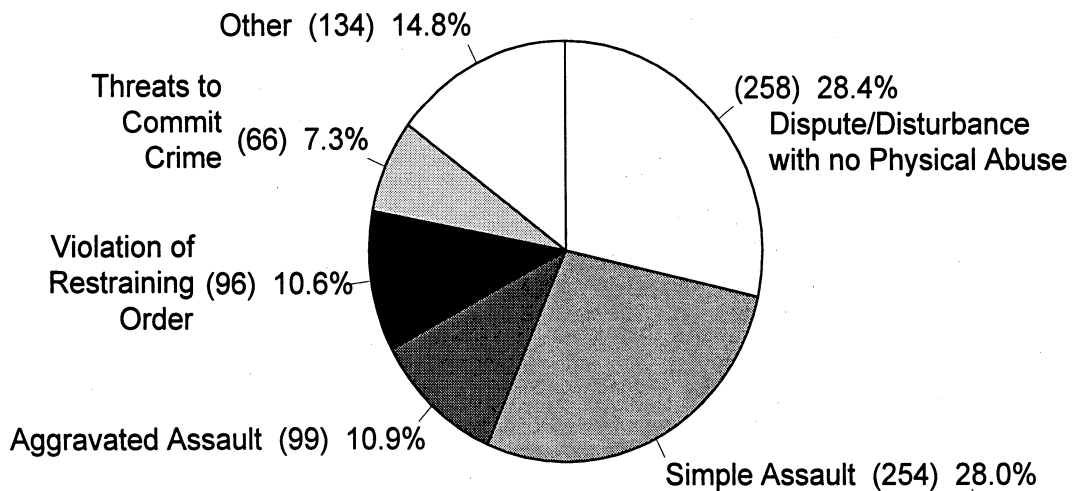
*Example of how to read this figure:*

Three fourths of violent crime occurs during the 12 hour period from 4pm to 4am.

**Figure 3-4**

## Domestic Crimes

Cambridge: 1997



Domestic crimes include offenses committed against family members, spouses, ex-spouses, roommates, romantic partners, and ex-romantic partners.

Total number = 907

Data Source: 1997 Annual Crime Report, Cambridge Police Department.

### *Example of how to read this figure:*

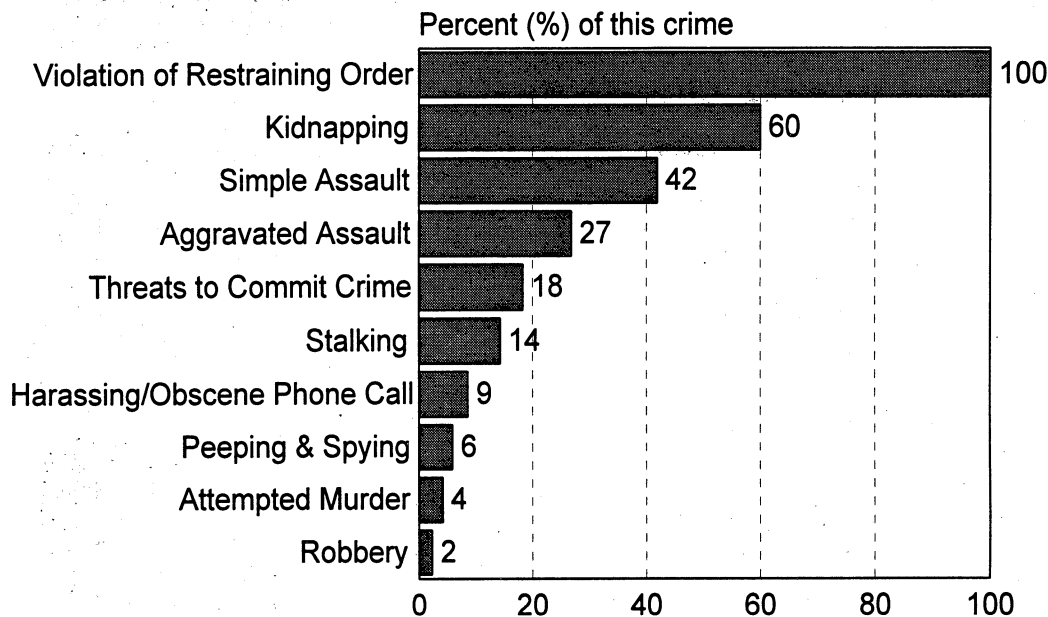
Among the 911 calls to the Cambridge police concerning domestic crime in 1997, 28.4% were disputes/disturbances with no physical abuse; 10.6% involved violation of a restraining order; and 38.9% aggravated and simple assaults.



**Figure 3-5**

**Percent of Crimes that Are Domestic Incidents**

Cambridge: 1997



Domestic crimes include offenses committed against family members, spouses, ex-spouses, roommates, romantic partners, and ex-romantic partners.

Data Source: 1997 Annual Crime Report, Cambridge Police Department.

*Example of how to read this figure:*

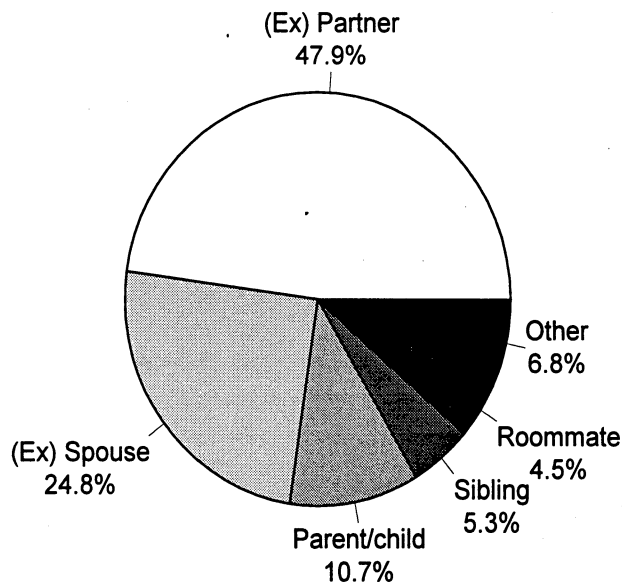
In Cambridge in 1997 domestic incidents accounted for 100% of violations of restraining orders; 60% of kidnappings; and 42% of simple assaults.



**Figure 3-6**

## Offender-Victim Relationship in Domestic Violence Incidents

Cambridge: 1997



Total number = 907

Source: Cambridge Police Department, Annual Crime Report, 1997

***Example of how to read this figure:***

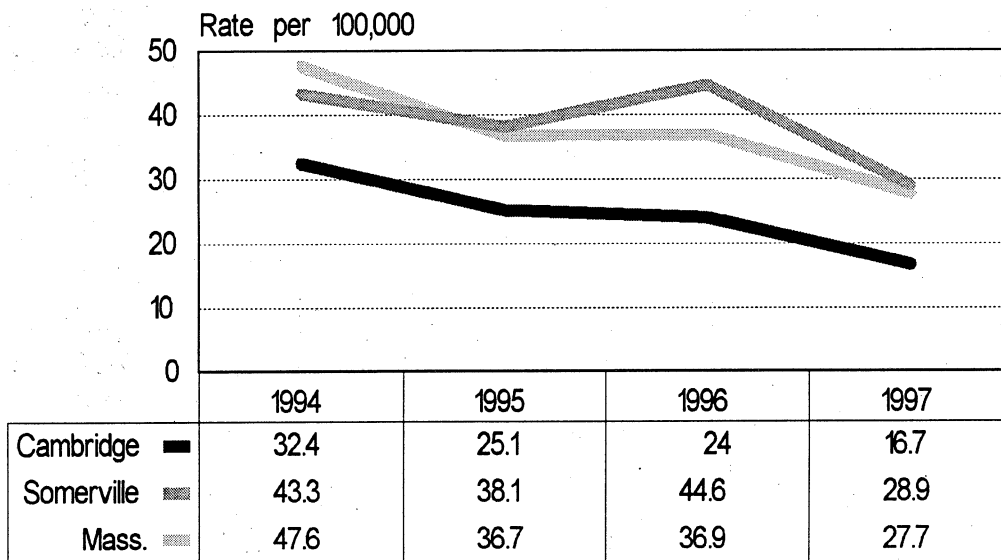
The majority of domestic violence incidents (72.7%) were committed by a current or former partner or spouse in Cambridge in 1997; 10.7% were incidents of child abuse.



**Figure 3-7**

### Violence-Related Injuries

Visits to Emergency Departments for Injuries from Guns and Sharp Instruments  
Cambridge, Somerville, and Massachusetts: 1994-97



Denominators for rates are based on data from the 1990 U.S. Census  
Data Source: Weapon-Related Injury Surveillance System, Massachusetts DPH

***Example of how to read this figure:***

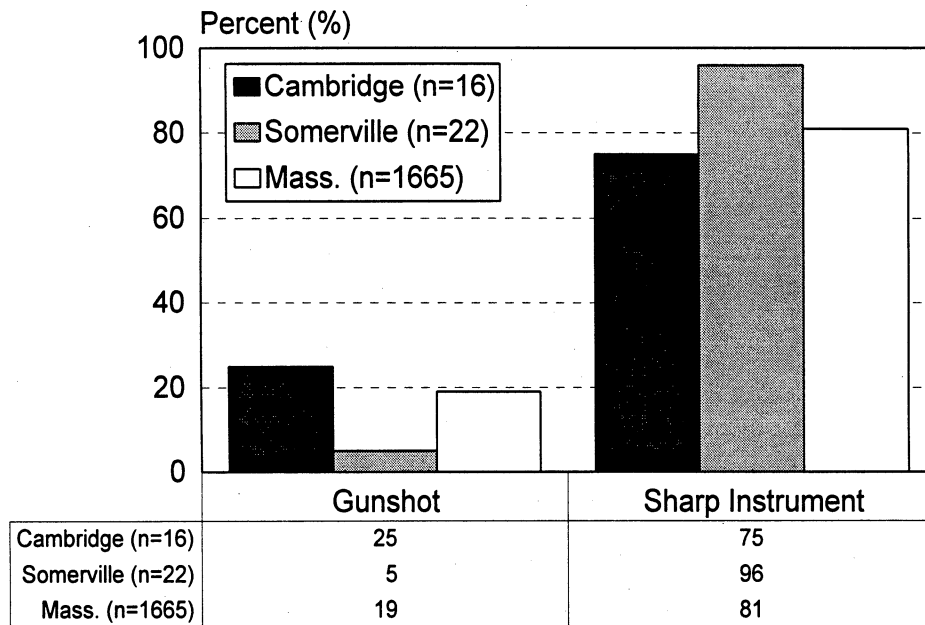
Rates of violence-related injuries fell in Cambridge from 32.4/100,000 in 1994 to 16.7/100,000 in 1997.



**Figure 3-8**

**Violence-Related Injuries by Type of Wound**

Injuries from Guns and Sharp Instruments  
Cambridge, Somerville, and Massachusetts: 1997



Data Source: Weapon-Related Injury Surveillance System, Mass. DPH  
Due to rounding, numbers may not sum to 100%.

*Example of how to read this figure:*

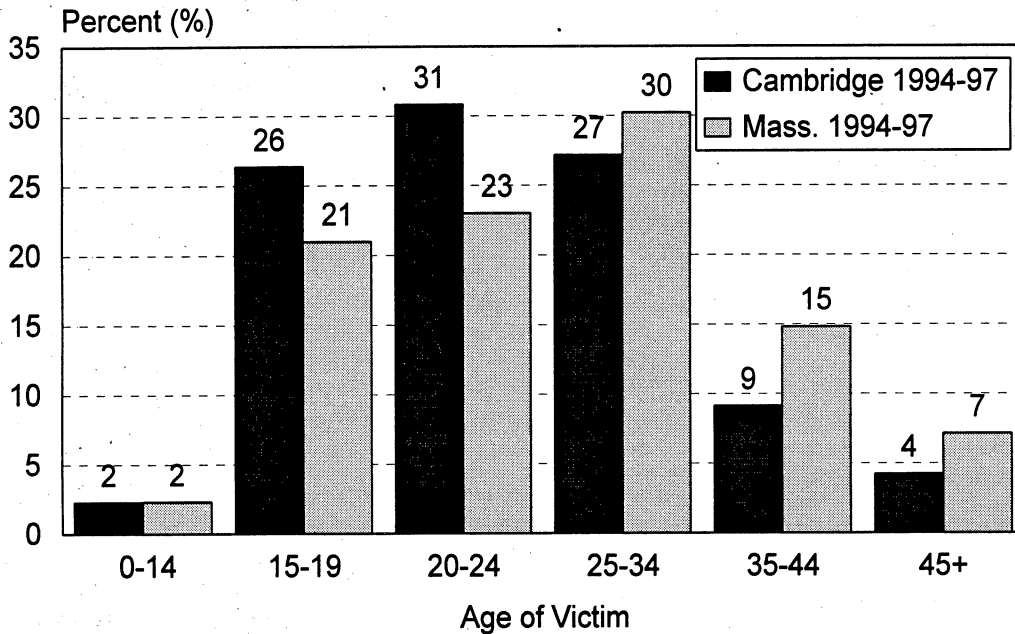
In Cambridge in 1997 a quarter of violence-related injuries were due to gunshot and the remainder due to sharp instrument.



**Figure 3-9**

**Violence-Related Injuries by Age**

Injuries from Guns and Sharp Instruments\*  
Cambridge and Massachusetts: Total 1994-97



\* Reported by Hospital Emergency Depts. in Mass.  
Data Source: Weapon-Related Injury Surveillance System, Mass. DPH

*Example of how to read this figure:*

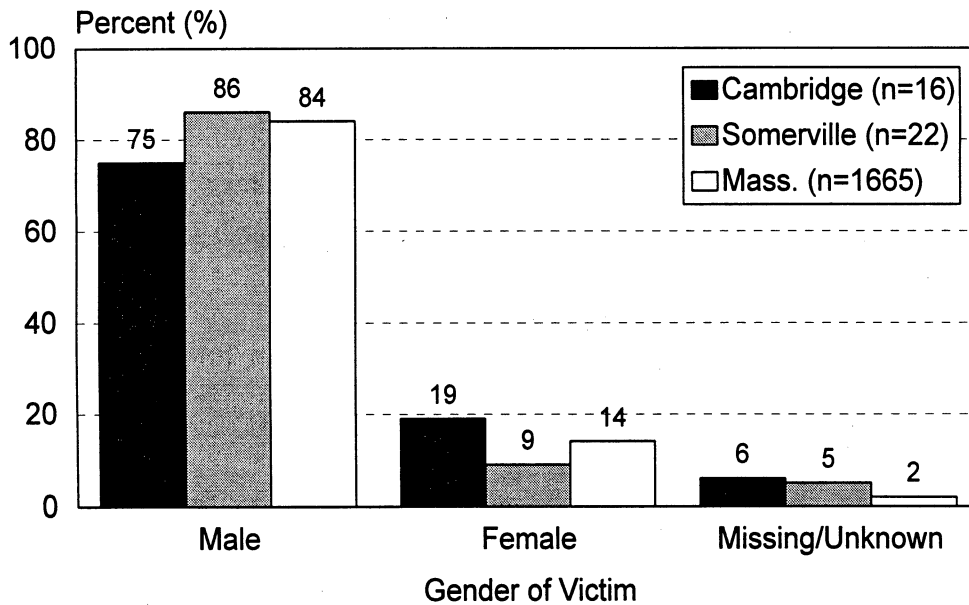
More than 80% of violence-related injuries in Cambridge occurred in the 15-34 year age group during the period 1994-97 .



**Figure 3-10**

**Violence-Related Injuries by Sex**

Injuries from Guns and Sharp Instruments  
Cambridge, Somerville, and Massachusetts: 1997



Data Source: Weapon-Related Injury Surveillance System, Mass. DPH  
Due to rounding, numbers may not sum to 100%.

*Example of how to read this figure:*

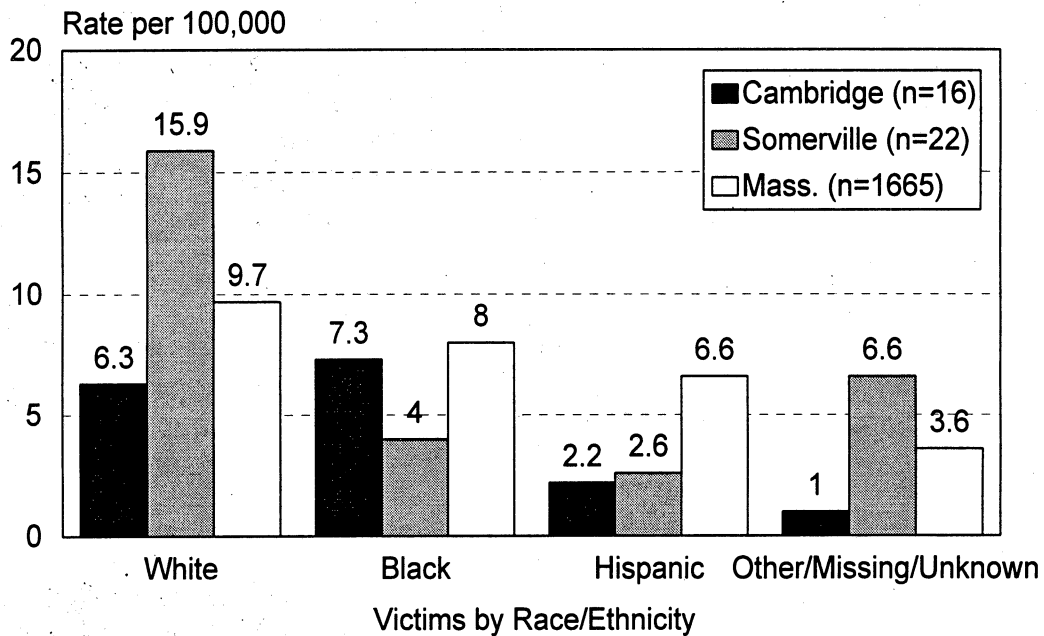
Most (75%) violence-related injuries in Cambridge residents occurred in males.



**Figure 3-11**

**Violence-Related Injuries by Race/Ethnicity**

Injuries from Guns and Sharp Instruments  
Cambridge, Somerville, and Massachusetts: 1997



Data Source: Weapon-Related Injury Surveillance System, Mass. DPH  
Rate per 100,000 is calculated based on 1990 U.S. Census data.

**Example of how to read this figure:**

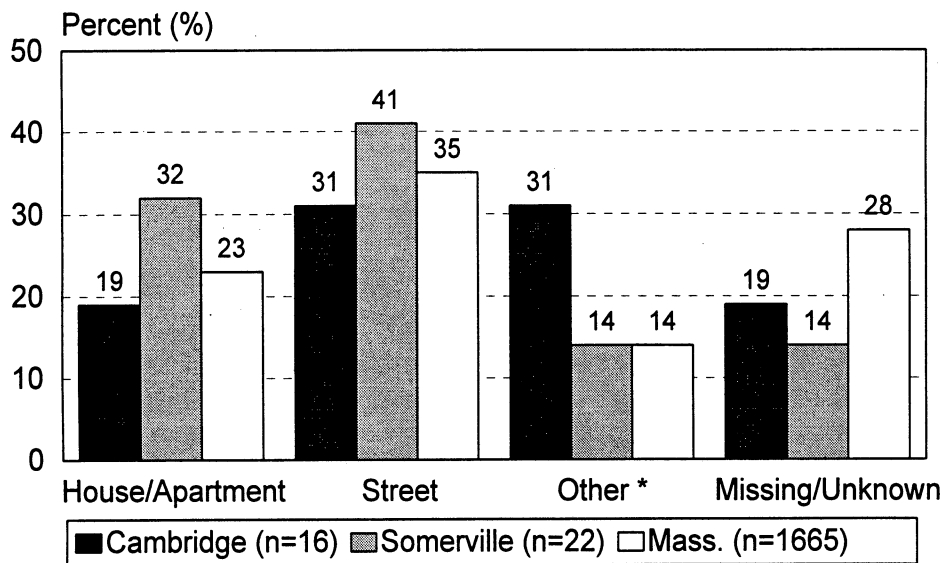
Rates of violence-related injury were higher in Blacks (7.3/100,000) than in Whites (6.3/100,000) or Hispanics (2.2/100,000) in Cambridge in 1997; however, inferences should be made with caution because the numbers are small.



**Figure 3-12**

**Violence-Related Injuries by Location of Incident**

Injuries from Guns and Sharp Instruments  
Cambridge, Somerville, and Massachusetts: 1997



Data Source: Weapon-Related Injury Surveillance System, Mass. DPH

\* Other includes workplace, bar, etc.

Due to rounding, numbers may not sum to 100%

*Example of how to read this figure:*

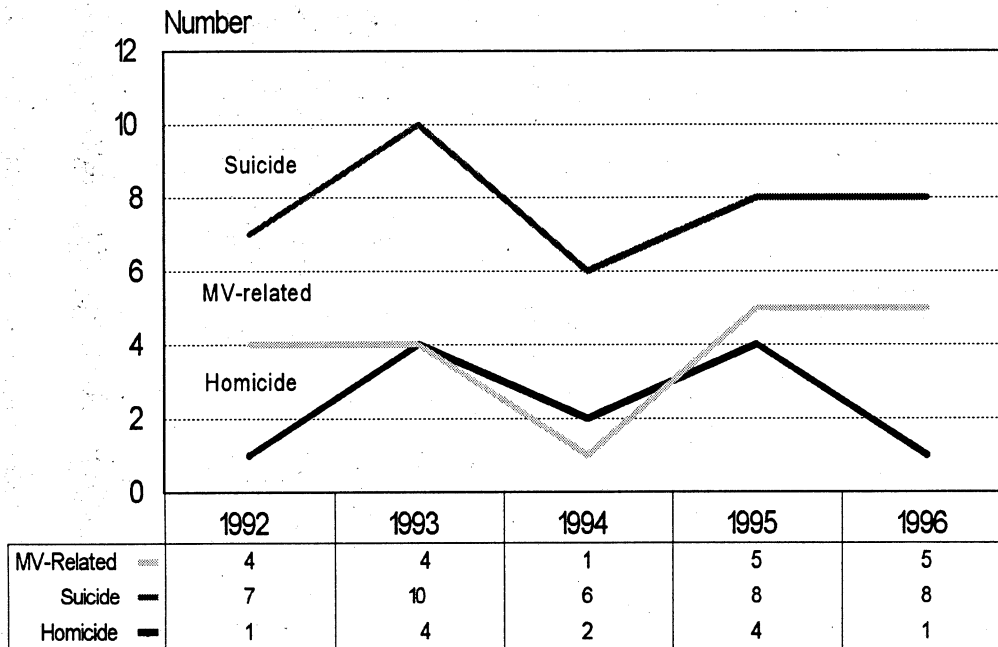
More violence-related injuries from weapons occurred on the street in Cambridge (31%) compared with the home (19%) in 1997.



**Figure 3-13**

### Trends of Injury Deaths

Cambridge Residents: 1992-96



MV = Motor Vehicle

Data Source: Mortality (Vital Records), MassCHIP, Mass. DPH, v2.0 r168.0, Dec 1, 1998.

***Example of how to read this figure:***

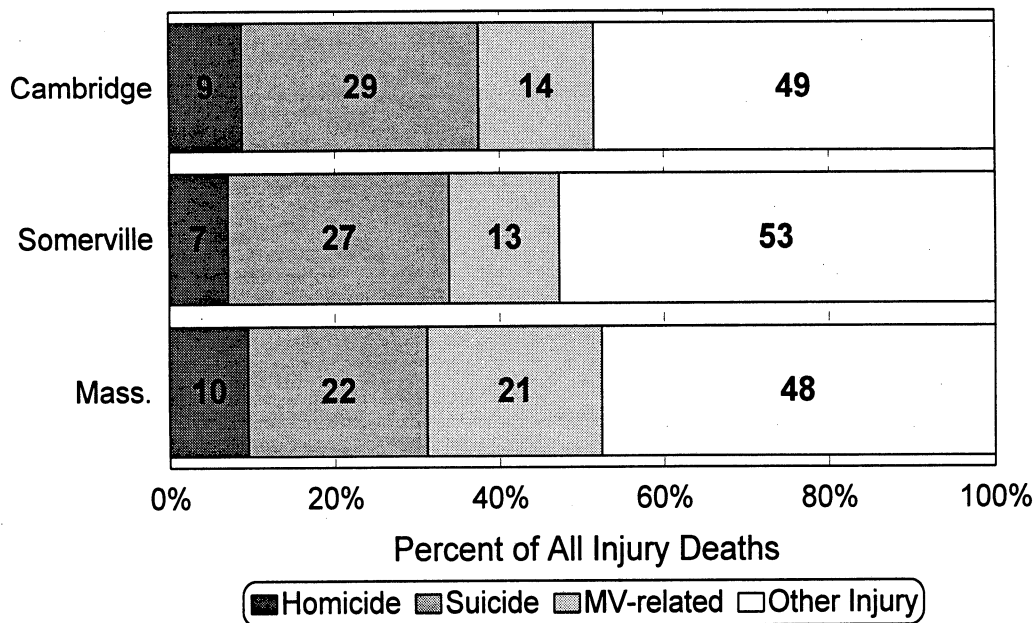
Suicide deaths consistently outnumbered both motor vehicle-related and homicide deaths from 1992 to 1996.



**Figure 3-14**

### Injury Deaths

Cambridge, Somerville, and Massachusetts Residents: 1992-96



Cambridge n=136; Somerville n=127; Mass. n=11,749

External Causes of Injury and Poisoning Codes: E800-E999

Data Source: Mortality (Vital Records), MassCHIP, Mass. DPH, v2.0 r168.0, Dec 1, 1998.

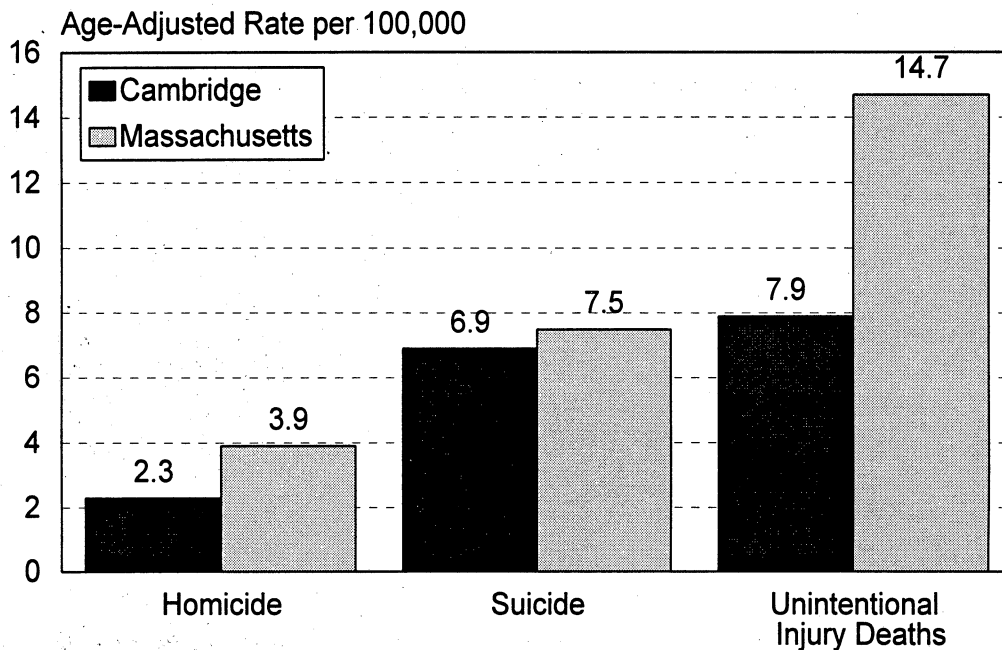
***Example of how to read this figure:***

Suicide was the single most common injury death both in Cambridge and statewide from 1992 to 1996. The category “other” includes deaths from various injuries. Motor vehicle-related deaths were lower in Cambridge (14% of all injury deaths) than statewide (21%).

**Figure 3-15**

## Homicide and Suicide vs. Unintentional Injury Deaths

Cambridge and Massachusetts Residents: 1992-96



Data Source: Mortality (Vital Records), MassCHIP, Mass. DPH, v2.0 r168.0, June 9, 1998.

***Example of how to read this figure:***

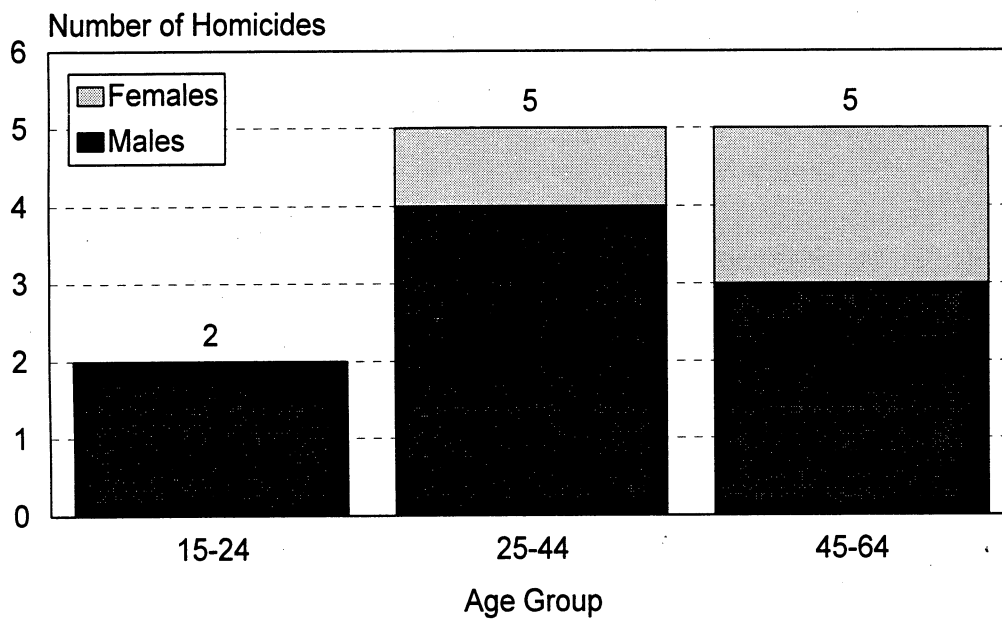
Deaths from suicide are nearly as frequent in Cambridge as those from unintentional injury (largely automobile accidents), and are three fold more frequent than homicides. These rates are lower in Cambridge than state-wide.



**Figure 3-16**

**Homicide by Age and Sex**

Cambridge Residents: 1992-96



Data Source: Mortality (Vital Records), MassCHIP, Mass. DPH, v2.0 r168.0, June 9, 1998.

*Example of how to read this figure:*

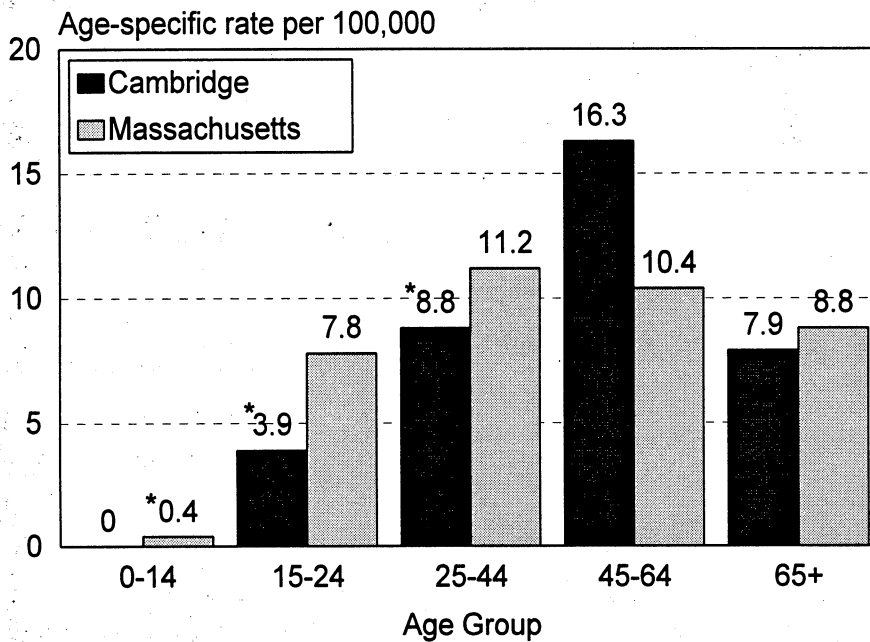
There were more homicides among men than women. However, no inferences should be made from these data because the numbers are very small.



**Figure 3-17**

**Suicide Rates by Age**

Cambridge Residents: 1992-96



\* n < 5

Total number of suicides for Cambridge 1992 to 1996 = 39

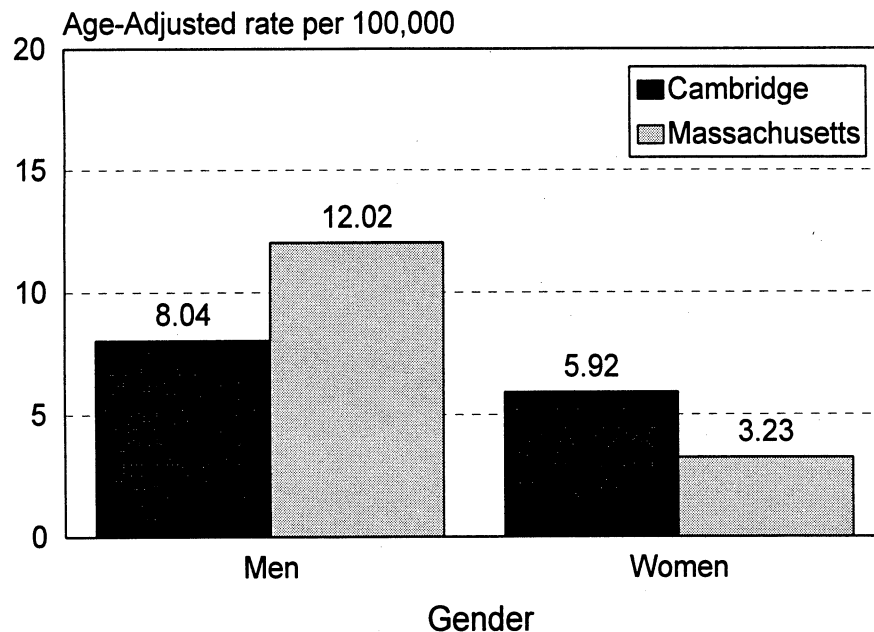
Source: Mortality (Vital Records). MassCHIP v2.0 r168.0, July 23, 1998.

**Example of how to read this figure:**

The rate of suicide peaked in adults ages 45-64 years in Cambridge between 1992 and 1996. These figures should be interpreted with caution due to the small number of suicide deaths in Cambridge.

**Figure 3-18****Suicide Rates by Sex**

Cambridge Residents: 1992-96



Total number of suicides for Cambridge 1992 to 1996 = 39

Source: Mortality (Vital Records), MassCHIP v2.0 r168.0, July 23, 1998.

***Example of how to read this figure:***

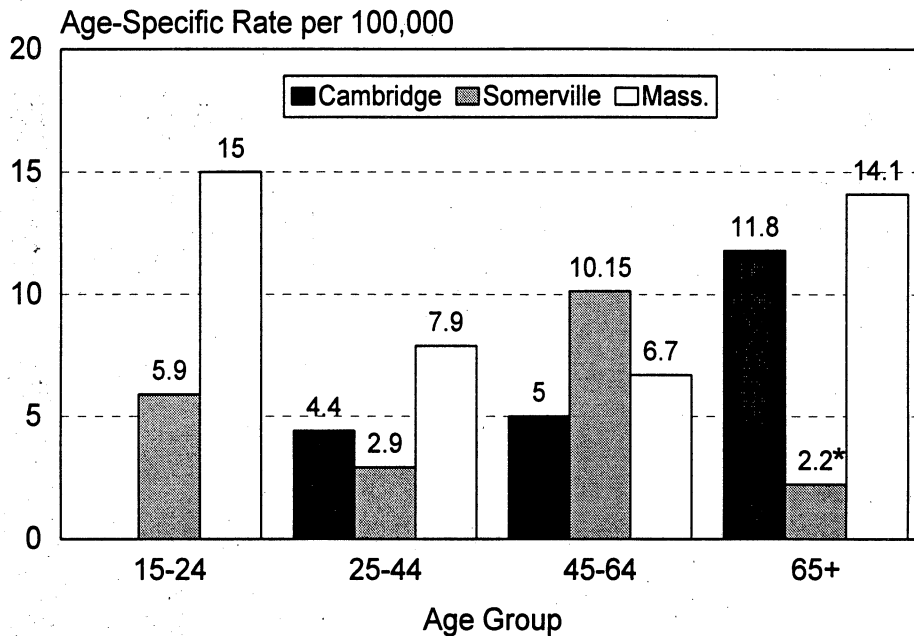
Suicide rates were higher for men (8 per 100,000) than women (5.9 per 100,00) in Cambridge between 1992 and 1996. While rates were also higher for men state-wide, these figures should be interpreted with caution due to the small number of suicide deaths in Cambridge.



**Figure 3-19**

**Motor Vehicle-Related Deaths by Age**

Cambridge, Somerville, and Massachusetts: 1992-96



\* n < 5

Data Source: Mortality (Vital Records), MassCHIP, Mass. DPH, v2.0 r168.0, Dec 1, 1998.

***Example of how to read this figure:***

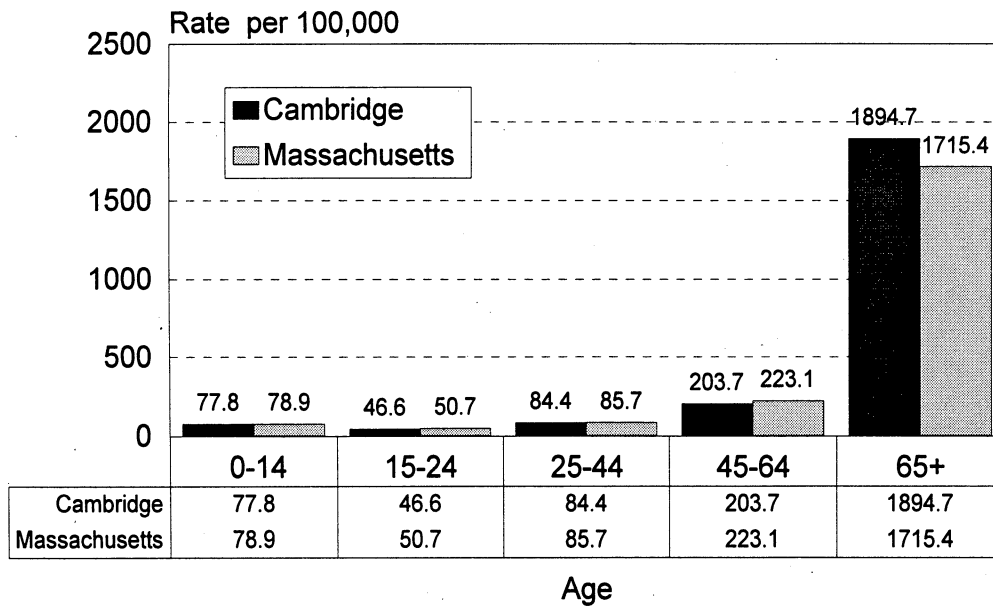
Rates of motor vehicle-related deaths in Cambridge were lower than rates state-wide in all age categories between 1992 and 1996. No children under the age of 15 died in motor vehicle accidents in Cambridge during this period.



**Figure 3-20**

### Injury Hospitalization Due to Falls by Age

Cambridge and Massachusetts: 1997



Source: Uniform Hospital Discharge Data Set, 1997

***Example of how to read this figure:***

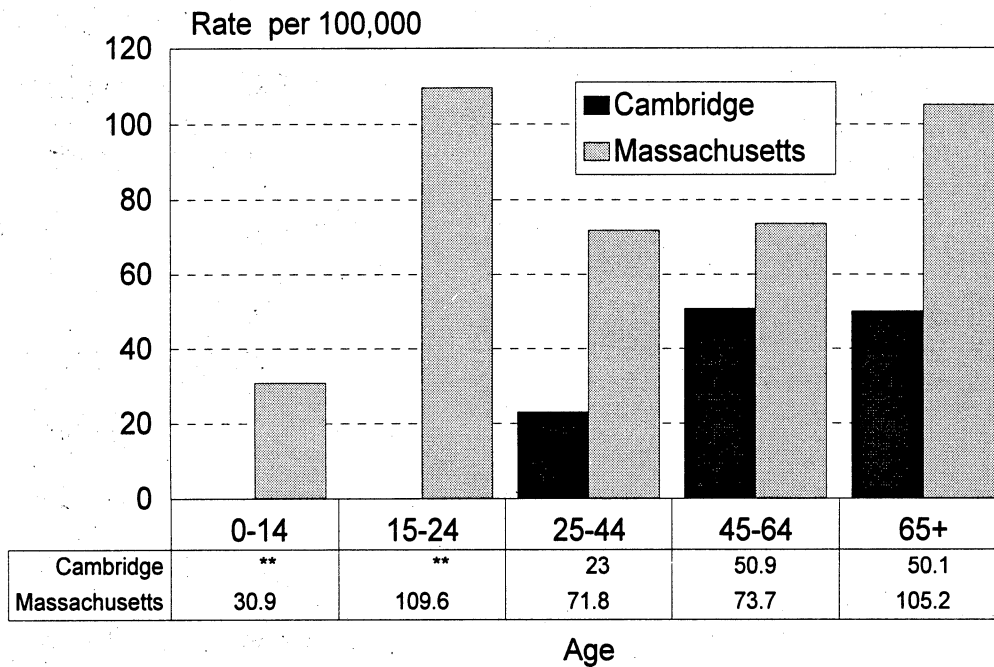
Hospitalization resulting from an injury due to falls was markedly higher after age 65 than at younger ages. Rates of injury hospitalization for falls in Cambridge were similar to state-wide rates.



**Figure 3-21**

**Motor Vehicle Injury Hospitalization by Age**

Cambridge and Massachusetts: 1997



\*\* =less than five cases

Source: Uniform Hospital Discharge Data Set, 1997

*Example of how to read this figure:*

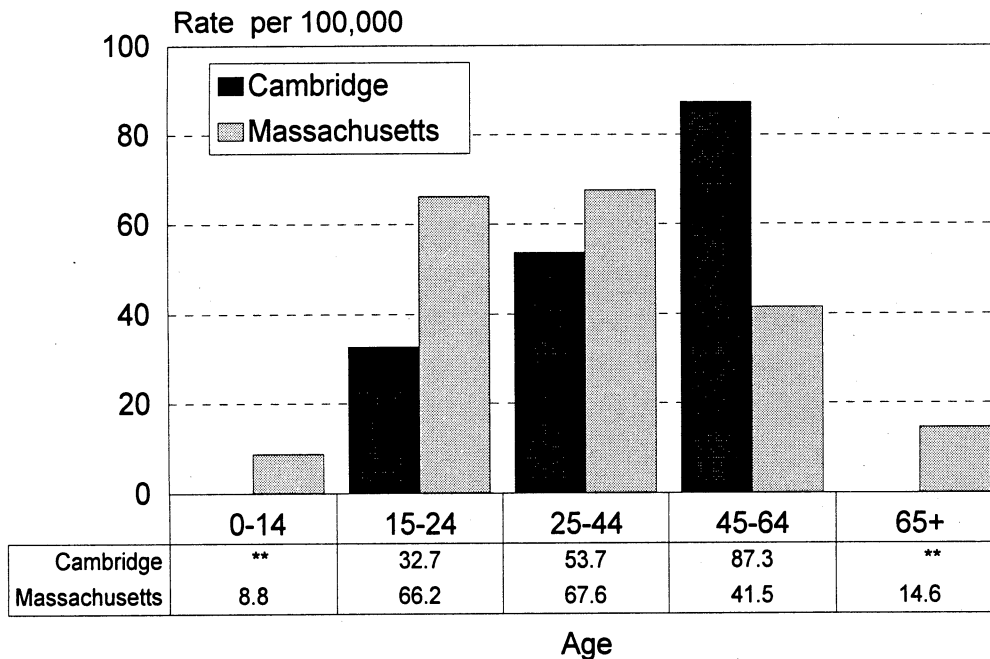
Rates of motor vehicle injury hospitalization were lower in Cambridge than rates state-wide in every age group. The age groups at highest risk for motor vehicle injury hospitalization were those 15 to 24 years of age and those over age 65.



**Figure 3-22**

## Self-Inflicted Injury Hospitalization by Age

Cambridge and Massachusetts: 1997



\*\* =less than five cases

Source: Uniform Hospital Discharge Data Set, 1997

***Example of how to read this figure:***

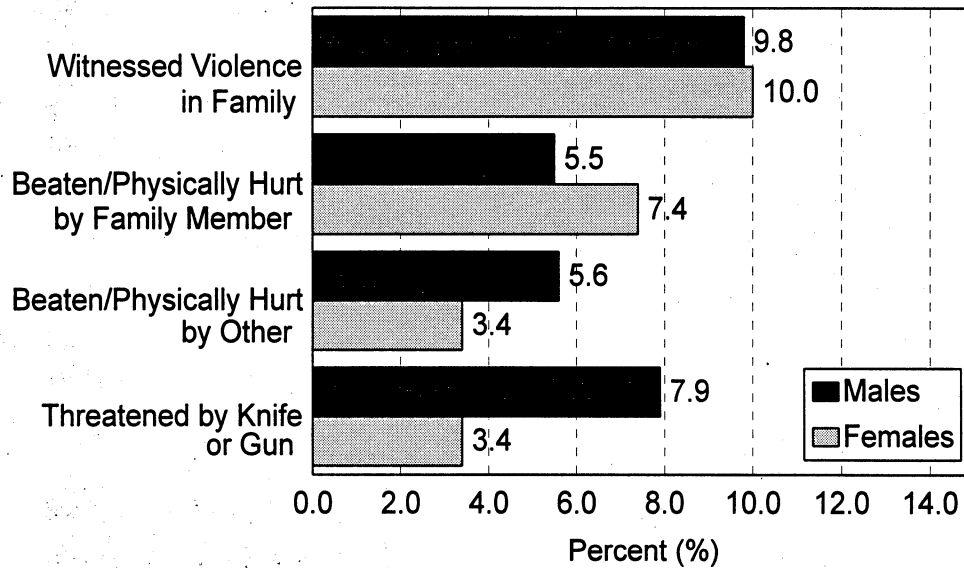
Rates of hospitalization for self-inflicted injury in Cambridge peaked in the age group 45-64. No hospitalization for self-inflicted injury was reported for Cambridge residents under 14 or over age 64.



**Figure 3-23**

### Violence-Related Events

Reported by Cambridge Students in Grades 6, 7, and 8: 1997



Total number = 1420  
 Respondents were requested to report about the past 12 months.  
 Source: Middle Grades Health Survey, Cambridge School Department, 1997.

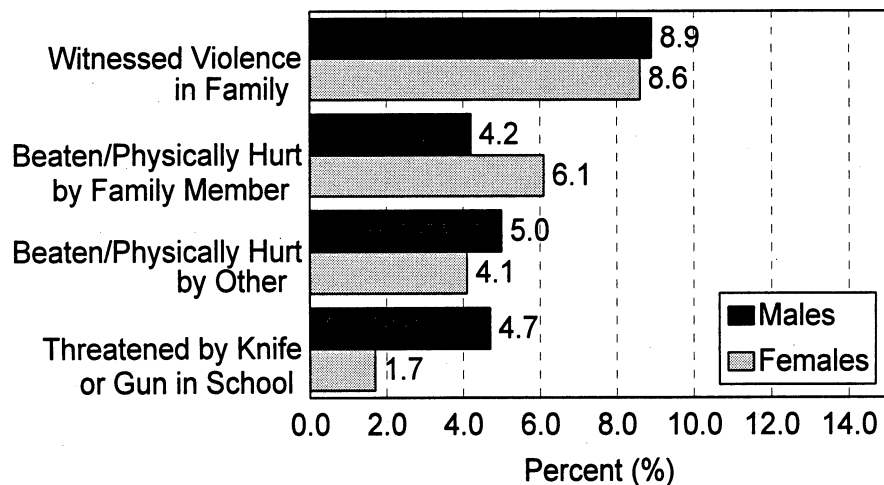
***Example of how to read this figure:***

Many middle school students in Cambridge reported violence in the family in the past 12 months. 9.8% of boys and 10% of girls reported witnessing violence in the family and 5.5% of boys and 7.4% of girls reported being beaten or physically hurt by a family member. Girls were more frequently beaten or physically hurt by a family member than by others.

**Figure 3-24**

## Violence-Related Events

Cambridge Rindge and Latin School: 1998



Respondents were requested to report about the past 12 months.  
Source: Teen Health Survey 1998 (n=1487), Cambridge School Department.

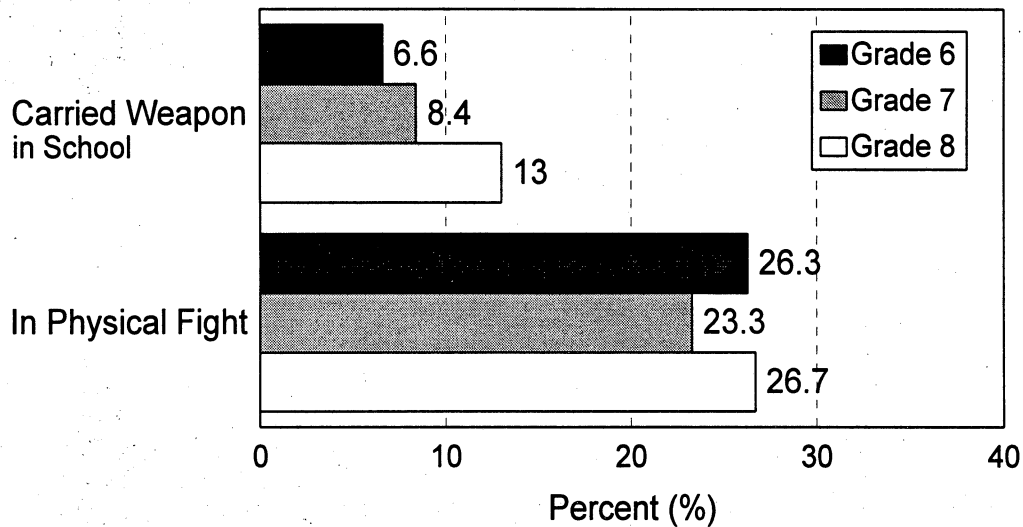
### *Example of how to read this figure:*

Many Cambridge high school students reported violence in their lives during the previous 12 months. 8.9% of boys and 8.6% of girls reported witnessing violence in the family and 4.2% of boys and 6.1% of girls reported being beaten or physically hurt by a family member. Girls were more likely beaten or physically hurt by a family member than by others.

**Figure 3-25**

## Indicators of Violence Among Middle School Students

Cambridge Middle School: 1997



Respondents were requested to report about the past 12 months.

Source: Middle Grades Health Survey (n=1420), 1997, Cambridge School Department.

### *Example of how to read this figure:*

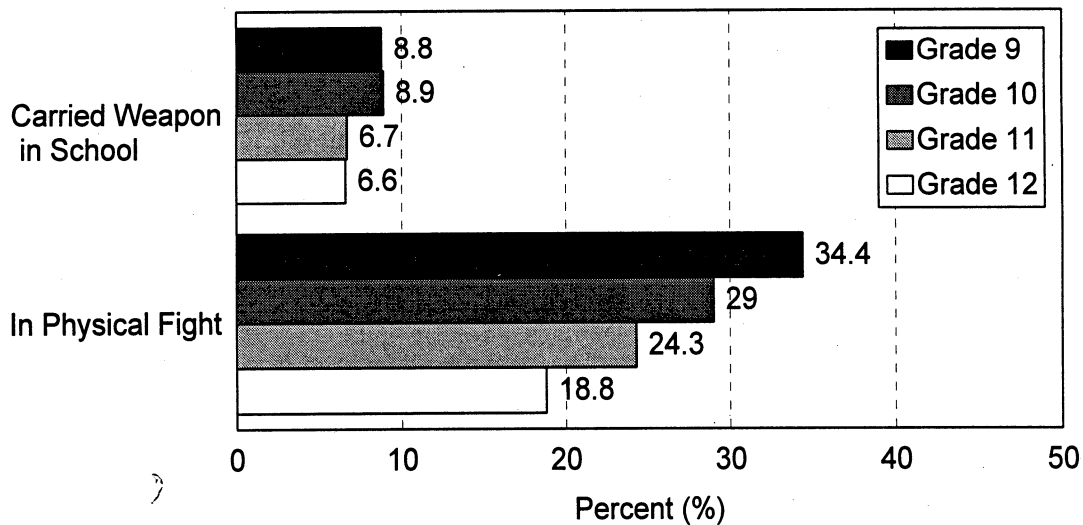
Among Cambridge middle school students, reports of weapon carrying peaked in 8<sup>th</sup> grade involving 13% of students, while reports of physical fighting fluctuated between 23.3 and 26.7%.



**Figure 3-26**

## Indicators of Violence Among High School Students

Cambridge Rindge and Latin School: 1998



Students were questioned about carrying weapon in school for the past 30 days and physical fight for the past 12 months.

Source: Teen Health Survey (n=1487), 1998, Cambridge School Department.

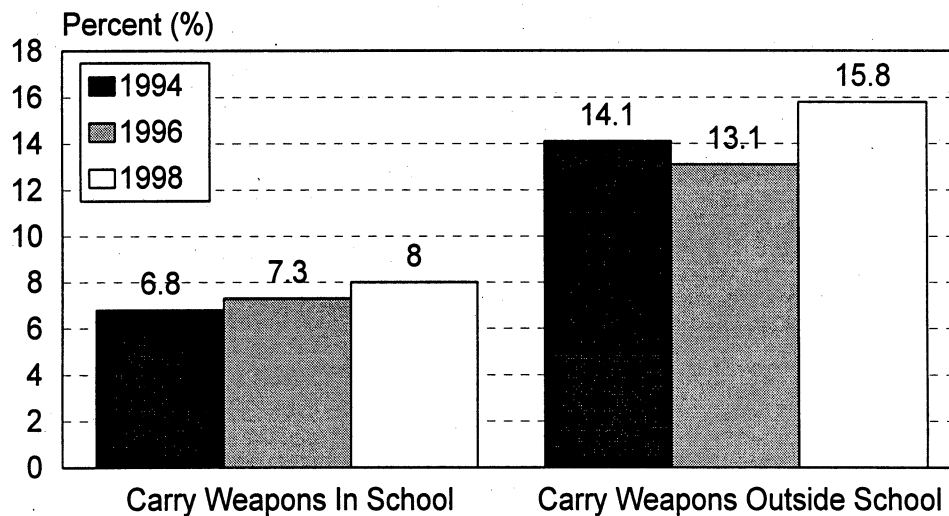
***Example of how to read this figure:***

Among Cambridge high school students, reports of weapon carrying ranged from 8.8% in grade 9 to 6.6% in grade 12; reports of physical fighting decreased markedly with increasing grade from 34.4% to 18.8%.

**Figure 3-27**

## Percent of Students Who Carry Weapons

Cambridge Rindge and Latin School: 1998



Respondents were requested to report about the past 30 days.

Source: Cambridge Public School Dept. Teen Health Survey 1998 (n=1487), 1996 (n=1556), 1994 (n=1407).

### *Example of how to read this figure:*

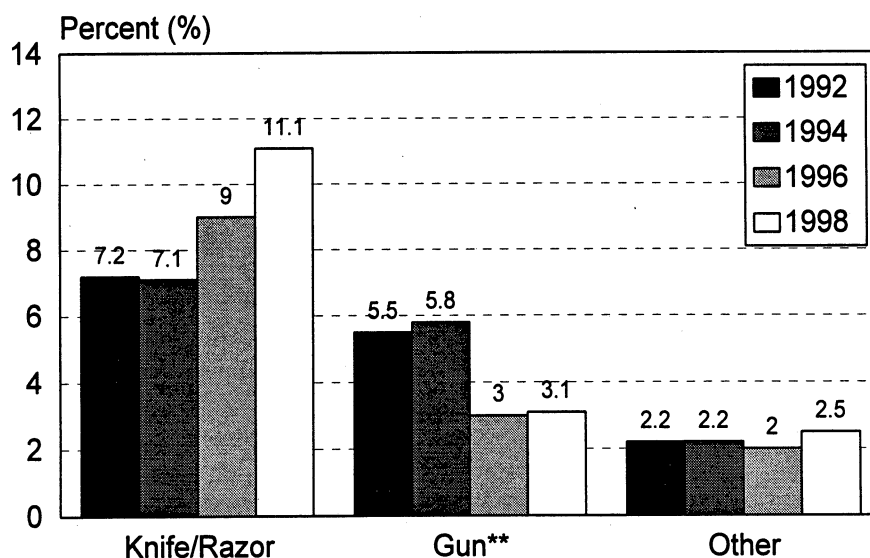
The percent of Cambridge high school students carrying weapons in school rose from 6.8% in 1994 to 8% in 1998; the percent carrying weapons outside school also rose from 14.1% to 15.8%.



**Figure 3-28**

**Type of Weapons Carried by Students\***

Cambridge Rindge and Latin School: 1998



Respondents were requested to report about the last 30 days.

\* Inside and outside school

\*\* Handgun or other gun type

Source: Cambridge Public School Dept. Teen Health Survey 1998 (n=1487), 1996 (n=1556), 1994 (n=1407), 1992 (n=1512)

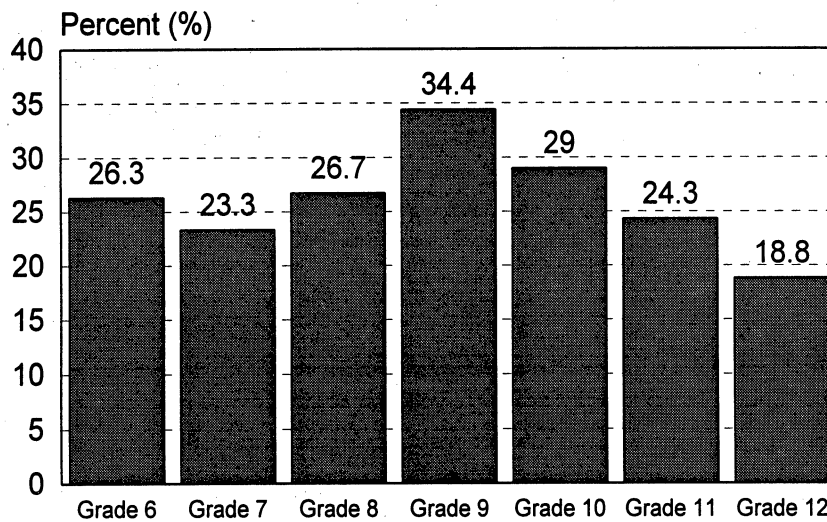
***Example of how to read this figure:***

The percent of Cambridge high school students carrying a knife or razor rose from 7.2% in 1992 to 11.1% in 1998 while gun carrying fell from 5.5% to 3.1% during the same time period.

**Figure 3-29**

## Physical Fights by Grade

Reported by Cambridge Students: Grades 6-8, 1997; Grades 9-12, 1998



Respondents were requested to report about the past 12 months.  
Source: Middle Grades Health Survey 1997 (n=1420), Teen Health Survey 1998 (n=1487),  
Cambridge School Department.

*Example of how to read this figure:*

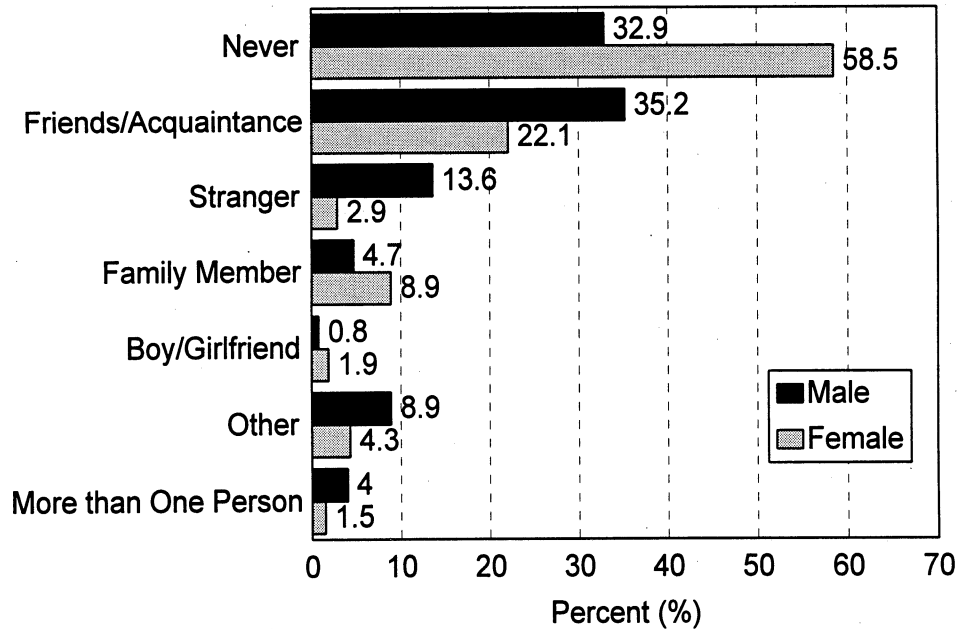
The percent of students reporting participation in a physical fight in the past 12 months peaked at 34.4% in grade 9 among Cambridge middle and high school students.



**Figure 3-30**

### Physical Fighting With Whom?

Cambridge Rindge and Latin School: 1998



Total number = 1487  
 Respondents were requested to report about the last time they were in a physical fight.  
 Source: Teen Health Survey, Cambridge School Department, 1998.

**Example of how to read this figure:**

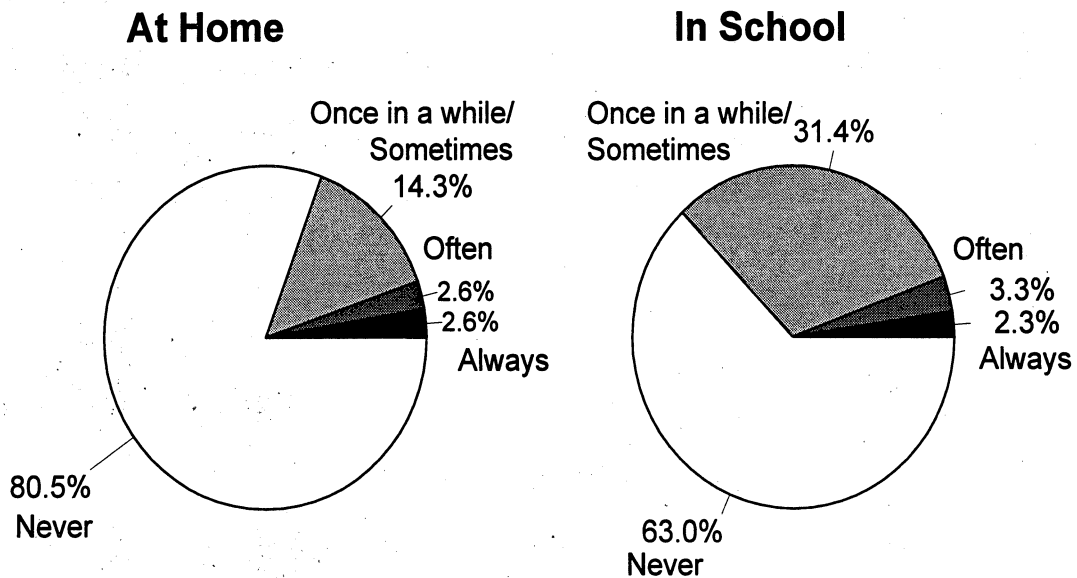
While 58.5% of Cambridge high school girls and 32.9% of boys reported never fighting, among students reporting a fight, the most common adversary was a friend or acquaintance, reported by 35.2% of boys and 22.1% of girls.



**Figure 3-31**

## Worry About Physical Fights Among Middle School Students

Cambridge Students in Grades 6, 7, and 8: 1997



Total number = 1420

Source: Middle School Survey, Cambridge School Department, 1997.

***Example of how to read this figure:***

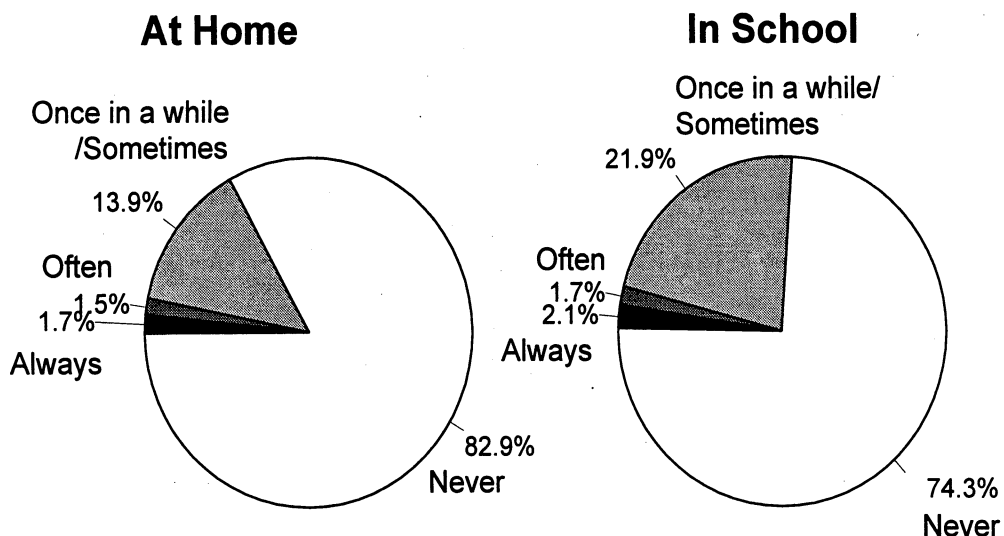
Over 19% of Cambridge middle school students reported worrying about physical fights at home and over 35% worried about fights in school.



**Figure 3-32**

## Worry About Physical Fights Among High School Students

Cambridge Rindge and Latin School: 1998



Total number = 1487  
 Source: Teen Health Survey, Cambridge School Department, 1998.

***Example of how to read this figure:***

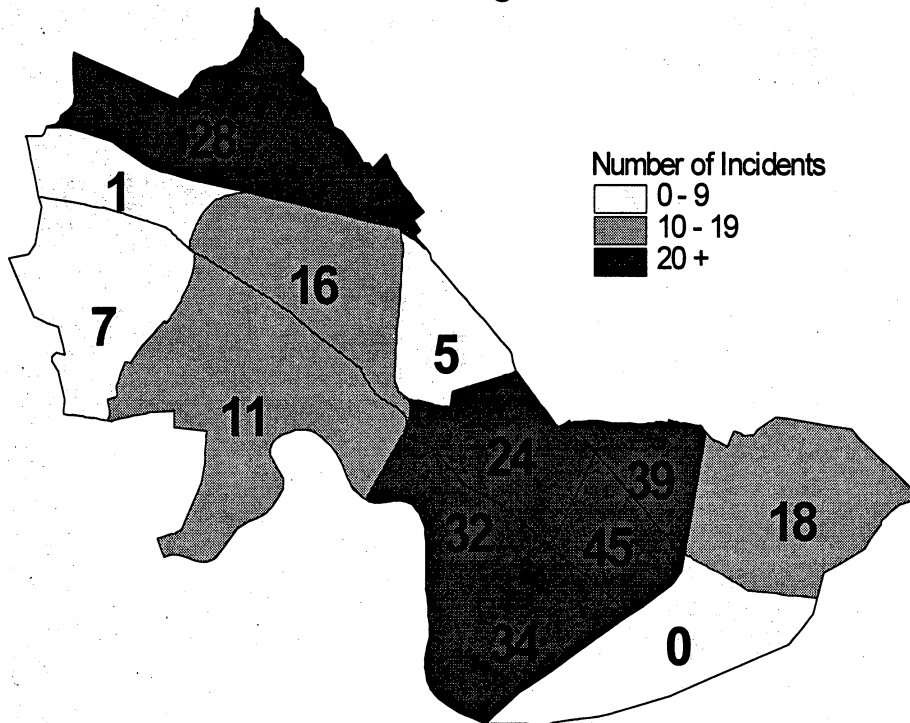
Over 17% of Cambridge high school students reported worrying about physical fights at home and 25% worried about fights in school.



Figure 3-33

# Reported Domestic Disturbances by Neighborhood

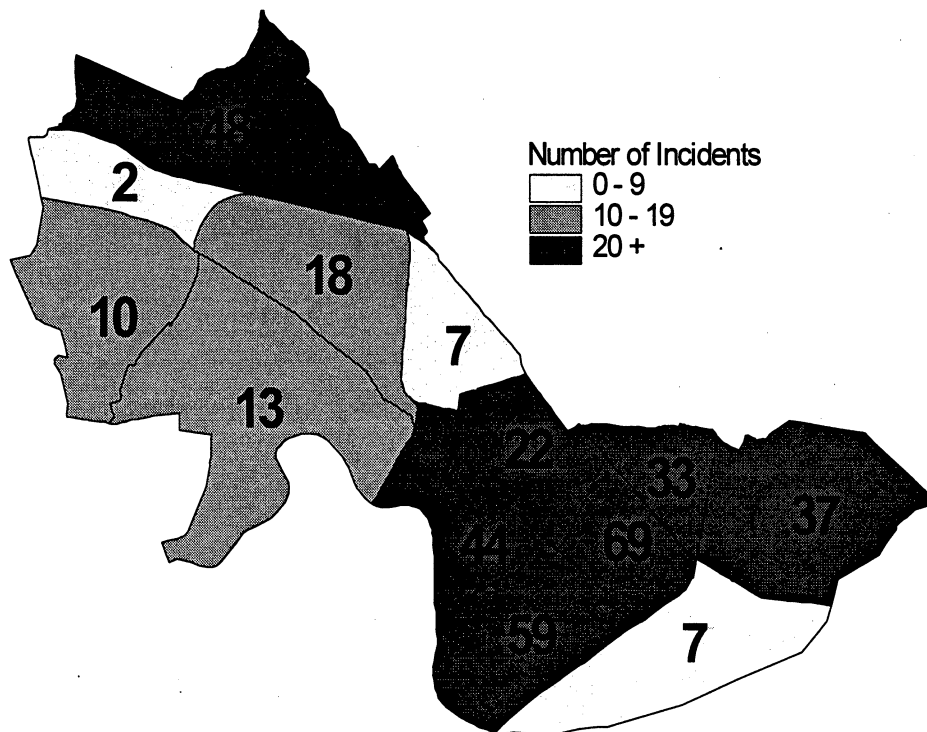
Cambridge: 1997





**Figure 3-34**

## Aggravated Assaults by Neighborhood Cambridge: 1997



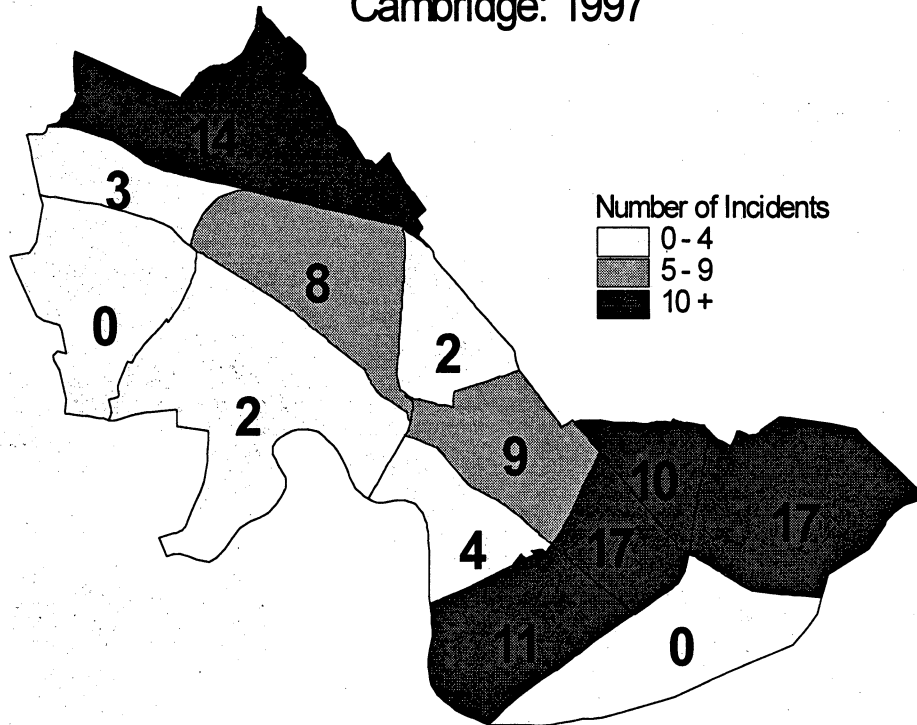
Source: 1997 Annual Crime Report, Cambridge Police Department.



**Figure 3-35**

# Reported Restraining Order Violations by Neighborhood

Cambridge: 1997



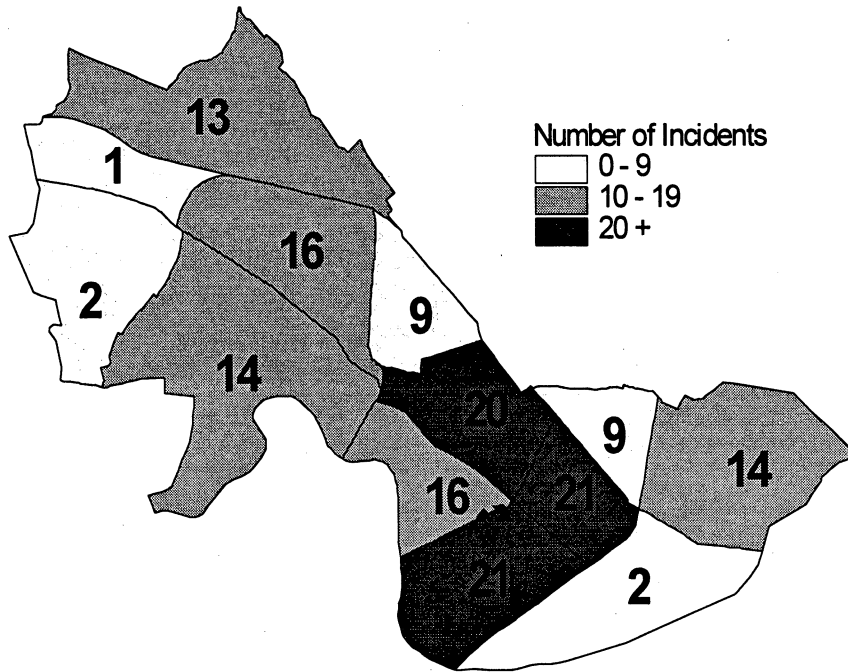
Source: 1997 Annual Crime Report, Cambridge Police Department.



Figure 3-36

# Street Robberies by Neighborhood

Cambridge: 1997





## 4. Environmental Health

- Cambridge tap water has met all EPA water quality standards since August 1994.
- Days with unhealthful air quality in the Boston area have dropped from fifteen in 1988 to one or none each year since 1993.
- While failing to meet EPA ozone standards in 1988, the Boston area has met these standards each year since 1992.
- Total enteric illnesses reported increased markedly in 1997, probably due to an enhanced surveillance program instituted by the state Department of Public Health in that year.
- Number of housing units de-lead in Cambridge has increased each year since 1993.
- The number of children in Cambridge reported to have elevated blood lead levels has dropped in recent years, but so have screening rates.

### Indicators:

- **Air Pollutants**

The Pollution Standards Index (PSI), reported as a value between 0 and 500, corresponds to a health descriptor like "good," or "unhealthful" with the following values: Good, 0-50; Moderate, 51-100; Unhealthful, 101-200; Very Unhealthful, 201-300; Hazardous, 301-500.

The pollutants which constitute the PSI are ground-level Ozone (O<sub>3</sub>), Nitrogen dioxide (NO<sub>2</sub>), Sulfur dioxide (SO<sub>2</sub>), Particulate matter (PM<sub>10</sub>), Carbon monoxide (CO), and Lead (Pb). Warm weather creates conditions favorable to the formation of the pollutants which make up this index, so conditions tend to be worse in the summer. Boston data is based on Eastern Massachusetts averages as collected by Massachusetts Department of Environmental Protection.

- **Reportable Enteric Illness**

Enteric diseases (affecting the intestines) are generally associated with fecal-oral transmission (fecal contamination via direct or indirect oral contact with contaminated water, surfaces or food). Some are also transmitted via drinking water in less developed regions of the world, but are far less likely to persist in a protected and treated water supply. Twelve enteric illnesses are reportable to the Massachusetts Department of Public Health (DPH). While some are fairly commonly contracted (Campylobacter, Giardiasis, Salmonellosis, Hepatitis A), others are infrequently contracted (Amebiasis, Salmonellosis typhi, Cryptosporidium, Cyclospora, E coli, Listeriosis, Toxoplasmosis, Trichinosis).



- **Reportable Zoonotic Illnesses**

The prevalence of these diseases relative to one another is fairly consistent from year to year. Zoonotic diseases are those passed between animals and humans. Though some cases of Giardiasis (e.g., beavers) and Listeria (e.g., cows) are also known to be zoonotic, they are reported by the Massachusetts Department of Public Health as enteric illnesses.

- **Household Poisonings**

While there is no state (DPH) reporting requirement for household poisonings, a great majority of these instances result in a phone call to the Massachusetts Poison Control Center at The Children's Hospital. Data is not available on the specific toxicants which caused these local poisonings, but the number and rate of calls (per 1,000 population) to the Poison Control Center are indicated. National data analyzing poison control calls indicates that children under 20 years of age consistently represent two-thirds of these incidents. Around 88% of these exposures occur in the home in a given year and 86% are unintentional.

- **Lead Exposure**

Childhood Lead Levels

While national standards identify 20 ug/dl (micrograms of lead per deciliters of blood) as the threshold for lead poisoning in children, there is growing evidence that 15 ug/dl lead can result in developmental effects as well. Between 2,500 and 3,400 children are screened annually in Cambridge for lead levels in blood. Efforts to limit child exposure to this toxic metal are intended to prevent impairment of neurological development, vitamin D metabolism, and other physiological effects in children. While adults are also subject to health effects, these occur at higher lead levels and cause fewer long term health effects.

Deleading Notifications

Contractors performing such abatements are required to notify the DPH Childhood Lead Poisoning Prevention Program (CLPPP). While there is no assurance of full compliance, these Deleading Notifications reflect the number of lead abatements more accurately than any other measures currently available.

- **Water Quality**

Drinking water and its regulated contaminants are monitored by the Cambridge Water Department as mandated by EPA drinking water quality regulations. The Cambridge drinking water supply system has only failed to meet these standards on one occasion since 1988, when it identified several isolated positive coliform counts within a one-month period in 1994. Coliform bacteria counts are used to



reflect all possible bacteriological contamination, but are generally not harmful in small, isolated instances.

Since August 1998, Cambridge has received its drinking water from the MWRA and its Quabbin Reservoir source. This two-year arrangement will allow Cambridge to update its water treatment plant at Fresh Pond to incorporate state-of-the-art treatment technology with greater protection and fewer chemical additives (better taste). In addition, a continuing program of systematic replacement of aged water mains and lead-containing service pipes running from the street to each building will improve water quality across the city progressively.

- **Sanitation and Housing**

The Inspectional Services Department (ISD) is empowered to enforce sanitary, restaurant, and housing code within the City of Cambridge. These conditions have clear implications for human exposure to agents of infection. ISD addresses these concerns by inspecting private residents and public places of business for garbage, rodents, roaches, and general unsanitary conditions.

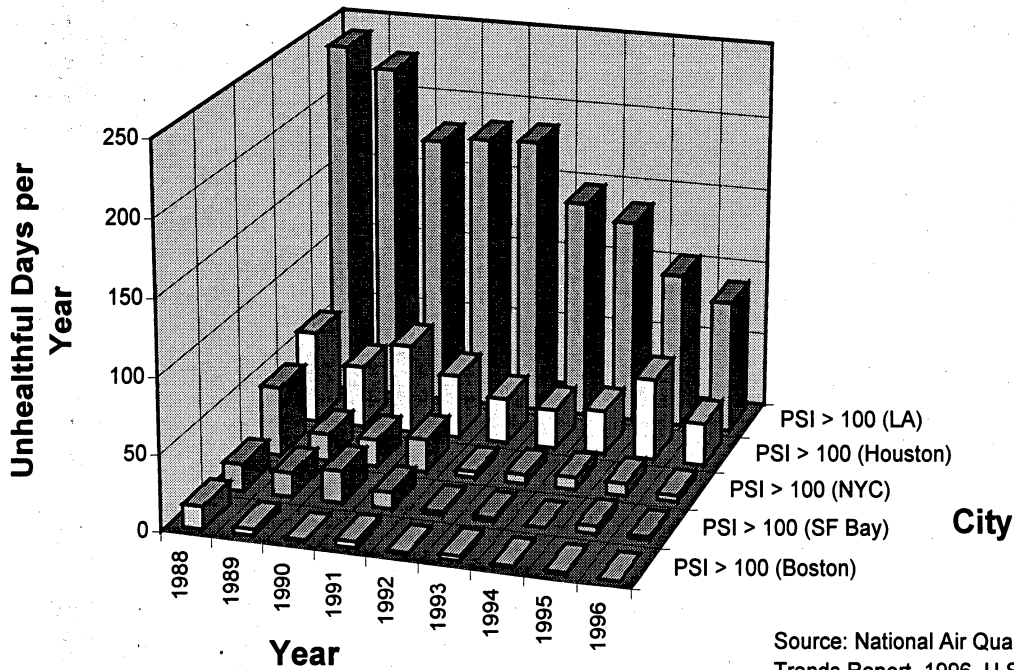
- **Bacteria Levels in the Charles River**

Charles River bacterial counts have decreased steadily over the past few years as a result of improved control of storm run-off, untreated sewer overflow, and illicit connections to the combined sewer overflow (CSO) system. Nonetheless, heavy rains tend to overload the storm and sewer system, allowing untreated sewage to mix with rain and flow into the Charles. The data presented here reflects samples taken four or five times a week during the boating season (May-October) by the Charles River Watershed Association. Trend data will be available in future years as this testing program is designed to remain in place to inform those who use the river.



**Figure 4-1**

### Unhealthful Air Quality Days per Year by City (1988-96)



Source: National Air Quality Trends Report, 1996, U.S.EPA

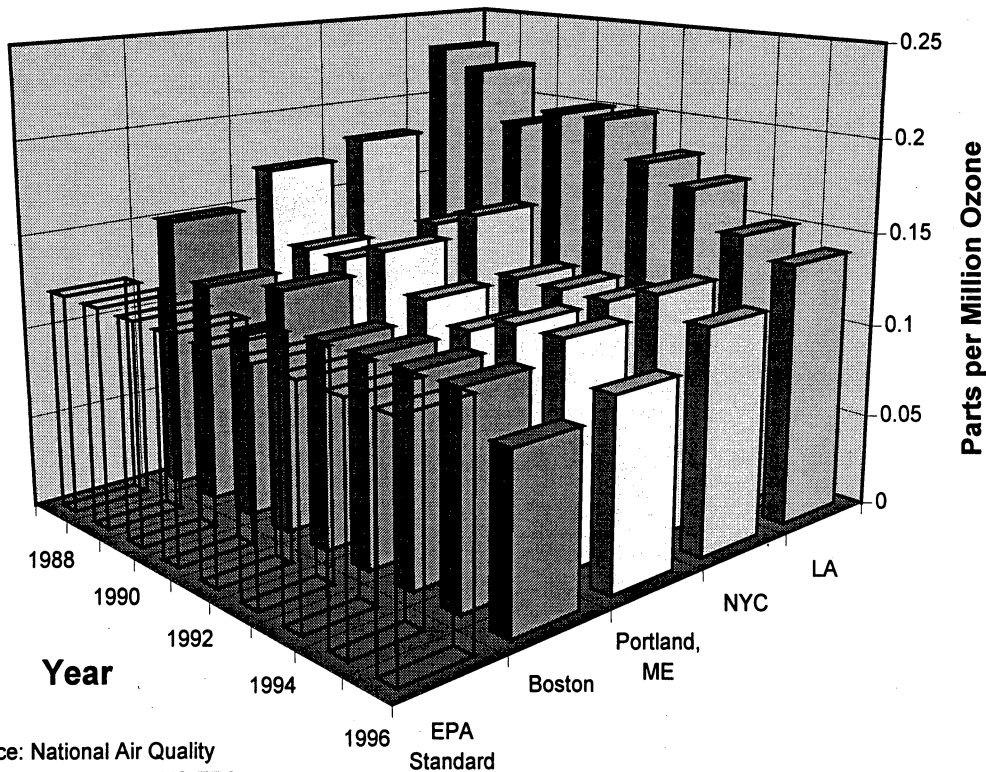
*Example of how to read this figure:*

PSI (Pollution Standard Index) values above 100 reflect “unhealthful” respiratory conditions as defined by the U.S. EPA. Since 1988 Boston has experienced very few “unhealthful” days. Other cities (see LA) have endured many more such days. PSI reflects the levels of all six National Ambient Air Quality Standard pollutants: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter (<10 micrometers), and lead.



**Figure 4-2**

### Ozone Levels by City (1988-96) 2<sup>nd</sup> Highest Daily Maximum



Source: National Air Quality Trends Report, 1996, US EPA

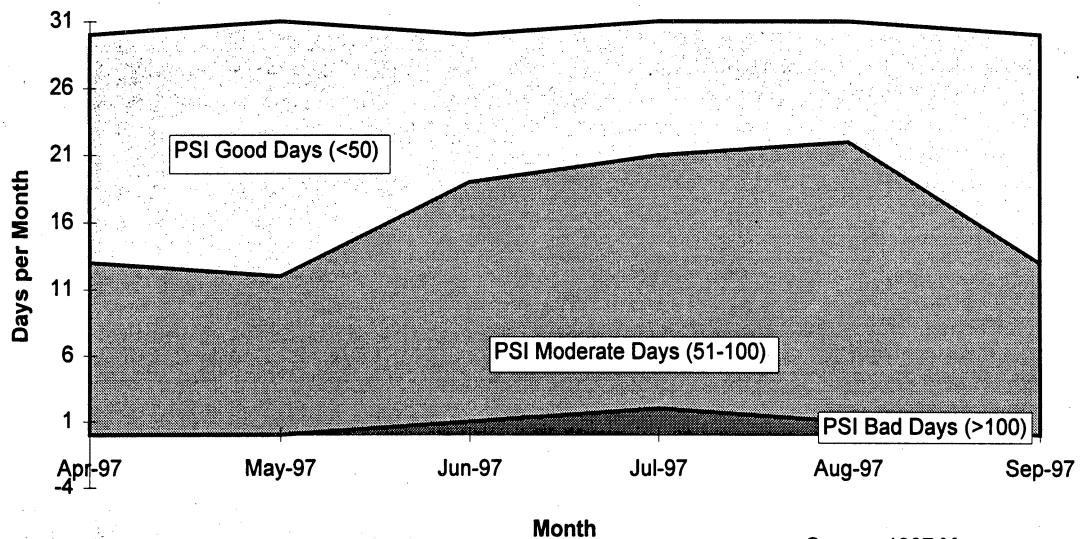
*Example of how to read this figure:*

Ozone levels in Boston have steadily improved from a concentration slightly above the EPA standard in 1988 to reach levels below that standard in 1996. Ozone is a primary contributor to smog and unhealthful respiratory conditions.



**Figure 4-3**

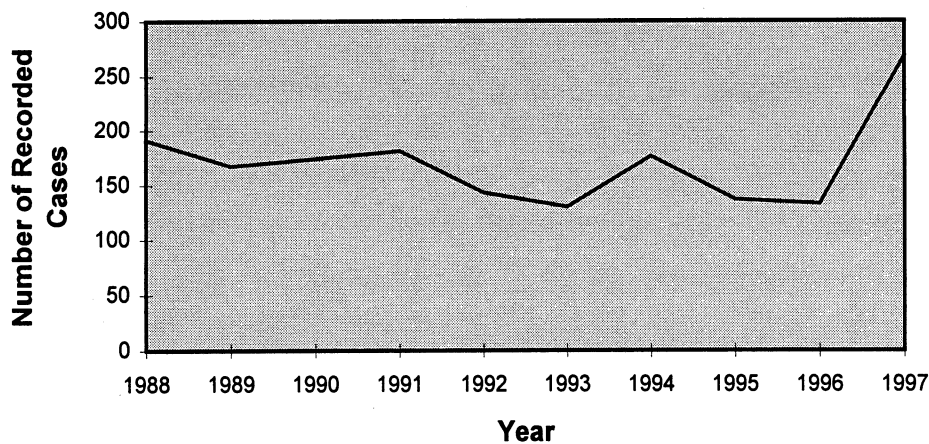
**Air Quality by Month (1997)  
Eastern Massachusetts**



Source: 1997 Mass. DEP Air Quality Report

**Example of how to read this figure:**

Air quality depends on both primary pollutant (gas) concentrations and temperature. At higher summer temperatures the PSI values go up. Air quality in Boston is very rarely a cause for health concerns.

**Figure 4-4****Total Enteric Illnesses  
Cambridge (1988-97)**

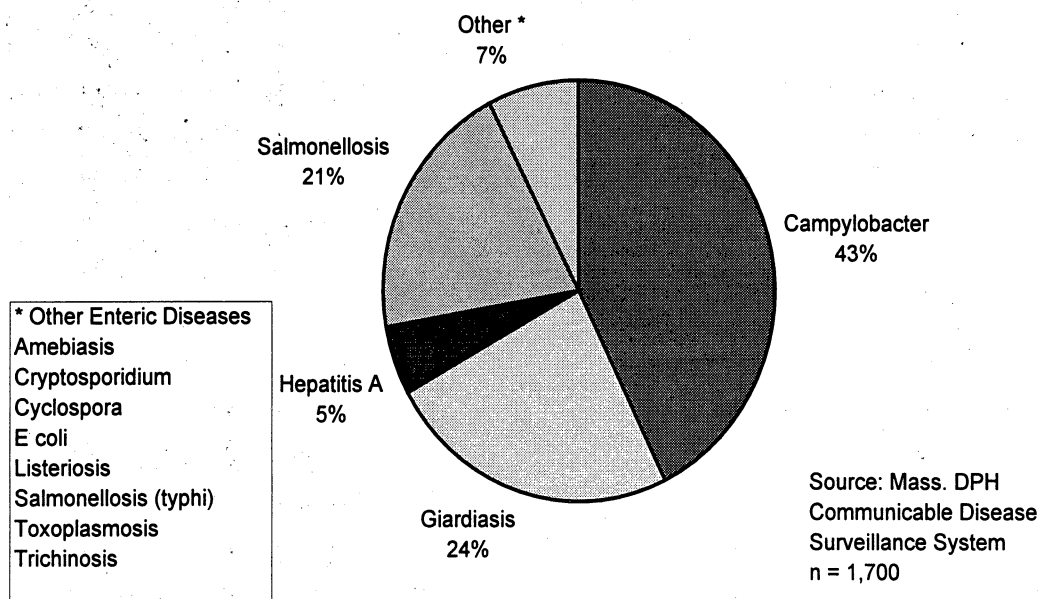
Source: Communicable Disease Surveillance Program, Mass. DPH and Cambridge Public Health Dept.  
n = 1,700

***Example of how to read this figure:***

Enteric illnesses have remained relatively steady over the past nine years. The 1997 rise in reported enteric illnesses reflects a newly enhanced disease surveillance program. These illnesses are now reported directly to the Massachusetts Department of Public Health from the lab responsible for the clinical diagnosis.

**Figure 4-5**

### Reportable Enteric Illnesses Cambridge (1988-97)



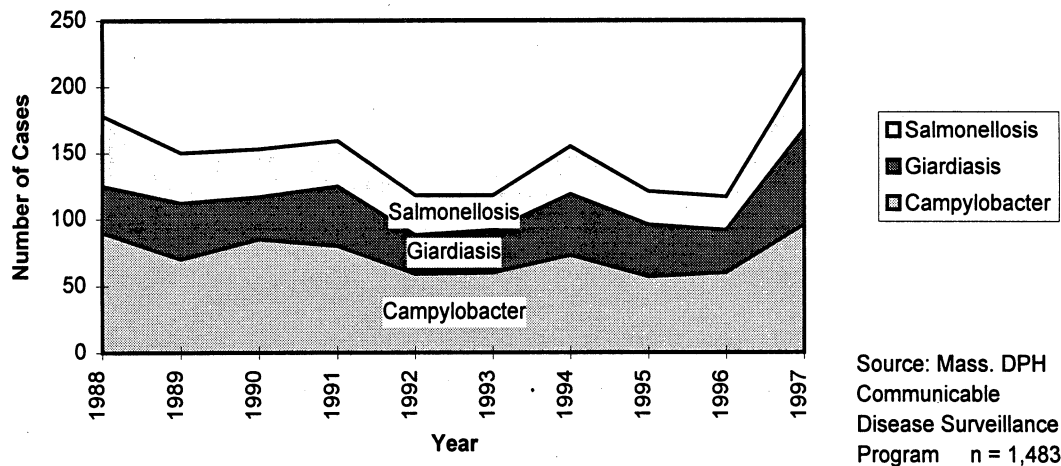
***Example of how to read this figure:***

Campylobacter, giardia, salmonella, and hepatitis A are the primary enteric diseases (in descending order of prevalence), representing 93% of all cases of enteric illness reported in Cambridge from 1988-97. Enteric illnesses (affecting the intestines) are transmitted via the fecal-oral route and through food. In less developed areas drinking water can carry these diseases.



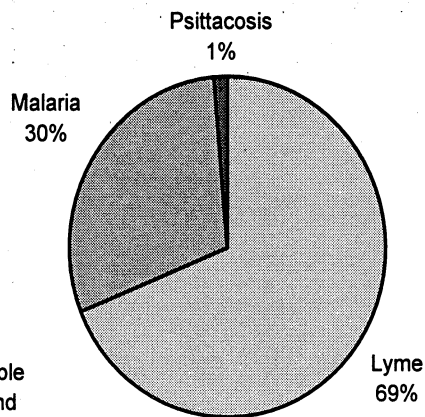
**Figure 4-6**

### Common Reportable Enteric Illnesses Cambridge (1988-97)



*Example of how to read this figure:*

The most frequently contracted enteric illnesses tend to rise and fall together, suggesting either changes in a common risk factor or shared variations in reporting. The rise in reported cases in 1997 primarily reflect an enhanced reporting system rather than a significantly increased prevalence of those diseases.

**Figure 4-7****Zoonotic Diseases  
Cambridge (1988-97)**

Source: Mass. DPH Communicable  
Disease Surveillance Program and  
Cambridge Public Health  
Department  
n = 80

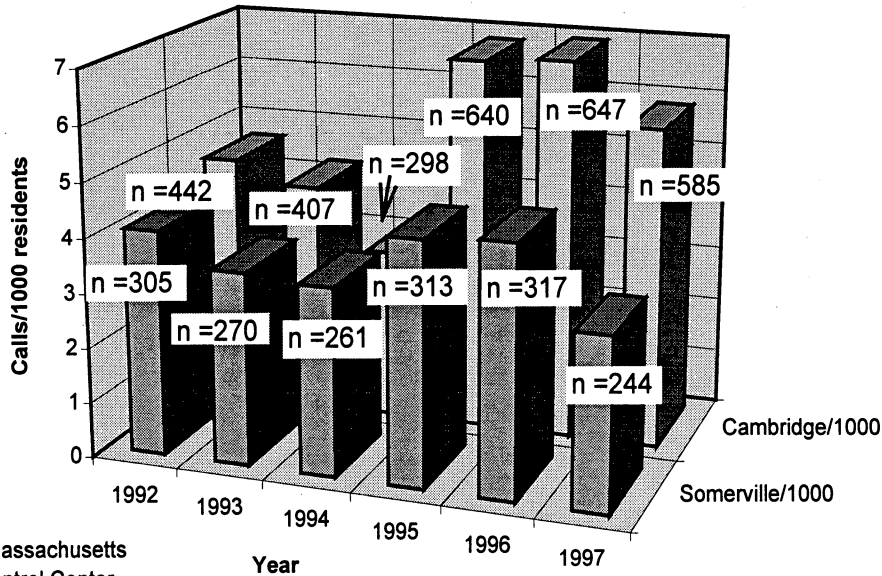
***Example of how to read this figure:***

Over the past decade Lyme disease has been the predominant zoonotic disease reported. Zoonotic diseases are those transmitted directly from animals to humans. The malaria cases reported were primarily contracted by residents while traveling in the tropics.



**Figure 4-8**

**Poison Control Calls/1000 Residents  
Cambridge and Somerville (1992-97)**



Source: Massachusetts  
Poison Control Center

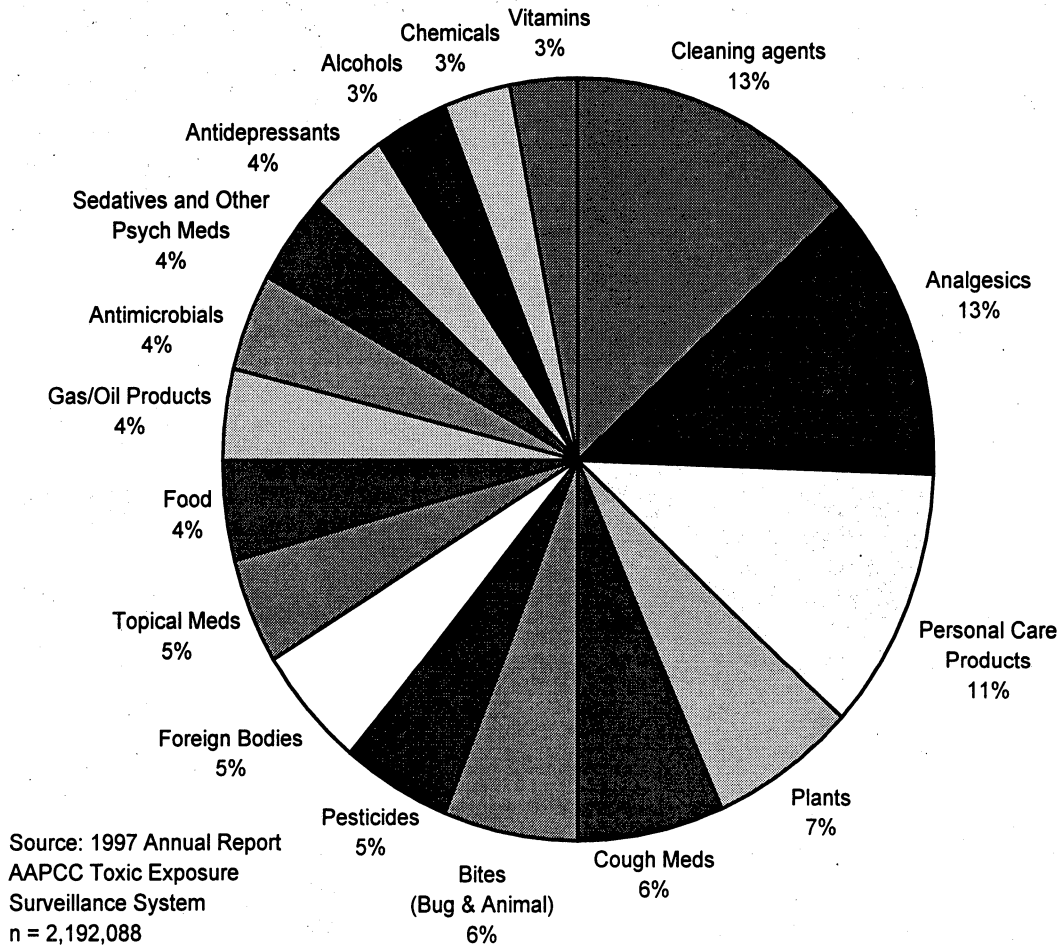
*Example of how to read this figure:*

Cambridge saw the number of calls to the Massachusetts Poison Control Center (MPCC) increase markedly from 1994 to 1995 and then decline from 1996 to 1997. These calls do not distinguish between inquiries and verified poisonings. All medical facilities in Cambridge refer poisoning calls to the MPCC.



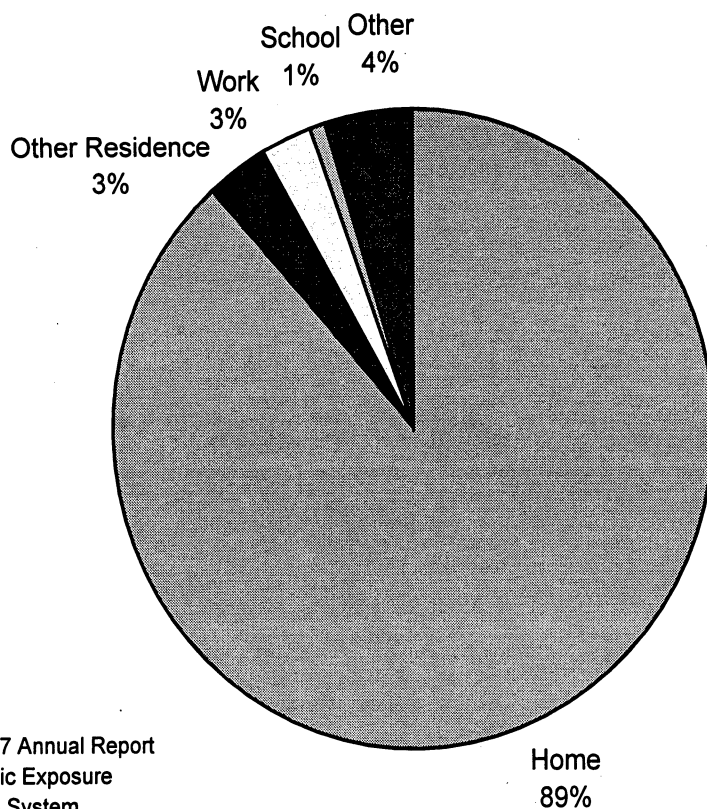
**Figure 4-9**

**Agents responsible for Poisoning in the U.S., 1997**



*Example of how to read this figure:*

Cleaning agents, analgesic medications (e.g., aspirin, ibuprofen), and personal care products accounted for more than a third of all poisonings in 1997. While data on chemical causes of poisonings in Cambridge are not reported separately, national and state-wide trends are very consistent as recorded by the American Association of Poison Control Centers (AAPCC).

**Figure 4-10****Locations of Poisonings in the U.S., 1997**

Source: 1997 Annual Report  
AAPCC Toxic Exposure  
Surveillance System  
n = 2,192,088

***Example of how to read this figure:***

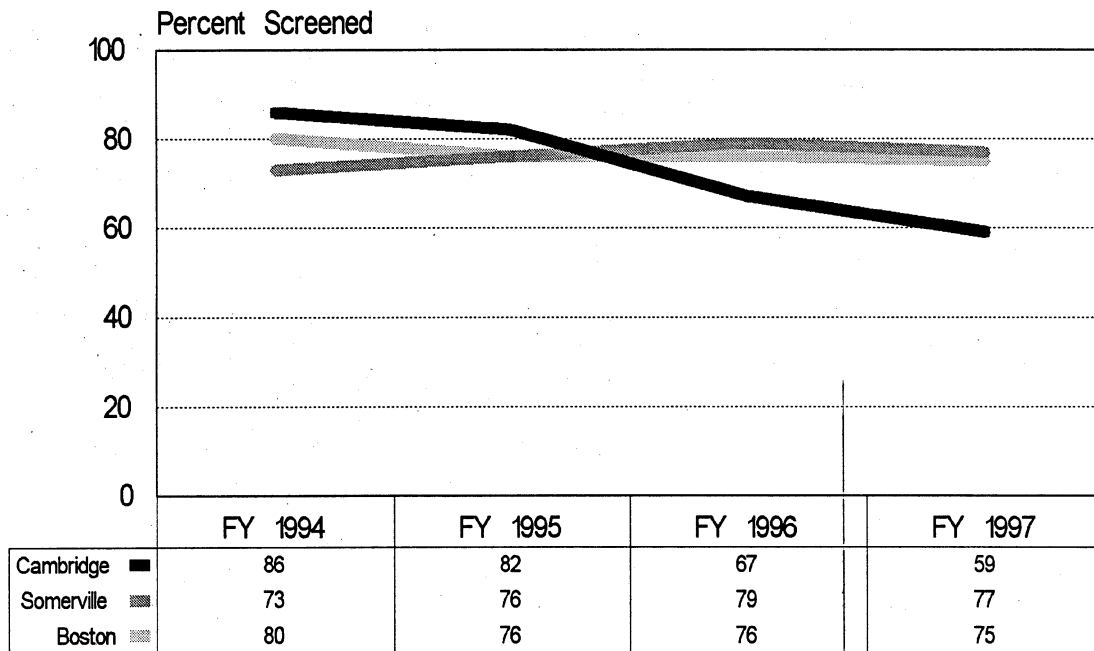
The vast majority (89%) of all poisonings occurred in the home. National data for 1997, collected by the American Association of Poison Control Centers (AAPCC), show locations where poisonings took place. The data show a very consistent pattern from one community to another.



**Figure 4-11**

## Screening Rates for Elevated Blood Lead

Children 6 Months to 6 Years of Age  
Cambridge, Somerville, and Boston, 1994-97



Source: Massachusetts Lead Poisoning Prevention Program/Mass. DPH

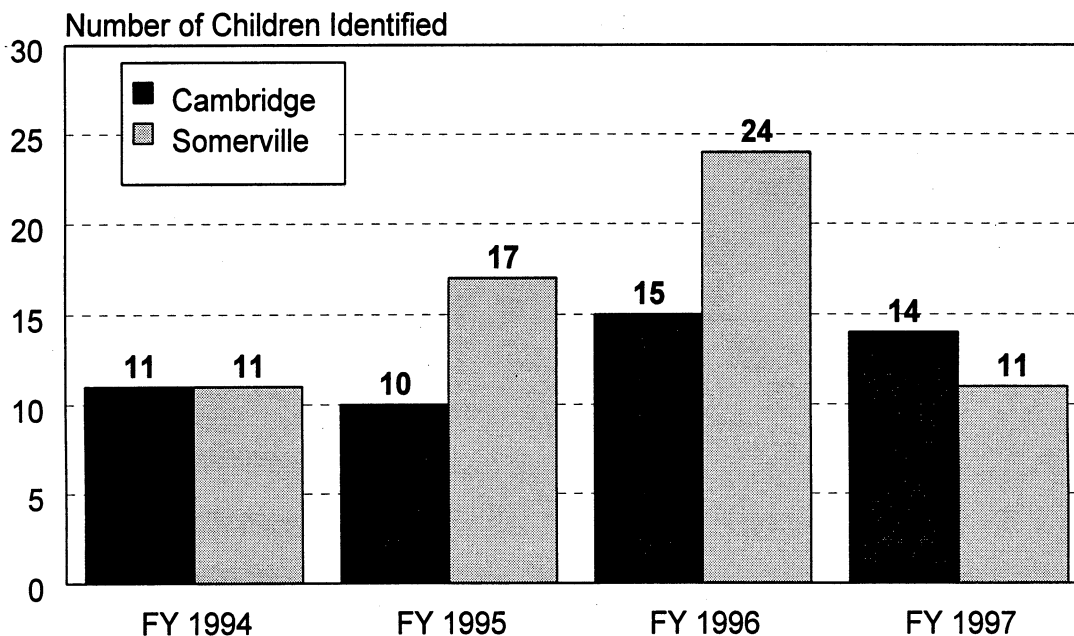
***Example of how to read this figure:***

The proportion of Cambridge children reported to have been screened for lead in the blood has decreased progressively over the past four years. While this decline does correspond to state-wide trends, the Cambridge Public Health Department is investigating factors that may be responsible. See Emerging Areas in the Lead Poisoning Prevention chapter (Volume 1, Section 1, Chapter 4F) for further discussion of this trend.

**Figure 4-12**

### Elevated Blood Lead Levels\*

Children 6 Months to 6 Years of Age  
Somerville and Cambridge: 1994-97



\*  $\geq 20$  mcg/dL

Source: Massachusetts Lead Poisoning Prevention Program, Massachusetts DPH

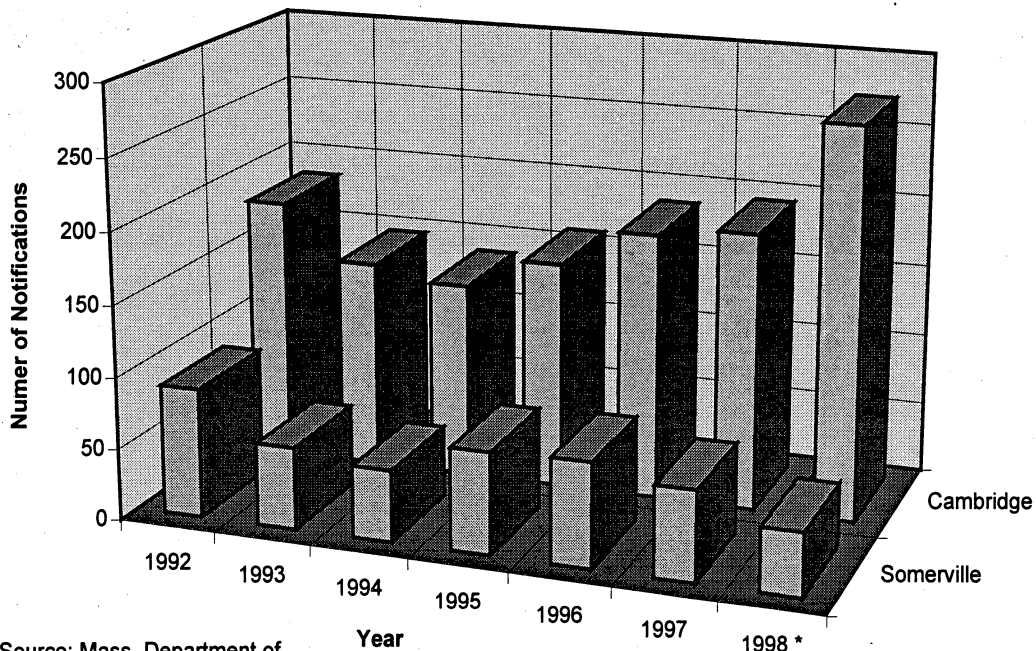
*Example of how to read this figure:*

There has been little variation in the number of children identified with elevated blood lead levels ( $>20$  micrograms/deciliter) in Cambridge over the past several years. The actual numbers of children discovered to have elevated blood lead levels are sufficiently low that observed variation does not represent a meaningful trend.



**Figure 4-13**

### De-Lead Notifications (1992-98) Cambridge and Somerville



Source: Mass. Department of Public Health - Childhood Lead Poisoning Prevention Program

\* Through 11/5/98

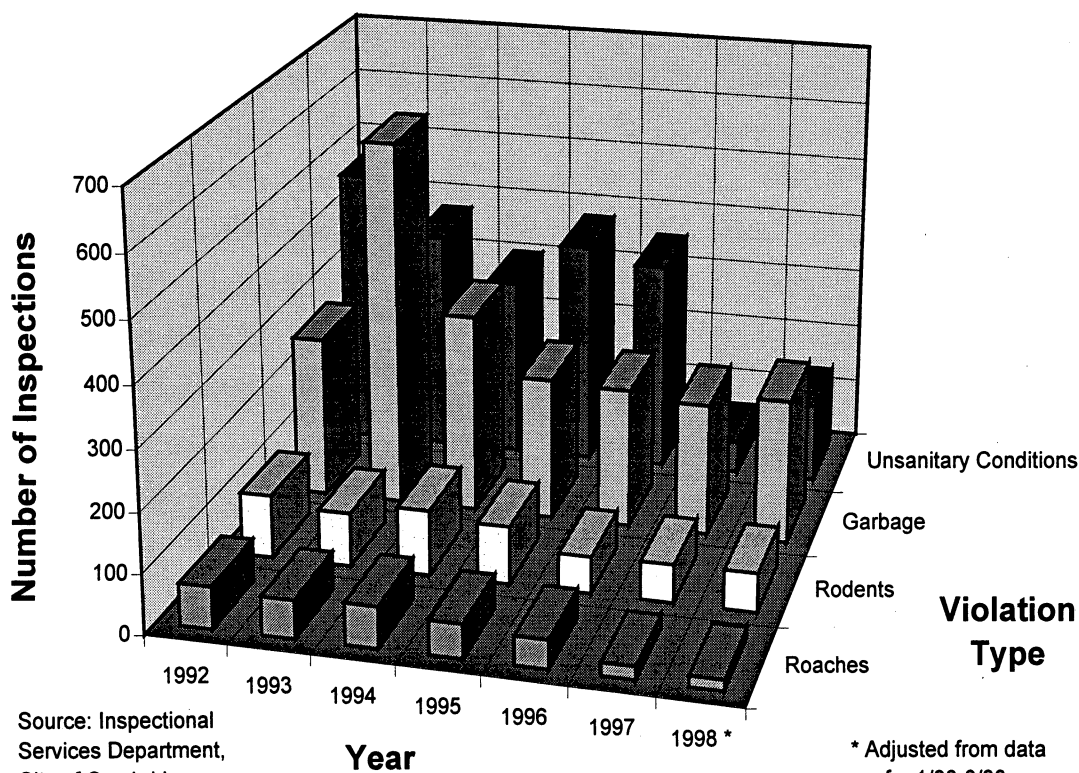
***Example of how to read this figure:***

Residential de-leading work must be reported to the Massachusetts Department of Public Health by all publicly and privately funded contractors. Cambridge generally has many more units de-leaded each year than Somerville and has seen an increase in residences de-leaded each year since 1994.



**Figure 4-14**

### Sanitation Violations Cambridge (1992-98)



**Example of how to read this figure:**

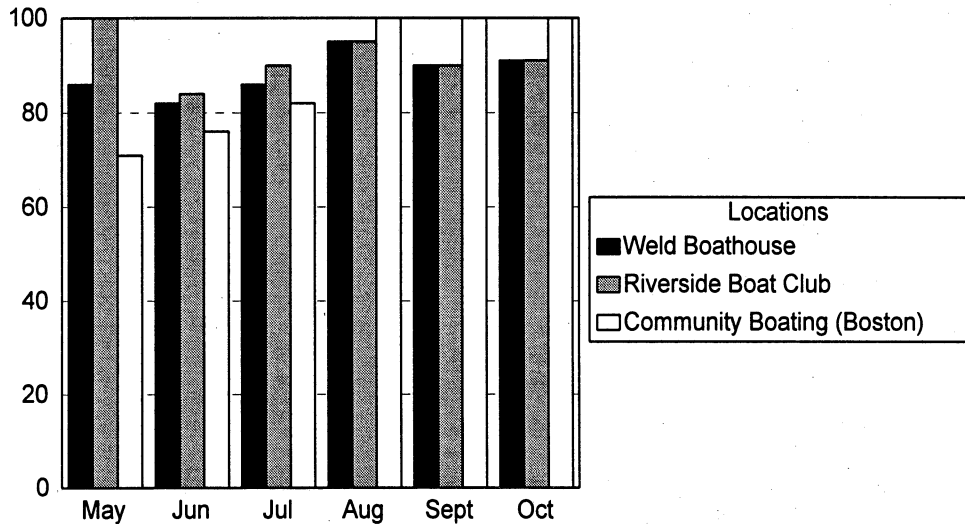
An overall trend shows that slightly fewer sanitary inspections have occurred over the past seven years. These inspections are performed at the request of residents and do not always result in cited violations.



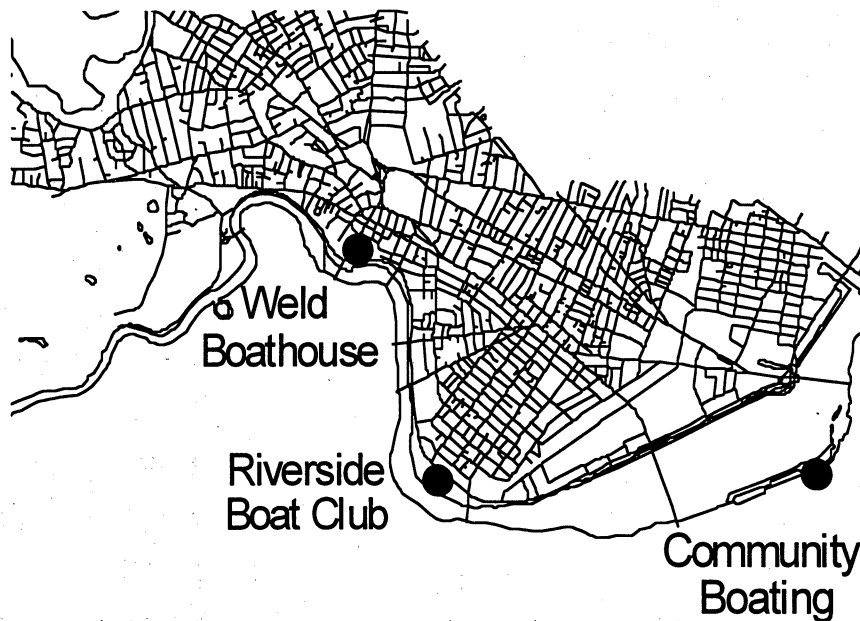
**Figure 4-15**

### Safe Bacteria Levels in the Charles River

% Days Met EPA Boating Standard (1998)



Source: Data collected 5/8/98 to 10/16/98 by the Charles River Watershed Association  
 EPA Boating Standard = 1000 colony forming units/100 milliliters water

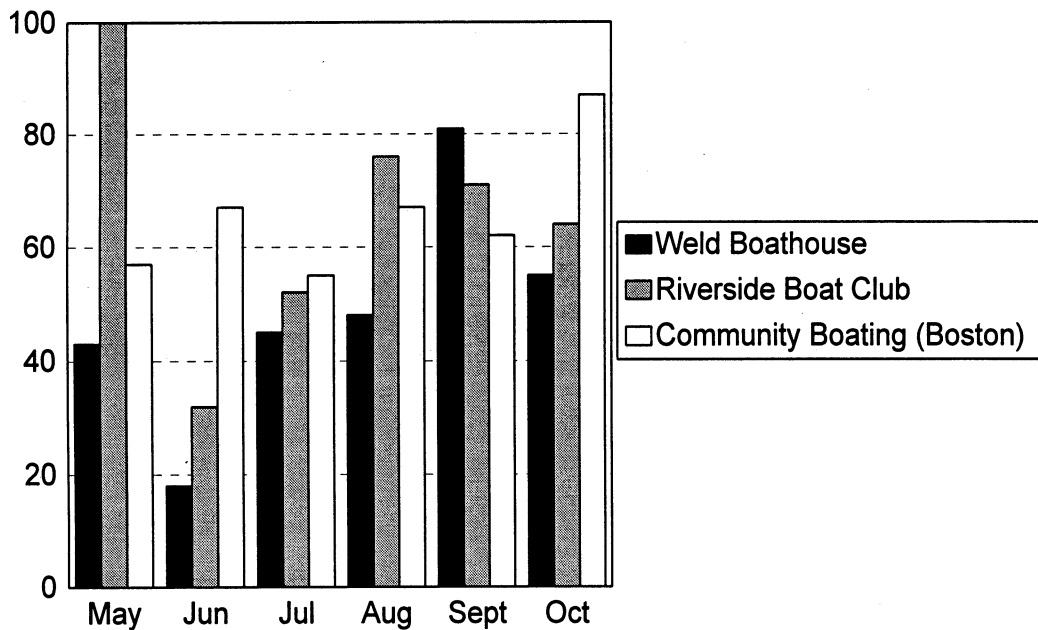




**Figure 4-16**

## Safe Bacteria Levels in the Charles River

% Days Met EPA Swimming Standards (1998)



Source: Data collected 5/8/98 to 10/16/98 by the Charles River Watershed Association  
 EPA Swimming Standard = 200 colony forming units/100 milliliters water

***Example of how to read this figure:***

The percentage of days in each month during which the Charles River exceeded EPA standards for boating (1000 cfu total coliform bacteria per 100 ml water) and swimming (200 cfu coliform bacteria per 100 ml water) are shown. Wet weather in June 1998 resulted in higher bacteria counts resulting from combined storm-sewer overflows.



## 5. HIV/AIDS and STDs

- By September 1, 1998 there were 368 Cambridge residents diagnosed and reported with AIDS; approximately 38% of these individuals are living.
- Eighty-three percent of all cases are male and 17% are female, however the proportion of female cases diagnosed each year has increased steadily since 1984.
- In Cambridge to date as in Massachusetts overall, the leading causes of transmission were male-to-male sex (46.7%); injection drug use (18.5%), and heterosexual sex (8.2%).

### Indicators:

- **Deaths due to HIV/AIDS:** No treatment is available to cure AIDS, but antimicrobials can now extend disease-free survival among those who are infected with the human immunodeficiency virus (HIV) and reduce the high death rates.
- **AIDS prevalence and incidence:** While HIV infected individuals may not show symptoms for years after infection, AIDS cases often involve significant illness and are more easily documented. This indicator measures both the ability to control the AIDS epidemic and the ability to forestall development of AIDS in individuals who are HIV positive.
- **HIV infection:** Rates of HIV infection are not available for the population as a whole, but this information is available for certain small subsets of the total population. For example, measuring the annual incidence of HIV among women who give birth provides information on the incidence of HIV infection.
- **Teen sexuality:** The HIV epidemic can be controlled through modifying personal behavioral risk factors. Behavioral practices such as sexual abstinence or the use of barrier contraceptives among sexually active teens can protect against teen pregnancy and its associated risks. Condoms also protect against sexually transmitted disease, including HIV/AIDS. Although sexually transmitted diseases (STDs) affect all population groups, adolescents and young adults are at greatest risk of acquiring an STD.
- **Condom use among teens:** Condom use provides important protection from HIV.
- **Injection drug use and IDUs in treatment:** The shared use of contaminated injecting equipment among drug users can spread HIV and is a marker of risk. Rates of treatment for injecting drug use can indicate reduced risk for infection with HIV.



- **Sexually transmitted disease:** Sexually transmitted diseases (STDs) are the most common diseases reported to the U.S. Centers for Disease Control. They affect all population groups. Gonorrhea, syphilis, and chlamydia are commonly seen in all types of primary care settings. Women and children suffer a disproportionate amount of STD disease burden, with pelvic inflammatory disease, infertility, ectopic pregnancy, blindness, cancer associated with human papillomavirus, fetal and infant deaths, and congenital defects among the most serious complications. In addition, the spread of these diseases is associated with increased incidence of HIV infections, and ultimately, AIDS.

**Table 5-1****YEAR 2000 OBJECTIVES, MASSACHUSETTS AND CAMBRIDGE RATES**

	HP 2000 Goal	Mass. Rate	Cambridge Rate
Death rate due to HIV/AIDS (rate per 100,000)	*	13.2 <sup>1</sup>	22.3 <sup>2</sup>
Persons (ages 25-44)	*	30.3 <sup>1</sup>	42.5 <sup>2</sup>
Black males (age 25-44)	*	184.4 <sup>1</sup>	216.5 <sup>2</sup>
Hispanic males (age 25-44)	*	156.6 <sup>1</sup>	129.4 <sup>2</sup>
White males (age 25-44)	*	37.9 <sup>1</sup>	50.4 <sup>2</sup>
Cumulative AIDS cases (rate per 100,000)	*	215.8 <sup>3</sup>	384.1 <sup>3</sup>
Annual AIDS (1997) cases (rate per 100,000)	*	8.8 <sup>3</sup>	15.7 <sup>3</sup>
HIV infection in childbearing women (per 1,000 births, 1994)	*	2.0 <sup>4</sup>	*
Adolescents who had intercourse by age 15	15%	20.7% <sup>5</sup>	26.3% <sup>6</sup>
before age 13	*	7.1% <sup>5</sup>	8.3% <sup>6</sup>

\*=Data not available



## YEAR 2000 OBJECTIVES, MASSACHUSETTS AND CAMBRIDGE RATES, CONTINUED

	HP 2000 Goal	Mass. Rate	Cambridge Rate
Condom use at last sexual intercourse			
Adolescents (age 15-19)	60-75%	57% <sup>5</sup> (grades 9-12)	79% <sup>6</sup> (grades 9-12)
Adults	50-75%	28% <sup>7</sup>	*
Injection drug users in publicly funded treatment programs	50%	18.5% <sup>8</sup>	16.6% <sup>8</sup>
Injection drug users offered clean syringes, prevention supplies, and education	*	816 <sup>9</sup>	*
Percent of adults ever tested for HIV	*	39% <sup>10</sup>	*
Adults tested for HIV in past year	*	14% <sup>10</sup>	*
Percent who received counseling with test	*	31% <sup>10</sup>	*

\*=Data not available

<sup>1</sup> 1996 rate per 100,000; Vital Records, Bureau of Health Statistics, Research and Evaluation, Mass DPH

NOTE: It is not always wise to report race-, age-, and gender-specific mortality by cause because of small or unstable numbers.

<sup>2</sup> 1992-96 average annual rate per 100,000, Mortality, MassCHIP, Mass DPH, V2.0 r168.0 Oct 15, 1998.

<sup>3</sup> Mass. and Cambridge cases (reported as of 9/98), AIDS Surveillance Program, Mass. DPH

<sup>4</sup> Seroprevalence of childbearing women in inner-city Boston=14.7 per 1,000 births; in Metropolitan Boston the rate was 1.8 per 1,000 births. HIV/AIDS Epidemiological Profile, Mass. DPH, FY 1996

<sup>5</sup> Youth Risk Behavioral Survey, Mass. Dept. of Education, 1997

<sup>6</sup> Teen Health Survey, Cambridge Public School Dept., 1998

<sup>7</sup> Behavioral Risk Factor Survey System, CDC and Mass. Dept. of Public Health, 1997

<sup>8</sup> Substance Abuse Program Utilization, MassCHIP, Mass DPH, V2.0 r168.0 Oct 15, 1998. Percentage is calculated by the total number of admissions for 1992-96.

<sup>9</sup> Combined Boston and Cambridge data for 1994-95 Pilot Needle Exchange Programs (AHOPE), HIV/AIDS Quarterly Review, Mass. DPH

<sup>10</sup> Health Risks and Preventive Behavior among Massachusetts Adults, 1996 Results from the Behavioral Risk Factor Surveillance System Chronic Disease Surveillance Program, Massachusetts Department of Public Health, July 1998

**Table 5-2**
**CUMULATIVE AIDS CASES IN SELECTED MASSACHUSETTS  
CITIES AND TOWNS**

City of Residence	Population <sup>2</sup>	Reported Cases <sup>1</sup>	Cumulative Case Rate per 100,000
Provincetown	3,561	271	7610.2
Boston	574,283	802.0	4606
Holyoke	43,704	277	519.4
Springfield	156,983	797	507.7
New Bedford	99,922	456	456.4
<b>Cambridge</b>	<b>95,802</b>	<b>368</b>	<b>384.1</b>
Worcester	169,759	593	349.3
Lawrence	70,207	241	343.3
Lynn	81,245	247	304.0
Brockton	92,788	282	303.9
<b>Somerville</b>	<b>76,210</b>	<b>227</b>	<b>297.9</b>
Lowell	103,439	287	277.5
Revere	42,786	112	261.8
Brookline	54,718	138	252.2
Malden	53,884	129	239.4
Quincy	84,985	169	198.9
Fall River	92,703	153	165

Source: AIDS Surveillance Program/Mass. DPH

<sup>1</sup> Cases reported as of 9/1/98; Mass. resident, Prisoners excluded.

<sup>2</sup> 1990 U.S. Census

***Example of how to read this table:***

As of September 1, 1998 Cambridge had 368 reported cases of AIDS, a cumulative case rate of 384.1/100,000.

**Table 5-3****TOTAL REPORTED AIDS CASES AS OF 9/1/98**

CAMBRIDGE, SOMERVILLE, AND MASSACHUSETTS RESIDENTS

	Cambridge		Somerville		Massachusetts	
	Number	%	Number	%	Number	%
<b>Sex</b>						
Male	305	82.9	181	79.7	10,955	81
Female	63	17.1	46	20.3	2,578	19
<b>Race/Ethnicity</b>						
White	199	54.1	154	67.8	7,818	58
Black	127	34.5	56	24.7	3,129	23
Hispanic	38	10.3	14	6.2	2,485	18
Other	<5	1.1	<5	-	101	10
<b>Age</b>						
0-19	5	1.4	5	2.6	246	1
20-29	60	16.3	45	19.8	2,281	17
30-39	187	50.8	104	45.8	6,631	49
40-49	98	26.6	56	24.7	3,358	25
50+	18	4.9	16	7.0	1,017	8
<b>Transmission category</b>						
Male sex w/ male (MSM)	172	46.7	106	46.7	5,449	40
IV drug users (IDU)	68	18.5	42	18.5	4,612	34
MSM & IDU	8	2.2	5	2.2	519	4
Heterosexual contact	30	8.2	17	7.5	1,219	9
Receipt of blood products	7	1.9	<5	-	329	2
Pediatric	<5	1.1	5	2.2	205	2
Not specified/undeter.	79	21.5	52	22.9	1,200	9
<b>Status</b>						
Alive	138	37.5	88	38.8	4,762	35.8
Dead	230	62.5	139	61.2	7,871	64.2
<b>Total</b>	<b>368</b>		<b>227</b>		<b>13,533</b>	

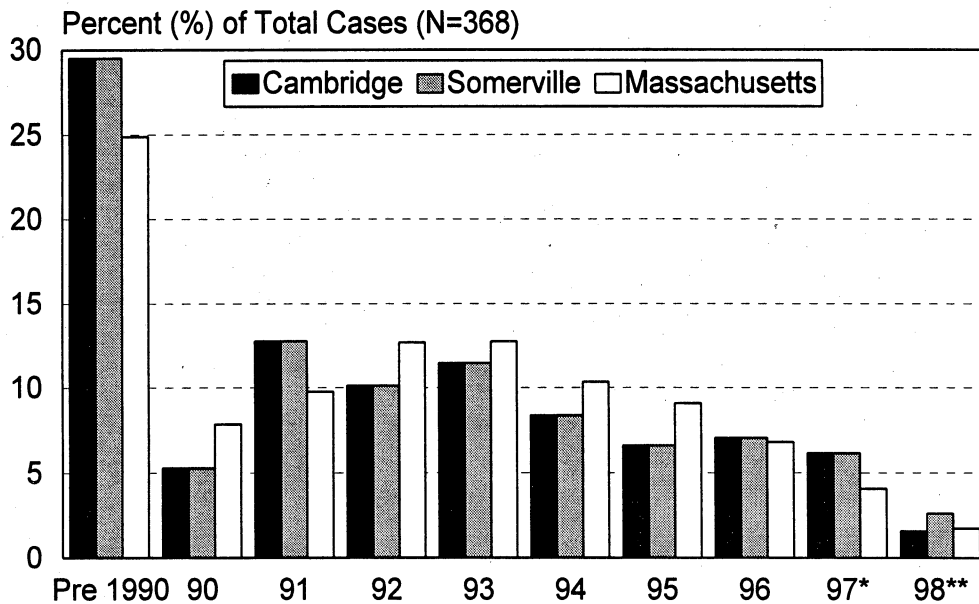
Source: Mass AIDS Surveillance, September 1, 1998, Mass DPH



**Figure 5-1**

## AIDS in Cambridge, Somerville, and Massachusetts

1981-98



Source: AIDS Surveillance Program, Mass. DPH

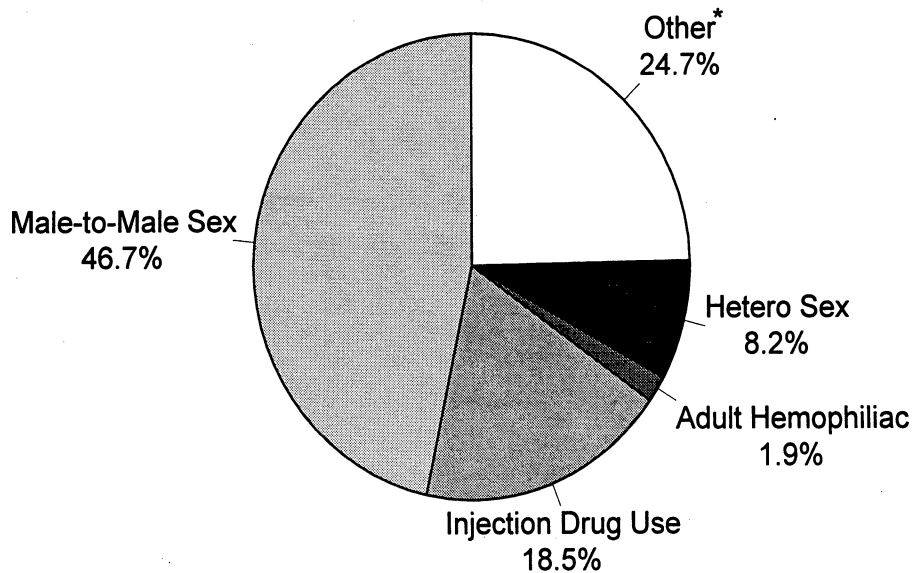
\* Incomplete due to reporting lag  
 \*\* Through 9/1/98

*Example of how to read this figure:*

Almost 30% of AIDS cases in Cambridge were diagnosed prior to 1990 and another 12% in 1991. Since then, the percent of total cases diagnosed each year has declined.

**Figure 5-2****AIDS by Transmission Mode**

Cambridge Residents: 1981-98



Source: AIDS Surveillance Program, Mass. DPH

368 cases reported as of 9/1/98

\*Other includes pediatric cases and undetermined.

***Example of how to read this figure:***

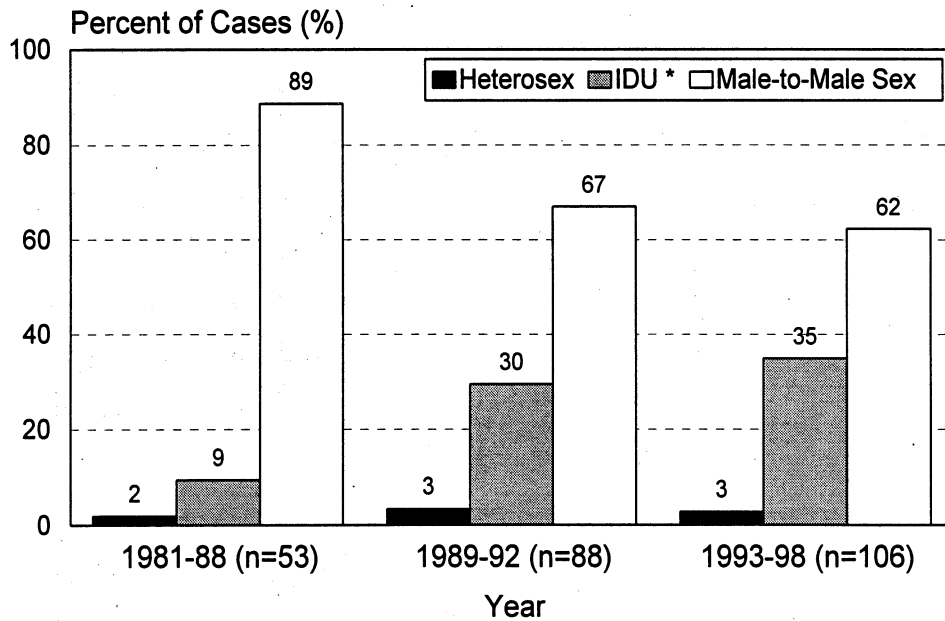
Almost 47% of AIDS cases in Cambridge were transmitted by male-to-male sex and over 18% by injected drug use.



**Figure 5-3**

## AIDS by Year of Diagnosis and Selected Risk

Cambridge Residents: 1981-98



Source: AIDS Surveillance Program, Mass. DPH

\* Injected Drug Use  
368 cases reported as of 9/1/98

*Example of how to read this figure:*

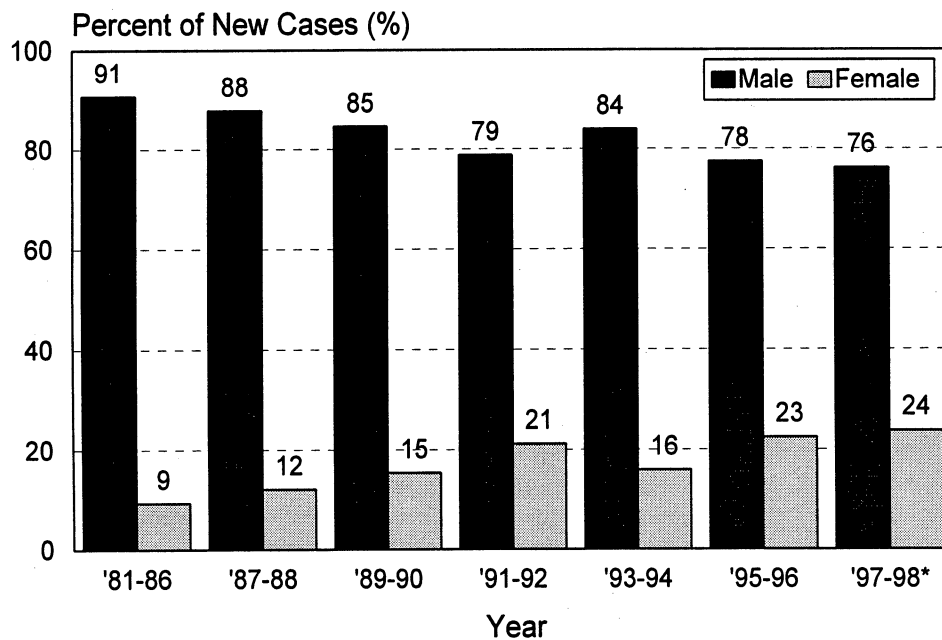
During the period 1981-88, the percent of cases transmitted by male-to-male sex declined and transmission by injected drug use increased.



**Figure 5-4**

**AIDS by Year of Diagnosis and Sex**

Cambridge Residents: 1981-98



Source: AIDS Surveillance Program, Mass. DPH

368 cases reported as of 9/98  
\*Incomplete due to reporting lag

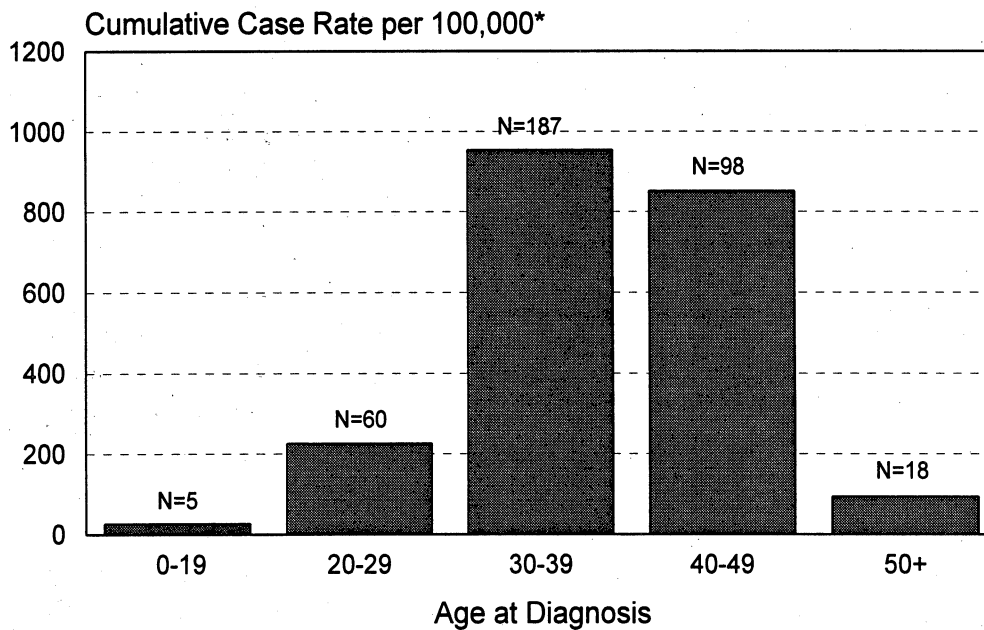
***Example of how to read this figure:***

The proportion of women diagnosed with AIDS has increased steadily from 9% in the period 1981-86 to 24% of cases diagnosed between 1997 and 1998.

**Figure 5-5**

## AIDS by Age Group

Cambridge Residents: 1981-98



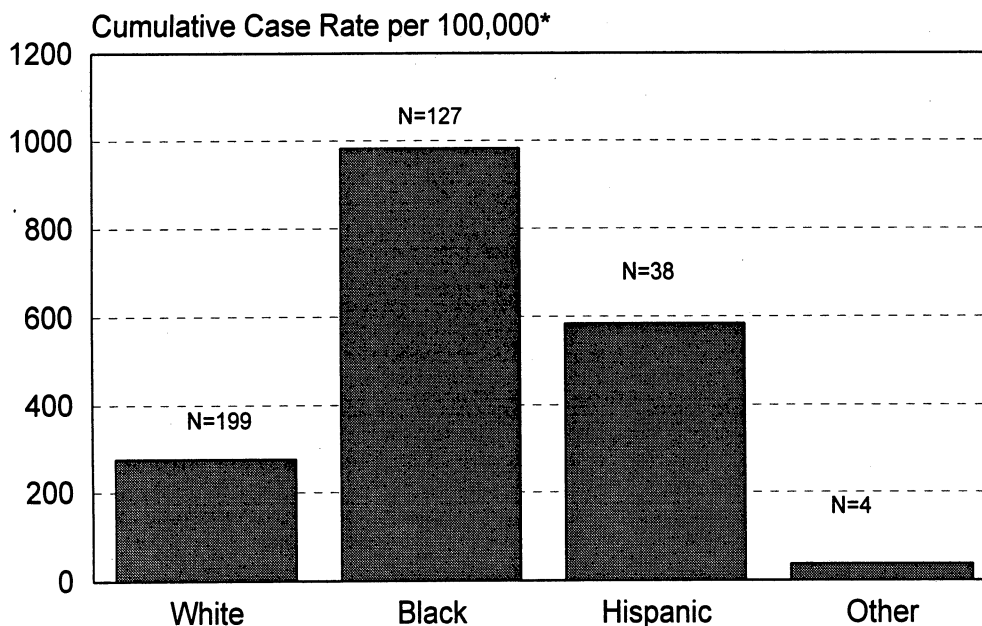
Source: AIDS Surveillance Program, Mass. DPH 368 cases reported as of 9/98  
 \*Rates are age specific used 1990 U. S. Census

### *Example of how to read this figure:*

There are more cases of AIDS diagnosed in Cambridge residents aged 30-39 years than in any other age group. This age group accounts for 187 out of a total of 368 cases. The cumulative AIDS case rate peaks in the 30-39 year age group at 954.6 per 100,000, followed by the 40-49 year group with a rate of 851.7 per 100,000.

**Figure 5-6****AIDS by Race/Ethnicity**

Cambridge Residents: 1981-98



Source: AIDS Surveillance Program, Mass. DPH

368 cases reported as of 9/98

\*Rates are race specific used 1990 U. S. Census

***Example of how to read this figure:***

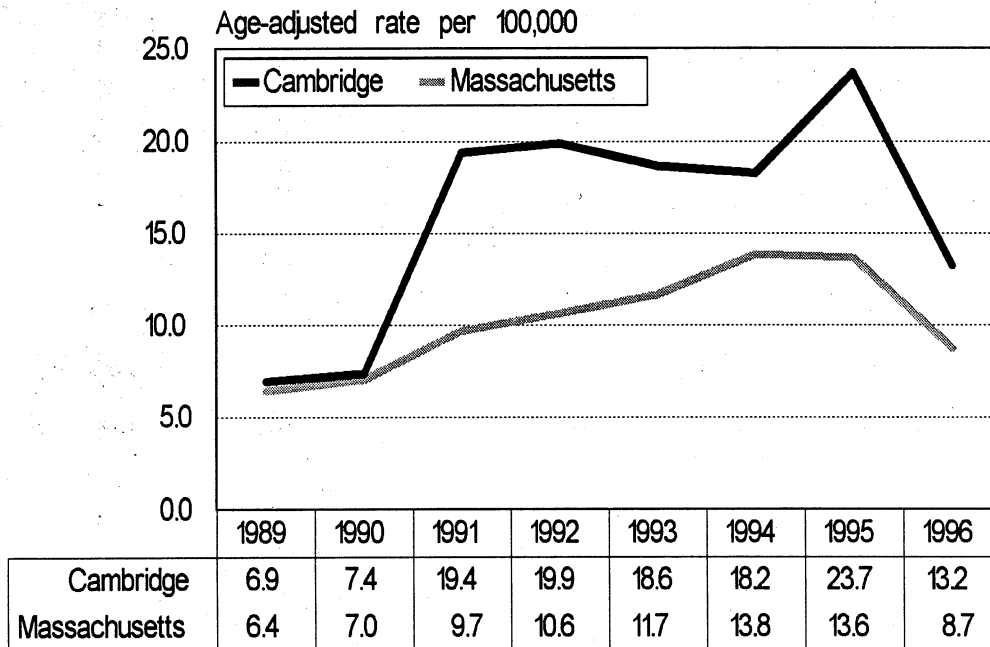
The majority of AIDS cases have been diagnosed in Whites in Cambridge, a total of 199, followed by 127 in Blacks and 38 in Hispanics. The cumulative AIDS case rate in Cambridge is highest among Blacks, 982.2 per 100,000, followed by Hispanics at 584.1 and Whites at 275.9.



**Figure 5-7**

## AIDS/HIV-Related Mortality Rates

Cambridge and Massachusetts Residents: 1989-96



Source: Mortality (Vital Records), MassCHIP, Mass. DPH, v2.0 r168.0, July 23, 1998.

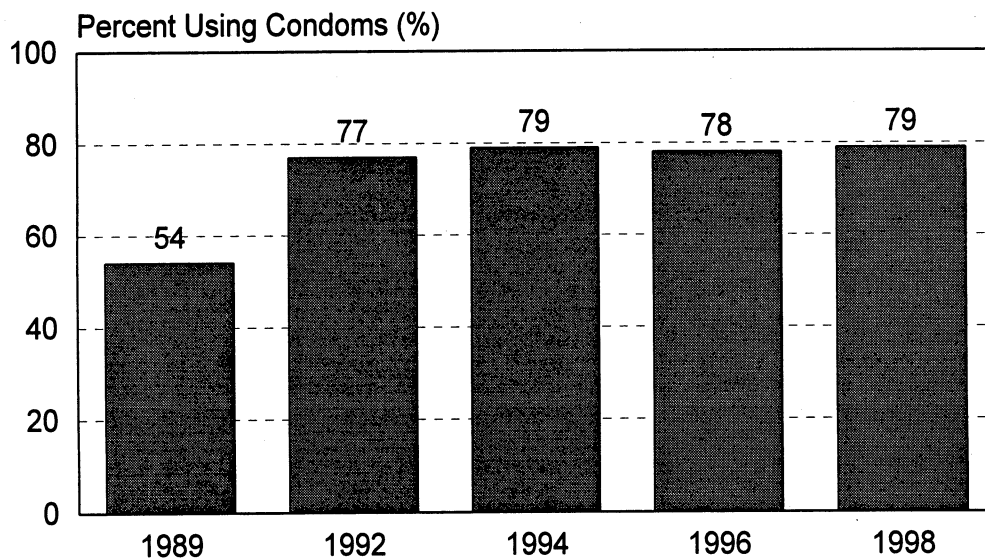
*Example of how to read this figure:*

AIDS-related mortality rates are higher in Cambridge than state wide.

**Figure 5-8**

## Condoms at Last Sexual Intercourse

Cambridge Rindge & Latin School: 1998



Source: Teen Health Survey 1998

1989 male n=642; female n=669  
 1992 male n=729; female n=752  
 1994 male n=691; female n=716  
 1996 male n=826; female n=730  
 1998 male n=705; female n=670

*Example of how to read this figure:*

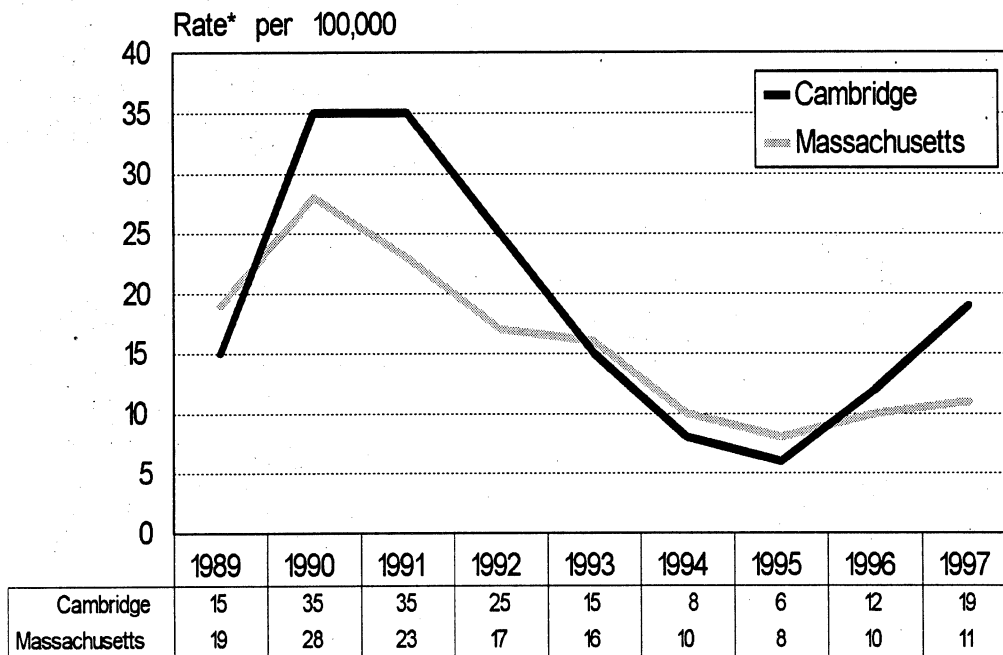
Condom use by Cambridge high school students rose from 54% in 1989 to 77% in 1992 with the introduction of condom distribution in the school and has plateaued since.



**Figure 5-9**

### Syphilis Morbidity Rates

Cambridge and Massachusetts: 1989-97



\*Population based on 1990 U.S. Census

Includes primary and secondary cases

Source: Division of STD Control, Bureau of Communicable Disease Control, Mass. DPH

***Example of how to read this figure:***

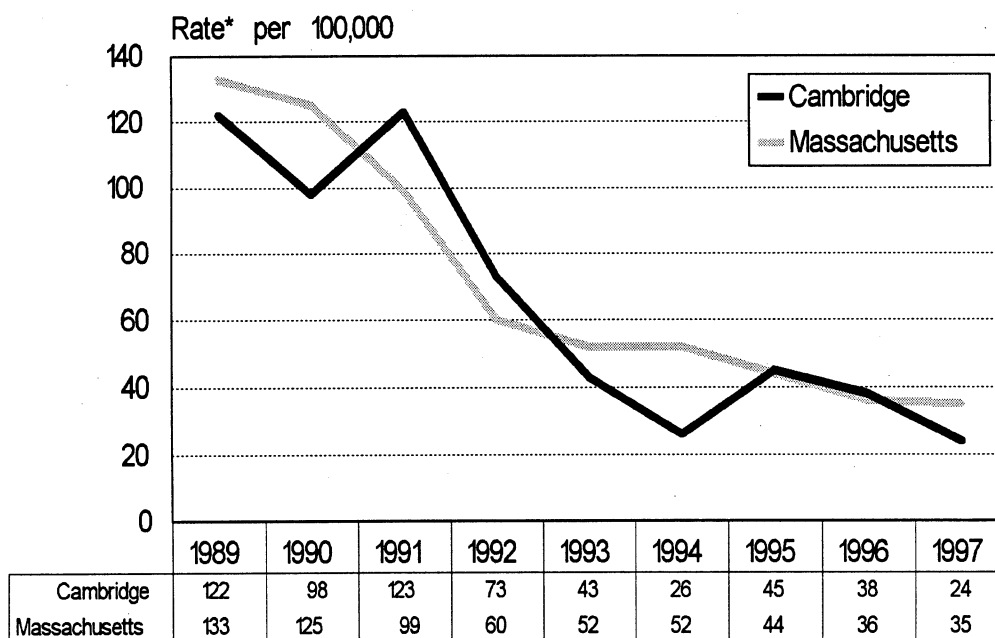
The rate of syphilis morbidity in Cambridge was 35 per 100,000 in 1990 and 1991 and then fell to 6 per 100,000 in 1995, followed by a rise to 19 per 100,000 in 1997.



**Figure 5-10**

### Gonorrhea Morbidity Rates

Cambridge and Massachusetts: 1989-97



\*Population based on 1990 U.S. Census

Source: Division of STD Control, Bureau of Communicable Disease Control, Mass. DPH

***Example of how to read this figure:***

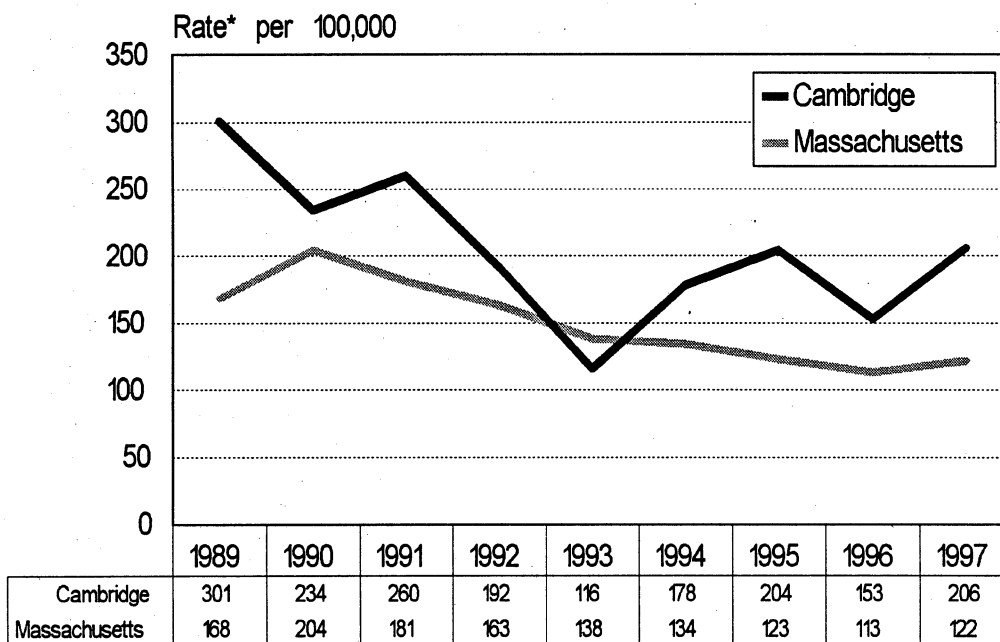
The rate of gonorrhea morbidity in Cambridge fell from 122 per 100,000 in 1989 to 24 per 100,000 in 1997.



**Figure 5-11**

### Chlamydia Morbidity Rates

Cambridge and Massachusetts: 1989-97



\*Population based on 1990 U.S. Census

Source: Division of STD Control, Bureau of Communicable Disease Control, Mass. DPH

***Example of how to read this figure:***

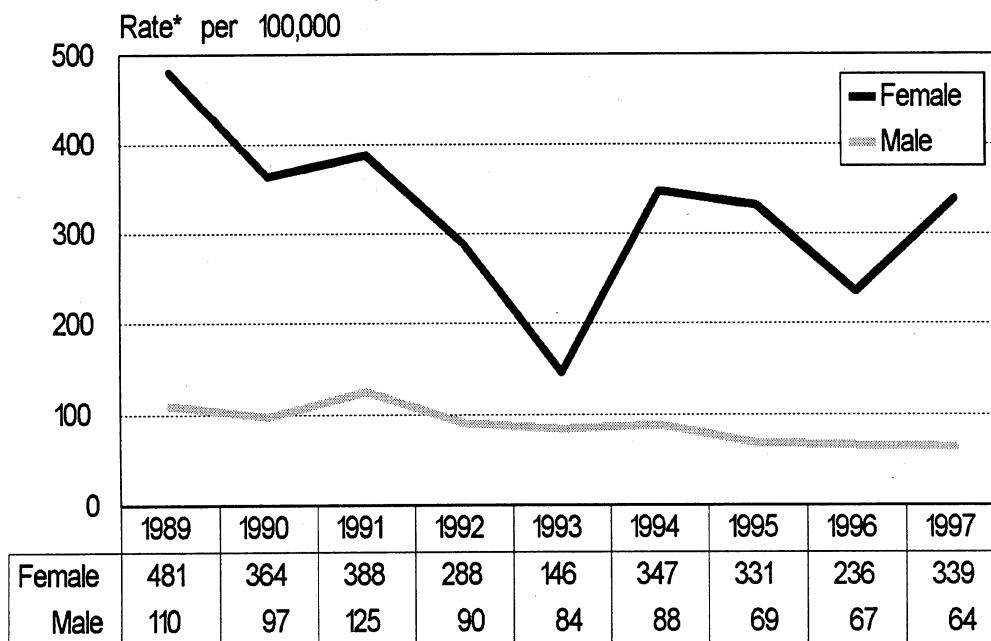
Chlamydia morbidity rates in Cambridge have been higher than rates for the state as a whole in 8 of the previous 9 years.



**Figure 5-12**

### Chlamydia in Cambridge

By Gender: 1989-97



\*Population based on 1990 U.S. Census

Source: Division of STD Control, Bureau of Communicable Disease Control, Mass. DPH

***Example of how to read this figure:***

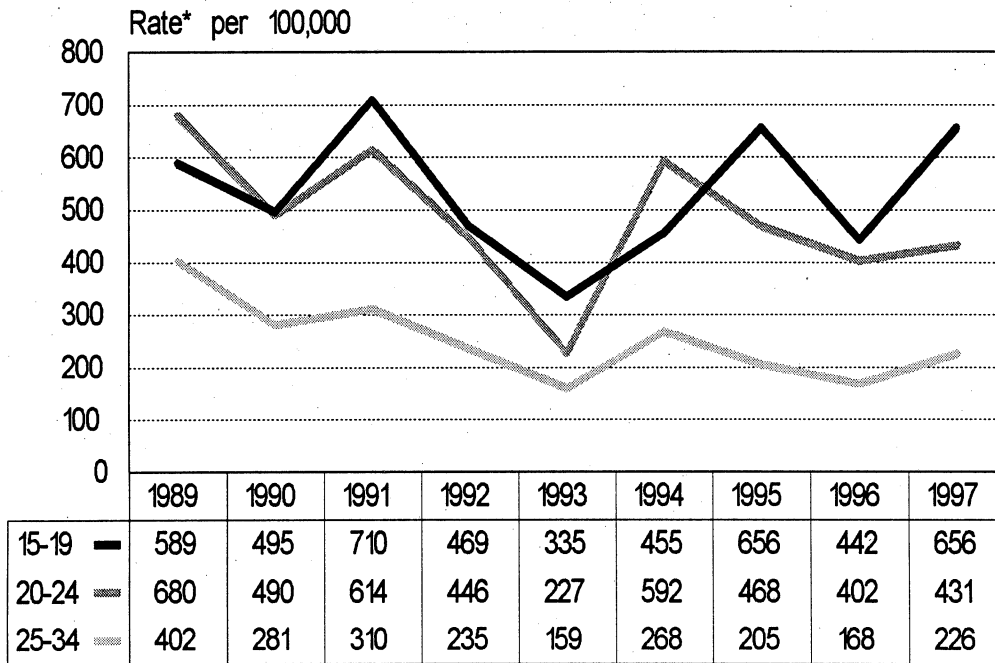
Chlamydia morbidity rates in females have been consistently higher than rates in males for the period 1989 to 1997.



**Figure 5-13**

## Chlamydia in Cambridge

By Age Group: 1989-97



\*Population based on 1990 U.S. Census

Source: Division of STD Control, Bureau of Communicable Disease Control, Mass. DPH

**Example of how to read this figure:**

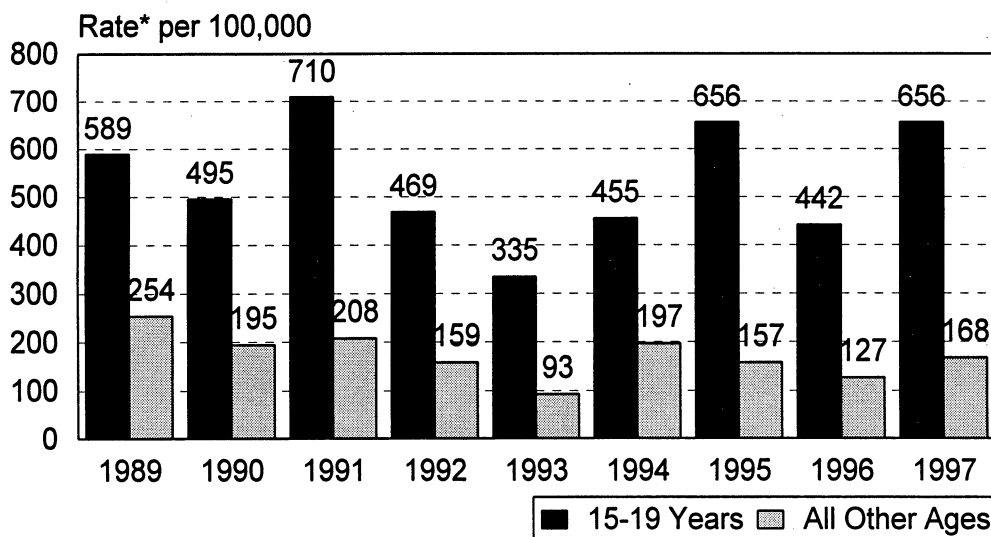
Chlamydia morbidity rates in the age group 15 to 24 years have been consistently higher than the rates in Cambridge residents aged 25 to 34 years.



**Figure 5-14**

### Chlamydia in Cambridge

15-19 Year Olds vs. All Other Ages: 1989-97



\*Population based on 1990 U.S. Census

Note: The state laboratory began using a more sensitive test for Chlamydia in 1997 resulting in higher rates of disease identification.

Source: Division of STD Control, Bureau of Communicable Disease Control, Mass. DPH

***Example of how to read this figure:***

Chlamydia morbidity rates among Cambridge residents 15 to 19 years has been consistently and markedly higher than in all other groups since 1989.



## 6. Substance Abuse: Alcohol, Tobacco, and Drugs

- Alcohol-attributable deaths decreased in Cambridge between 1993 and 1996 while drug-attributable deaths increased.
- Between 1993 and 1995 Cambridge had the highest rate of weekly self-help meetings and lowest rates of death related to substance abuse among cities in Massachusetts with populations over 90,000.
- Marijuana use among Cambridge high school students increased from 14% in 1992 to 31% in 1998. Among students who reported current use of alcohol or other drugs, 37% reported they used both alcohol and marijuana.
- Among Cambridge public high school students in 1998, those who had smoked cigarettes in the last 30 days were more likely to use alcohol, marijuana, and other drugs than students who did not report smoking. Smokers were more likely to use alcohol (80%), marijuana (65%), and other drugs (18%) than non smokers who reported less frequent use of alcohol (42%), marijuana (21%), and other drugs (3%). Among students who reported smoking, 18% of girls and 17% of boys smoked cigarettes daily.

### Indicators:

\***Substance abuse:** Alcohol and other drug use is difficult to observe and measure directly. Thus, it is useful to examine indirect measures, usually adverse consequences, related to the consumption of alcohol and other drugs.

- **Death related to substance abuse:** This indicator includes both direct causes of death (e.g., overdose) and associated conditions (e.g., cirrhosis) related to alcohol or drug use as listed on the death certificate. Caution should be used in interpreting these figures because of the inaccuracy inherent to death certificate data and attributions of illness to substance abuse.
- **Hospital discharges related to substance abuse:** This indicator reports acute hospital patient discharge records with diagnoses related to either alcohol or drug use. Because each record represents a discharge for one patient hospitalization, a single patient could be counted repeatedly.
- **Admissions to publicly funded treatment programs:** Admissions to substance abuse treatment agencies funded by the Bureau of Substance Abuse Services for treatment of alcohol, drug, or both alcohol and drug use.



- **Cigarette smoking and tobacco use:** Tobacco use is responsible for about one of every five deaths in the U.S. and is the single most important preventable cause of death and disease in our society. Cigarette smoking accounts for about 21% of all coronary heart disease deaths, 87% of lung cancer deaths, and 82% of deaths from chronic obstructive pulmonary disease (COPD). Moreover, public and private expenditures for smoking-related health care costs impose a substantial economic burden at the state and city level.
- **Use of alcohol, tobacco, and other drugs by high school students:** Alcohol is the most popular drug among adolescents with consequences ranging from increased risks of motor-vehicle accidents to elevated rates of homicide and suicide while under the influence of alcohol and drugs. Large numbers of Americans have misused alcohol and used illicit drugs with serious health and social consequences. Approximately 11% of preventable deaths are related to alcohol and illicit drug use. One out of three young people who become regular smokers will die of a smoking-related disease.<sup>1</sup> The lag time from initiation of smoking to illness and death can be 30 years or more for some diseases. Thus prevention of smoking among today's adolescents will reduce morbidity and mortality for decades to come.
- **Binge drinking:** Heavy alcohol use has increased among young people nationwide: 30% of high school seniors and 40% of U.S. college students had five or more drinks on one occasion in the previous 2-week period in 1995.<sup>1</sup>

<sup>1</sup> Healthy People 2000 review, 1997, U.S. Dept Health and Human Services, CDC and NCHS





**YEAR 2000 OBJECTIVES, MASSACHUSETTS AND CAMBRIDGE RATES,  
CONTINUED**

	HP 2000 Goal	Mass. Rate	Cambridge Rate
Current smokers	*	20.6% <sup>2</sup>	20.3% <sup>6</sup>
Former smokers	*	28.5% <sup>2</sup>	21.9% <sup>6</sup>
Tobacco related deaths	*	7.7% <sup>5</sup>	7.5% <sup>5</sup>
Smoking in past 30 days among high school students:		34.4% <sup>3</sup>	21% <sup>4</sup>
Males	*	33.0% <sup>3</sup>	20% <sup>4</sup>
Females	*	35.8% <sup>3</sup>	22% <sup>4</sup>
Smoking daily in past 30 days among high school students:		14.5% <sup>3</sup>	8.5% <sup>4</sup>
Males	*	14.6% <sup>3</sup>	7.1% <sup>4</sup>
Females	*	14.3% <sup>3</sup>	9.9% <sup>4</sup>

\*=Data not available

<sup>1</sup> 1993-95 average annual rate per 100,000; Indicators of Substance Abuse Report, Bureau of Substance Abuse Services/Health and Addictions Research, Mass. DPH

<sup>2</sup> 1997 Behavioral Risk Factor Surveillance Survey, Mass. Dept. of Public Health (self-reported data)

<sup>3</sup> 1997 Youth Risk Behavioral Survey, (grades 9-12), Mass. Dept. of Education

<sup>4</sup> 1998 Teen Health Survey, Cambridge Public Schools.

<sup>5</sup> 1995 Behavioral Risk Factor Surveillance Survey and Smoking Report, MassCHIP v2.0 r168.0, 9/24/98, Mass. Dept. of Public Health

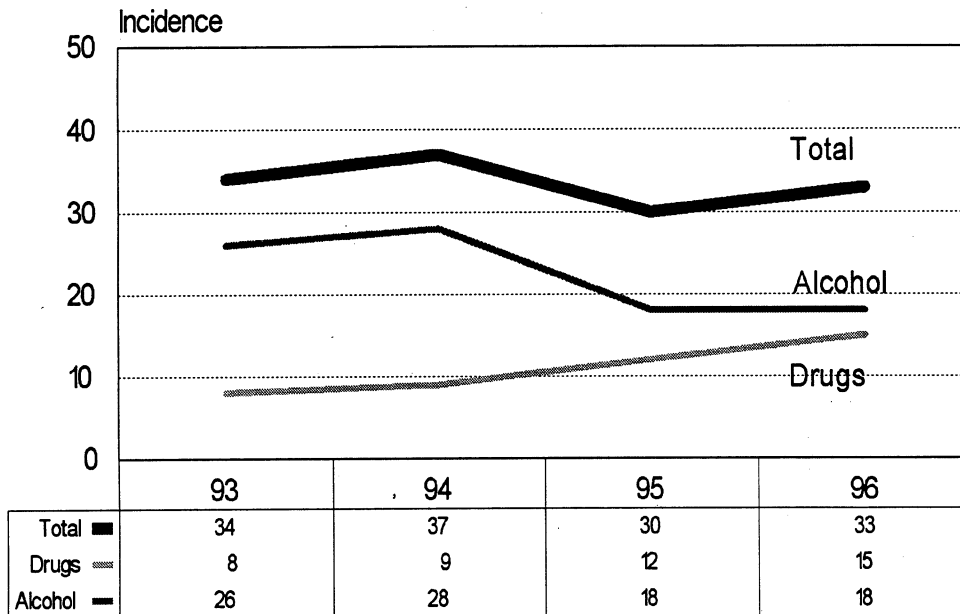
<sup>6</sup> Health Research Associates 1993



**Figure 6-1**

## Alcohol and Drug-Related Deaths

Cambridge: 1993-96



Source: Health and Addictions Research, Inc. and Bureau of Substance Abuse Services, Mass. DPH

*Example of how to read this figure:*

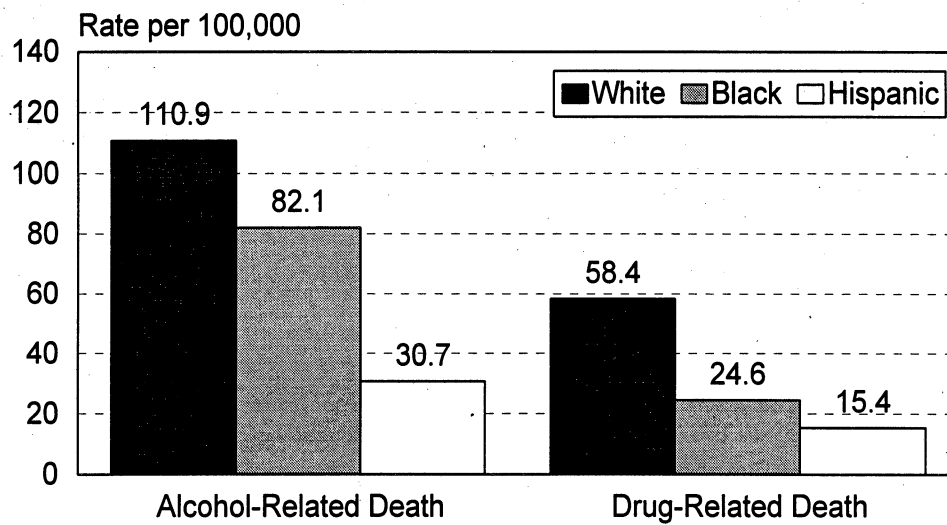
Of the total 636 deaths in Cambridge in 1996, 5% were related to alcohol and drug abuse. Drug-attributable deaths rose 88% from 1993 to 1996 while alcohol-attributable deaths declined by 31%.



**Figure 6-2**

## Alcohol and Drug-Related Deaths by Race

Cambridge: 1993-96



Source: Health and Addictions Research, Inc. and Bureau of Substance Abuse Services, Mass. DPH. Rates were calculated based on sum of 1993-96 and race-specific 1990 U.S. census.

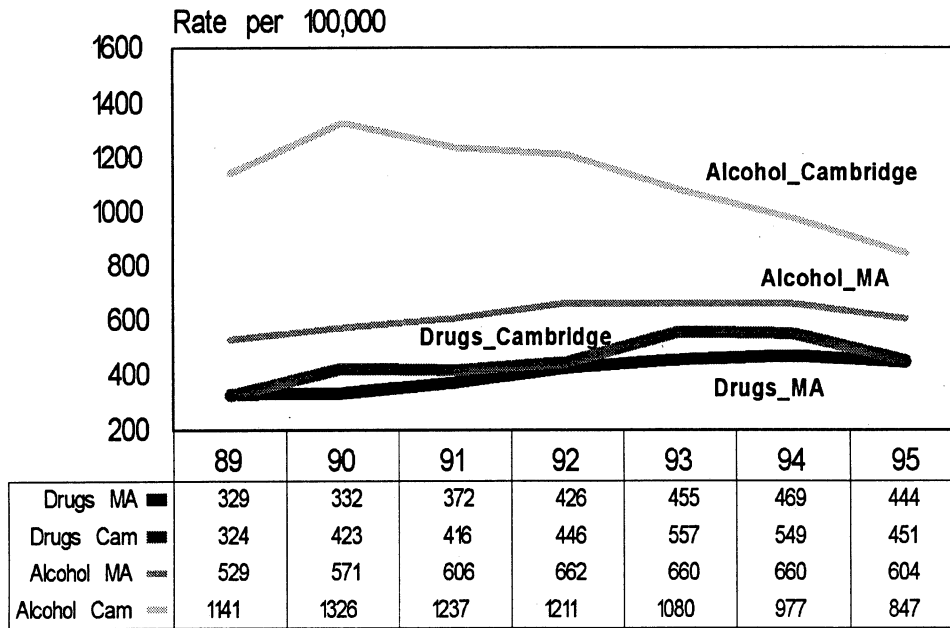
*Example of how to read this figure:*

Rates of alcohol- and drug-related deaths were higher in White residents than in either Black or Hispanic residents.



**Figure 6-3**

**Alcohol and Drug-Related Hospital Discharges**  
Cambridge: 1989-95



Source: Health and Addictions Research, Inc. and Bureau of Substance Abuse Services, Mass. DPH

*Example of how to read this figure:*

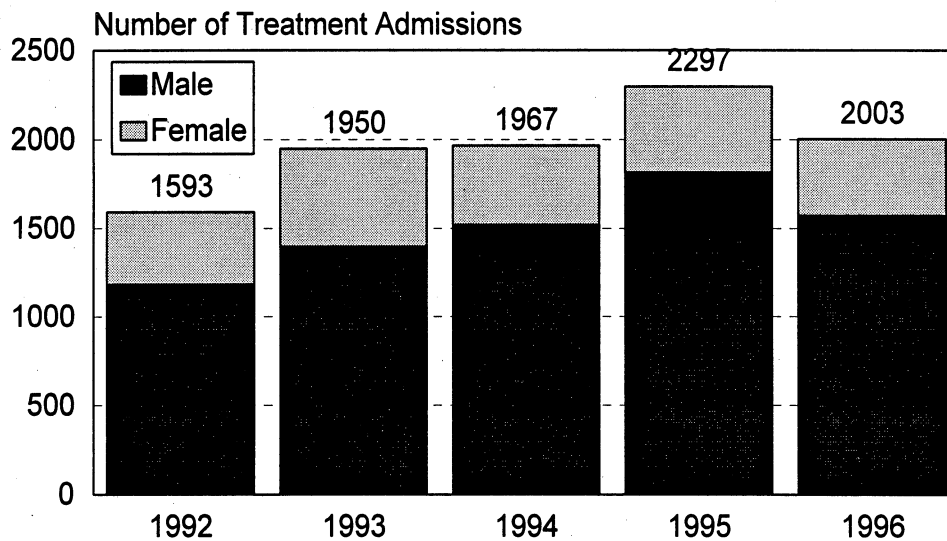
Alcohol- and drug-related hospital discharges per 100,000 population were higher among Cambridge residents than state-wide, but the rate has been decreasing in Cambridge since 1990. State-wide the rate remained constant. The rate of drug-related hospital discharges increased 39% in Cambridge and 35% state-wide since 1989.



**Figure 6-4**

## Alcohol and Drug-Related Admissions\*

Cambridge: 1993-95



\* Admissions to publicly funded treatment programs

Source: Mass CHIP v2.0 r 168.0, June 30, 1998

*Example of how to read this figure:*

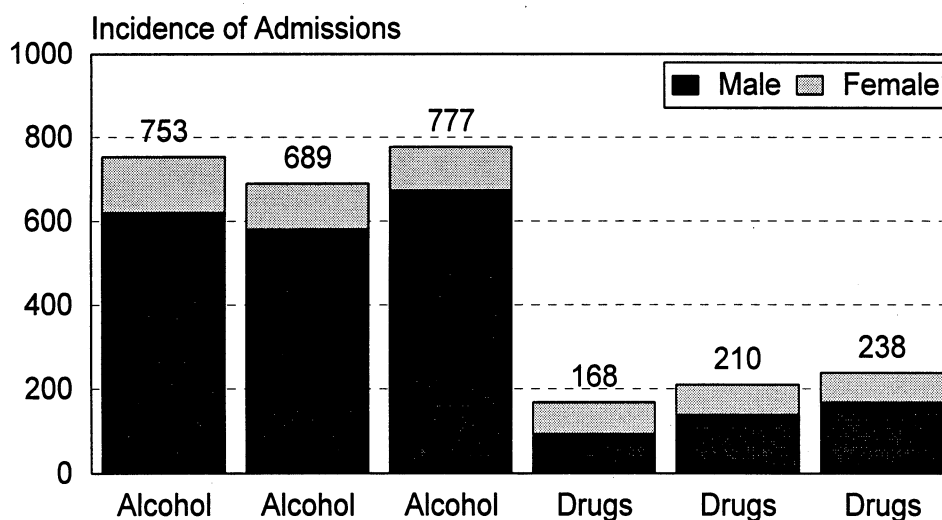
Among Cambridge residents, publicly funded substance abuse treatment admissions fluctuated around 2,000 since 1993. Between 1992 and 1995, the number of treatment admissions rose 44% but went down slightly in 1996.



**Figure 6-5**

## Alcohol and Drug-Related Admissions\* by Sex and Substance

Cambridge: 1993-95



\* Admissions to publicly funded treatment programs

Source: Health and Addictions Research, Inc. and Bureau of Substance Abuse Services, Mass. DPH

*Example of how to read this figure:*

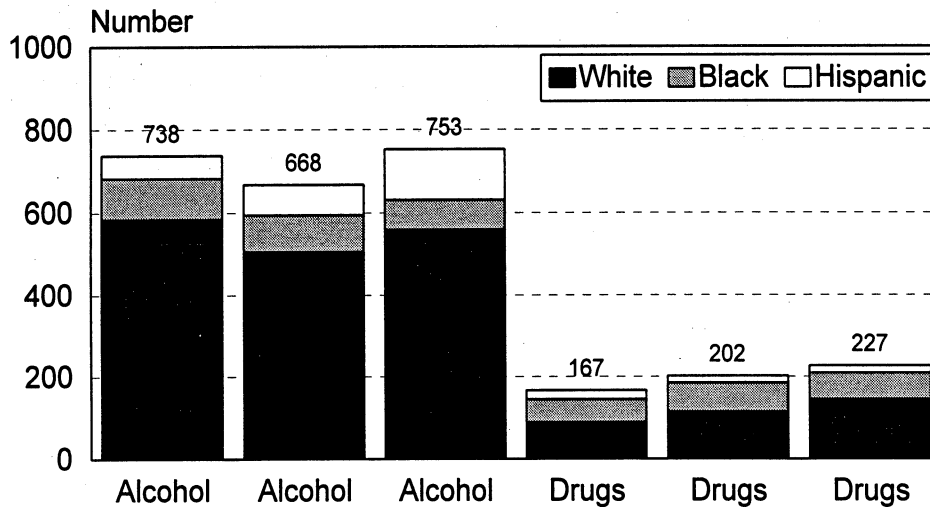
Men received more publicly funded substance abuse treatment than women. Men accounted for about 85% of alcohol treatment admissions and 65% of drug treatment admissions.



**Figure 6-6**

## Alcohol and Drug-Related Admissions\* by Race and Substance

Cambridge: 1993-95



\* Admissions to publicly funded treatment programs  
Source: Health and Addictions Research, Inc. and Bureau of Substance Abuse Services, Mass. DPH

*Example of how to read this figure:*

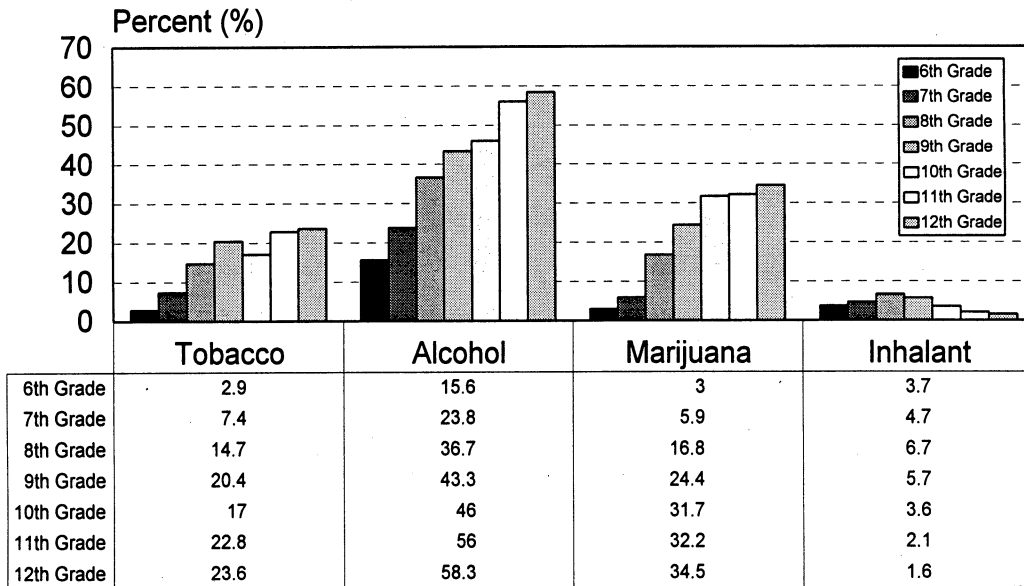
Among those admitted for alcohol treatment, 76% were White, 12% Black, and 12% Hispanic. Admissions for drug treatment had a different racial composition: 58% White, 32% Black, and 10% Hispanic.



**Figure 6-7**

## Current\* Substance Use Among Students by Grade

Cambridge Middle & High School Students



Total students in survey: middle school n=1420, high school n=1487.

\* Used during the last 30 days.

Source: Cambridge Middle Grades Health Survey 1997, Teen Health Survey 1998

*Example of how to read this figure:*

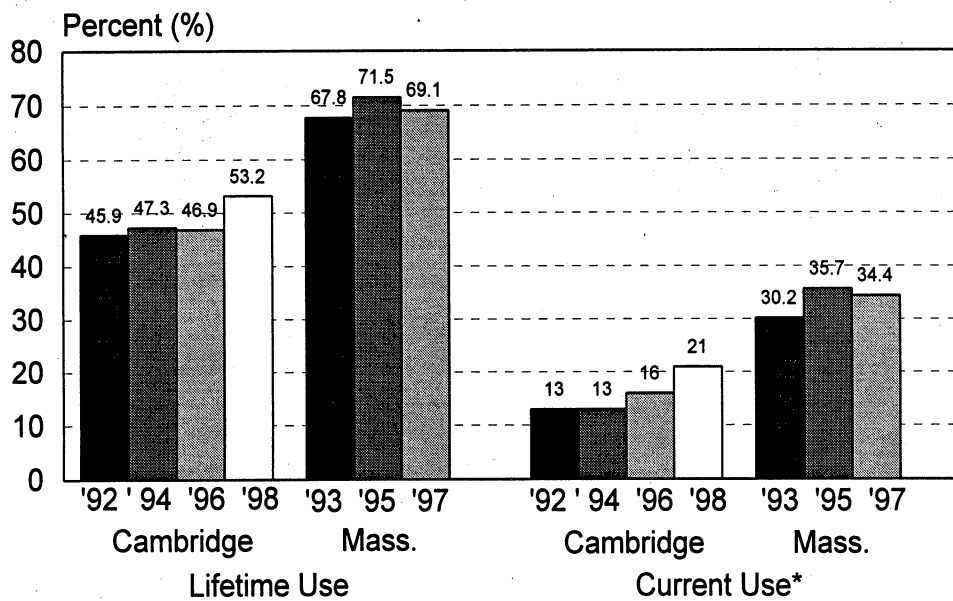
Use of illicit substances increased with grade among middle and high school students with the biggest jump in use occurring between grades 8 and 9.



**Figure 6-8**

## Tobacco Use Among High School Students

Cambridge and Massachusetts: 1992-98



\* smoked during the last 30 days.

Source: 1997 Mass. Youth Risk Behavior Survey, Mass. Dept. of Education, Teen Health Survey 1992, 1994, 1996, 1998.

*Example of how to read this figure:*

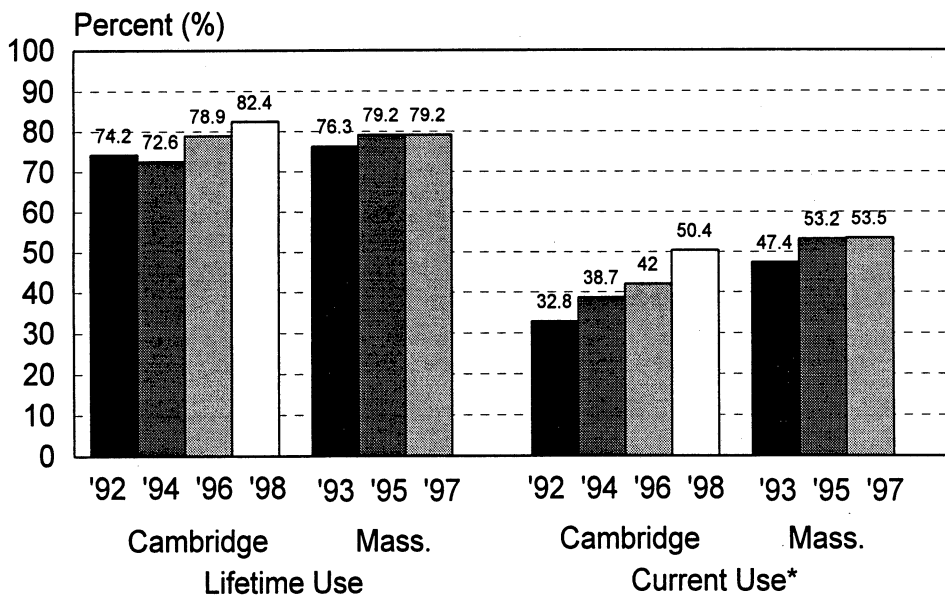
Students' report of current and lifetime tobacco use rose in the 1998 Teen Survey. Over 53% of students indicated that they used tobacco at least once in their lifetime, compared to about 46% in 1992, 1994 and 1996. Despite community efforts to decrease teen smoking, more high school students are smoking now compared to 5 years ago.



**Figure 6-9**

## Alcohol Use Among High School Students

Cambridge and Massachusetts: 1992-98



\* Consumed alcohol during the last 30 days.

Source: 1997 Mass. Youth Risk Behavior Survey, Mass Dept. of Education, Teen Health Survey 1992, 1994, 1996, 1998.

*Example of how to read this figure:*

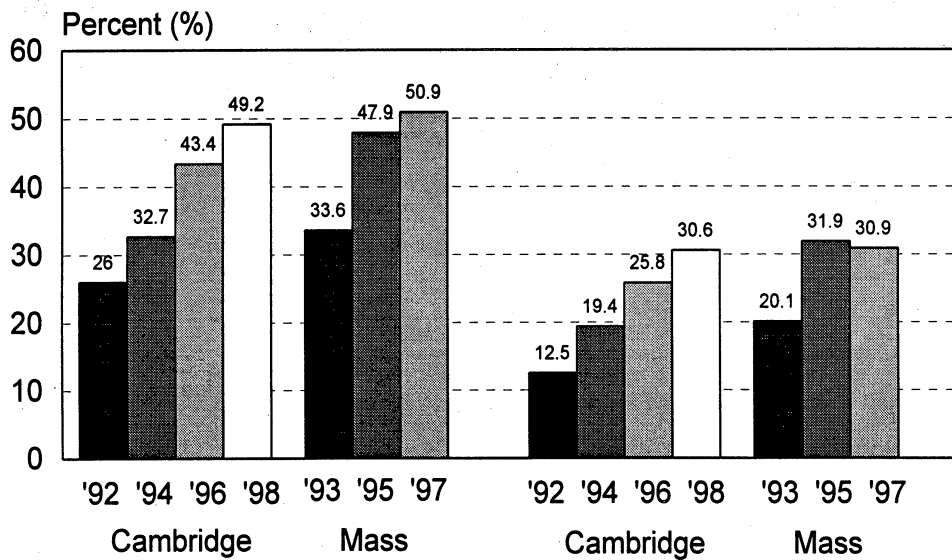
Both current and lifetime use of alcohol by high school students rose more sharply in Cambridge than state-wide during the years measured. Current use of alcohol by Cambridge students rose 17.6% compared to 6.1% for Massachusetts students.



**Figure 6-10**

## Marijuana Use Among High School Students

Cambridge and Massachusetts: 1992-98



\* Used during the last 30 days.

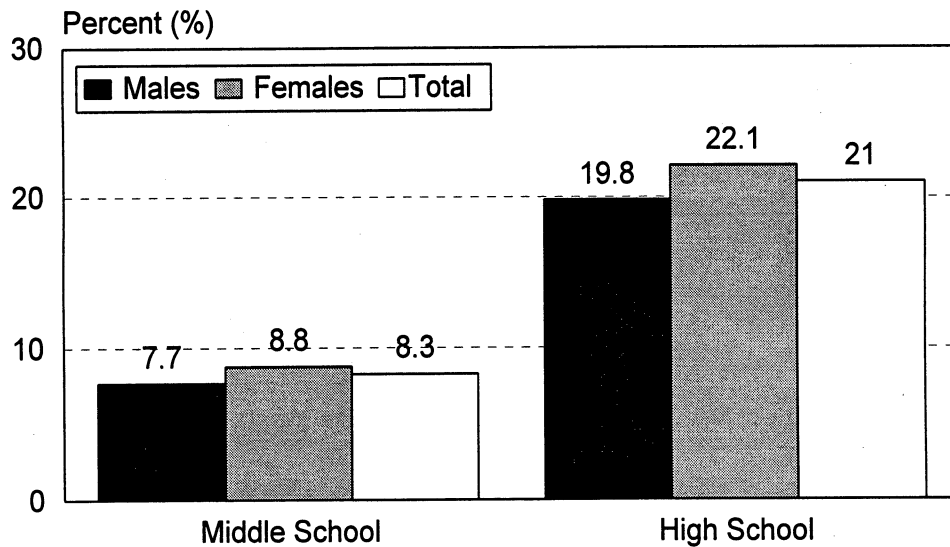
Source: 1997 Mass Youth Risk Behavior Survey, Mass. Dept. of Education, Teen Health Survey 1992, 1994, 1996, 1998.

*Example of how to read this figure:*

In the most recent surveys administered in Cambridge and Massachusetts, approximately 50% of students reported that they used marijuana at least once in their lifetime and almost 31% indicated that they used marijuana at least once during the past 30 days.

**Figure 6-11****Current\* Tobacco Use by Sex**

Cambridge Middle &amp; High School Students



Total students in survey: middle school n=1420, high school n=1487.

\* Smoked during the last 30 days.

Source: Cambridge Middle Grades Health Survey 1997, Teen Health Survey 1998

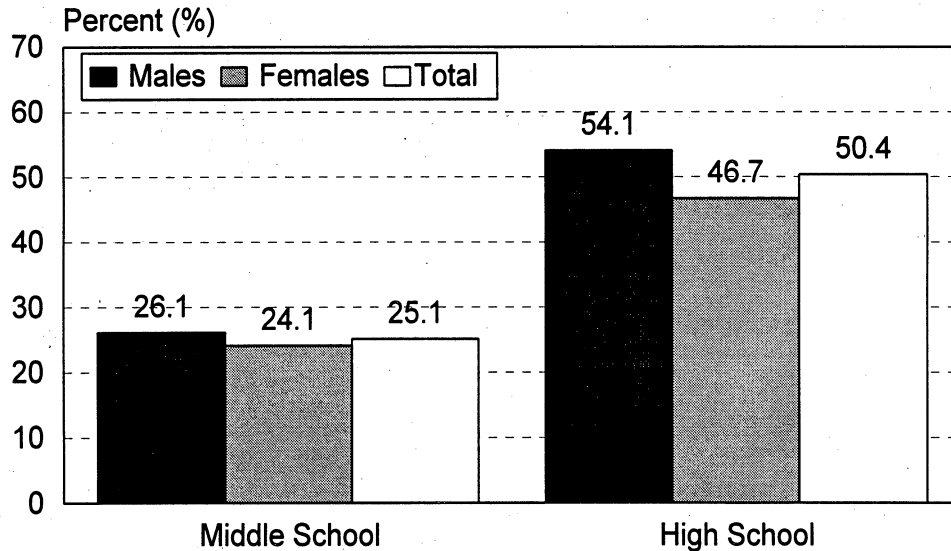
*Example of how to read this figure:*

More than eight percent of middle school students and twenty-one percent of high school students reported that they used tobacco at least once during the past 30 days. Use of tobacco was slightly higher in girls than boys both in the middle school and the high school.

**Figure 6-12**

## Current\* Alcohol Use by Sex

Cambridge Middle & High School Students



Total students in survey: middle school n=1420, high school n=1487.

\*Used during the last 30 days.

Source: Cambridge Middle Grades Health Survey 1997, Teen Health Survey 1998

*Example of how to read this figure:*

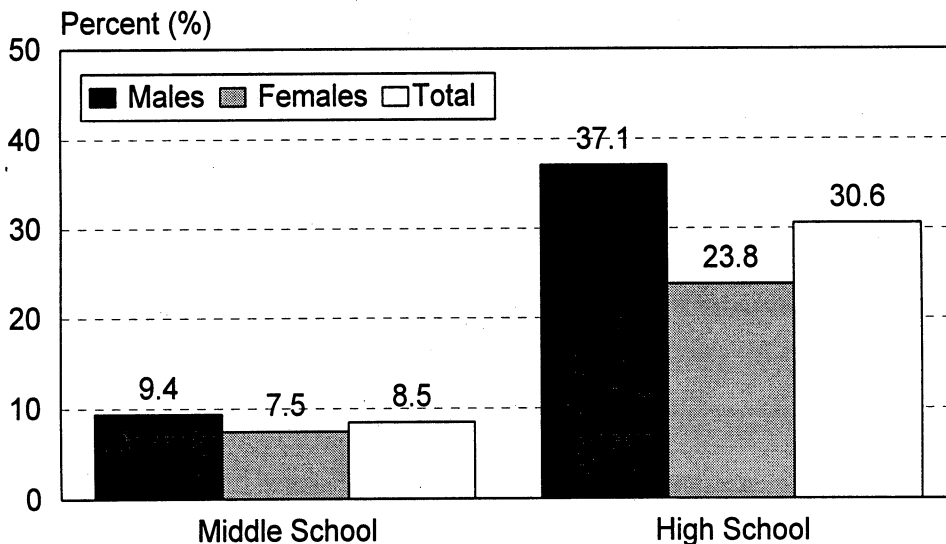
Over twenty-five percent of middle school students who responded to the 1997 survey indicated that they used alcohol at least once during the past 30 days with little difference in use by sex. In the 1998 Teen Health Survey 50.4% of high school students reported drinking alcohol. Rates of use were higher in males (54.1%) than females (46.7%).



**Figure 6-13**

### Current\* Marijuana Use by Sex

Cambridge Middle & High School Students



Total students in survey: middle school n=1420, high school n=1487.

\* Used during the last 30 days.

Source: Cambridge Middle Grades Health Survey 1997, Teen Health Survey 1998

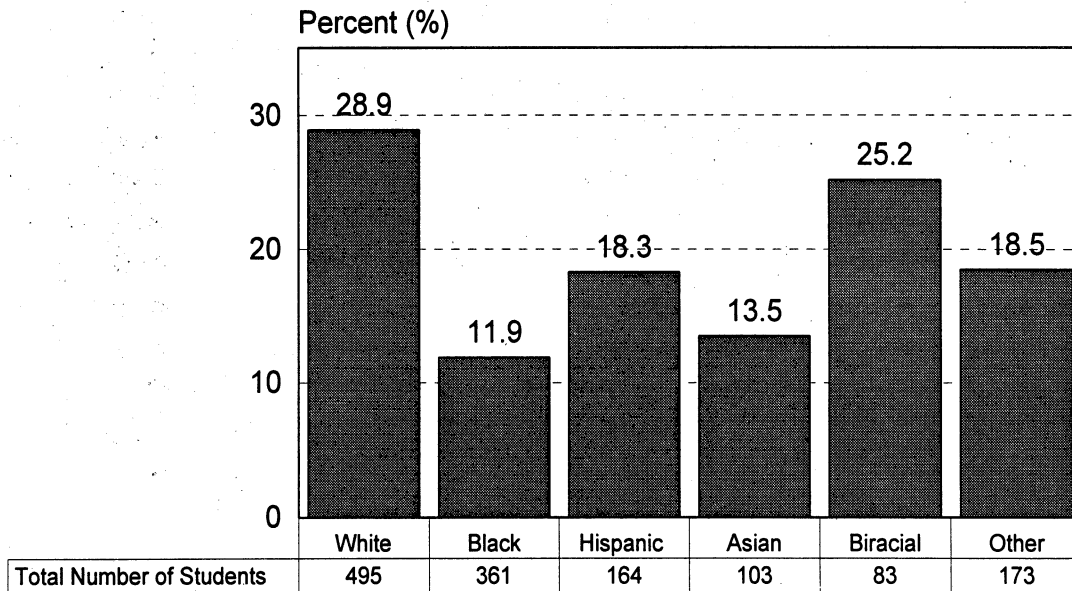
*Example of how to read this figure:*

9.4% of middle school students and 30.6% of high school students reported marijuana use during the past 30 days. Use was higher among males than females, particularly among high school students with 37.1% of male and 23.8% of female students reporting current marijuana use.



**Figure 6-14**

**Current\* Tobacco Use Among Cambridge High School Students by Race**



Total students in survey n=1487; missing=108.  
 \* Used during the last 30 days.  
 Source: Teen Health Survey 1998

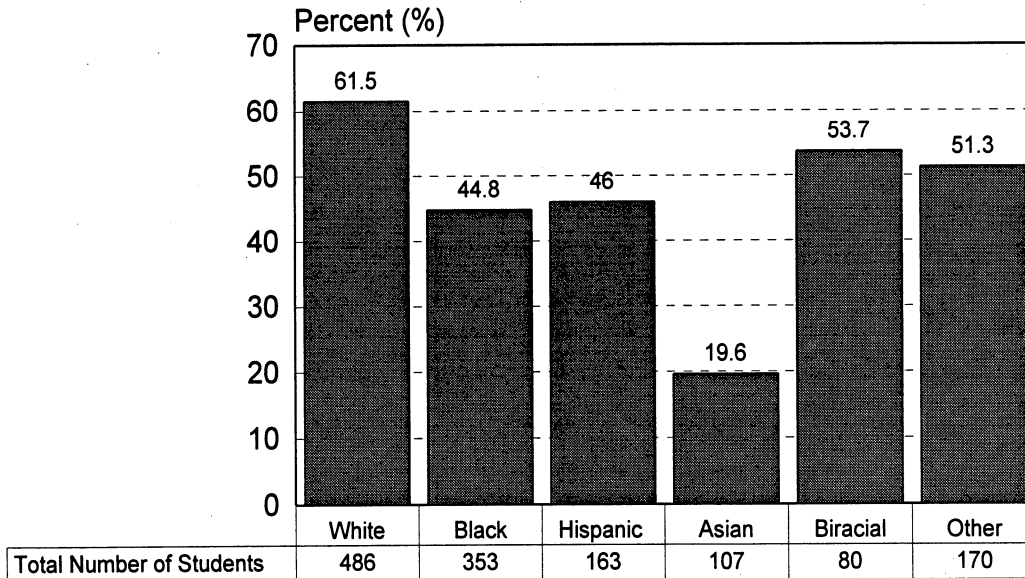
*Example of how to read this figure:*

The prevalence of smoking among White students was higher than other racial groups. 28.9% of White students reported smoking in the past 30 days, compared to 18.3% of Hispanic, 25.2% of biracial, 13.5% of Asian, and 11.9% of Black students.



**Figure 6-15**

**Current\* Alcohol Use Among Cambridge High School Students by Race**



Total students in survey n=1487; missing=128.  
 \* Used during the last 30 days.  
 Source: Teen Health Survey 1998

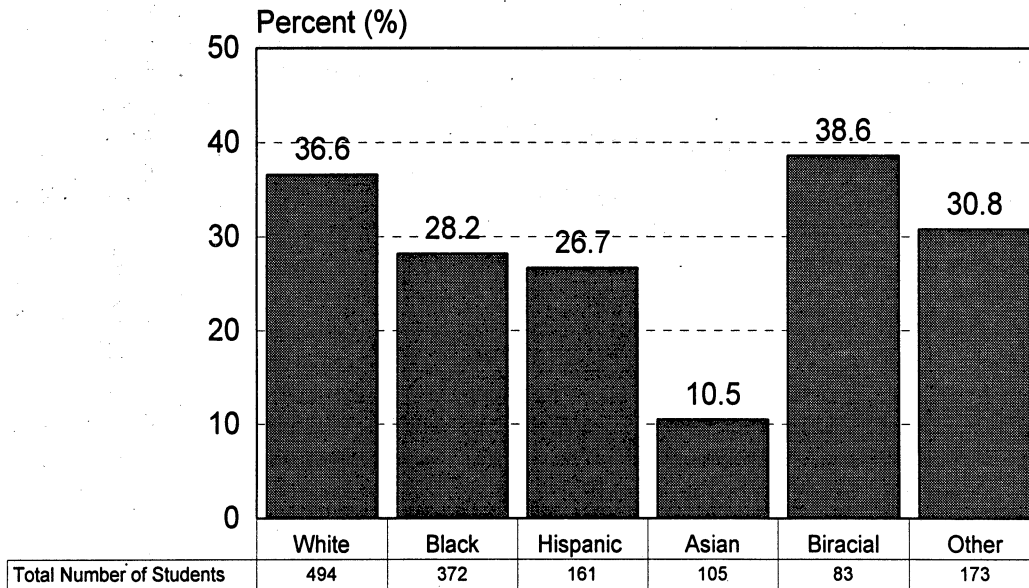
*Example of how to read this figure:*

61.5% of White students reported current use of alcohol, compared to 53.7% of biracial, 46% of Hispanic, 44.8% of Black, and 19.6% of Asian students.



**Figure 6-16**

**Current\* Marijuana Use Among Cambridge High School Students by Race**



Total students in survey n= 1487; missing=99.  
 \* Used during the last 30 days.  
 Source: Teen Health Survey 1998

*Example of how to read this figure:*

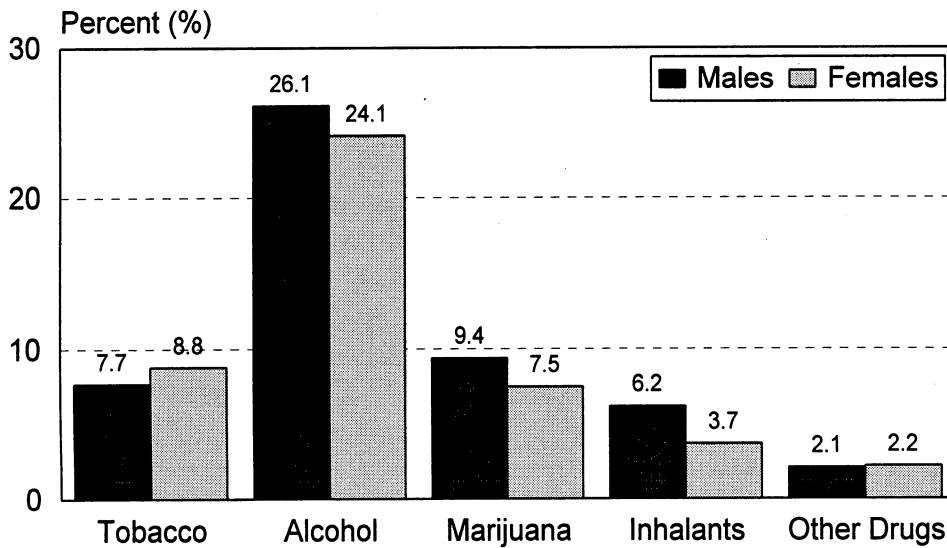
38.6% of biracial students reported smoking marijuana during the past 30 days compared to 36.6% of White, 28.2% of Black, 26.7% of Hispanic, and 10.5% of Asian students.



**Figure 6-17**

## Current\* Substance Use by Middle School Students

Cambridge Middle Schools: 1997



\* Used during the past 30 days. Grades 6-8, n=1349  
Source: Cambridge Middle Grades Health Survey 1997

*Example of how to read this figure:*

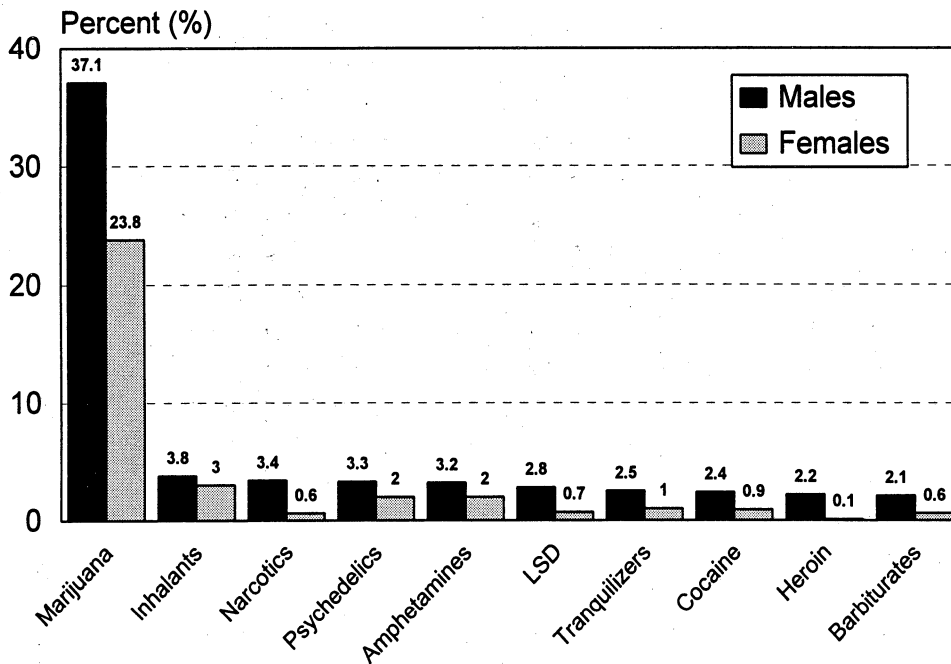
While middle school girls reported more smoking (8.8%) than boys (7.7%) in the past 30 days, a greater percentage of boys reported using alcohol, marijuana, and inhalants.



**Figure 6-18**

**Current\* Illegal Drug Use by High School Students**

Cambridge Rindge & Latin School: 1998



\* Used during the last 30 days  
Source: Teen Health Survey 1998

*Example of how to read this figure:*

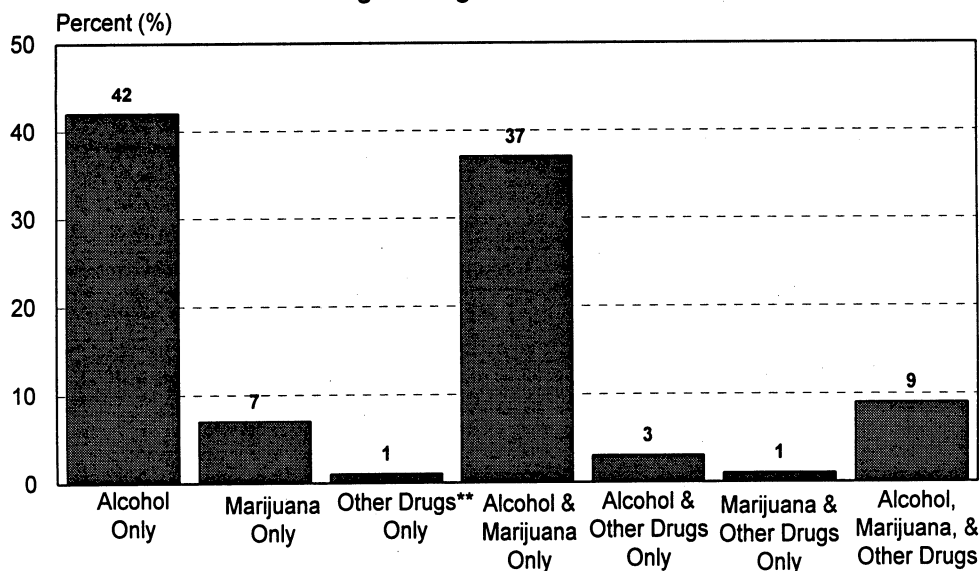
High school students used marijuana more than any other illegal substance, including inhalants, psychedelics, cocaine, and amphetamines (alcohol was not considered for this analysis). 37.1% of male students and 23.8% of female students reported smoking marijuana at least once in the past 30 days.



**Figure 6-19**

### Current\* Substance Use by High School Students

Cambridge Rindge & Latin School: 1998



\* Used during the last 30 days

\*\* Other Drugs include psychedelics, cocaine, amphetamines, tranquilizers, barbiturates, inhalants, and narcotics.

Total number of students who used either alcohol or other drugs is 723.

Source: Teen Health Survey 1998

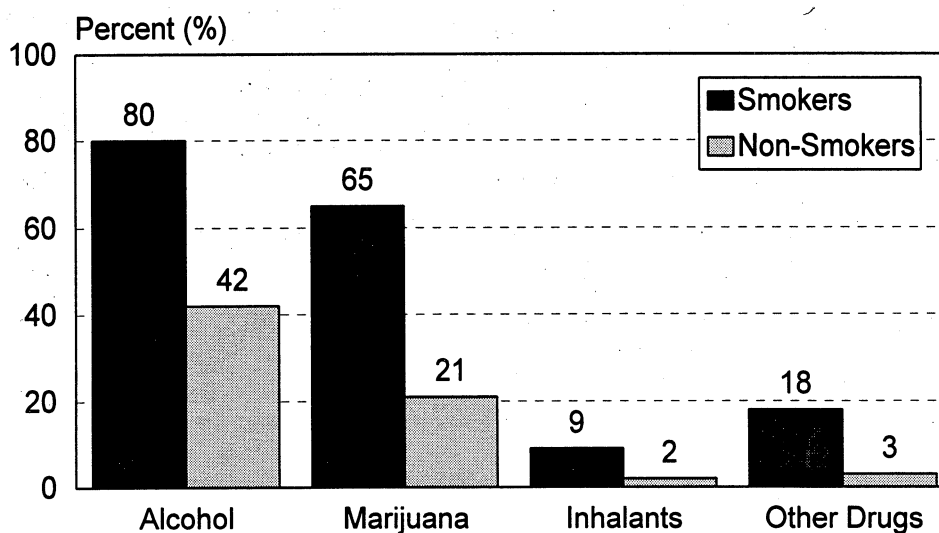
*Example of how to read this figure:*

Among high school students who reported substance use during the past 30 days, 42% reported only alcohol, 7% only marijuana, 37% both alcohol and marijuana, and 9% used alcohol, marijuana, and other drugs.

**Figure 6-20**

## Substance Use: Smokers\* Versus Non-Smokers

Cambridge Rindge &amp; Latin School: 1998



\* Used during the last 30 days  
Source: Teen Health Survey 1998

*Example of how to read this figure:*

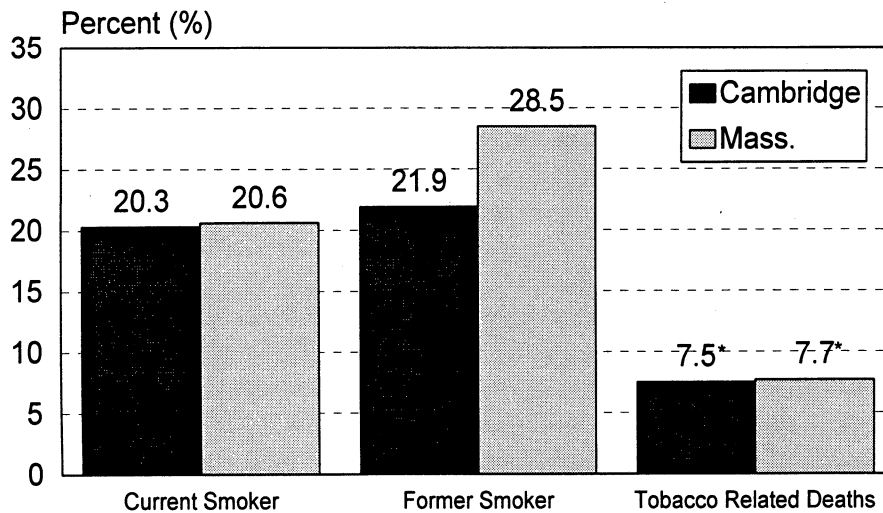
Current smokers were more likely to use alcohol, marijuana, and other drugs than students who didn't smoke. About twice as many smokers reported drinking alcohol as non-smokers and smokers were almost three times as likely to use marijuana .



**Figure 6-21**

## Smoking Prevalence and Tobacco Related Deaths

Cambridge 1993 and Massachusetts 1997



Source: Health Research Associates 1993; Mass. Behavioral Risk Factor Surveillance System 1997  
 \*Smoking Report 1995, MassCHIP v2.0 r-168.0 MDPH, Aug. 1998

*Example of how to read this figure:*

In 1996, 20.3 % of Cambridge residents were current smokers and 21.9% were former smokers; the percent of current and former smokers was higher state-wide.



## 7. Health Promotion/Disease Prevention

- The percentage of children and adolescents who are overweight has more than doubled in the past 30 years. National data collected between 1988 and 1994 found about 11% of children and adolescents were classified as overweight with an additional 14% at risk for becoming overweight.<sup>1</sup> In 1998, 6% of Cambridge elementary school children were overweight and 13% were at risk of becoming overweight.<sup>2</sup> Calorie-dense foods are abundant and the United States has moved toward a sedentary lifestyle. National data do not indicate an increase in caloric intake in children and young adolescents. Decreasing activity in children is the suspected cause, but we lack information on trends in activity for young children.
- Over the past several years, the percentage of Cambridge elementary school children qualifying for free or reduced-priced meals has been approximately 45 to 50%. At the end of the 1997-98 school year, 46% of the total elementary school population had qualified for discounted school meals, with a range of 22 to 67% for individual schools.<sup>3</sup>
- Societal overemphasis on being thin can contribute to poor body perception, eating disorders, and unsound weight-loss practices, especially among female teenagers. Among Massachusetts female teenagers, 62%<sup>4</sup> are trying to lose weight. According to the Cambridge Teen Health Survey,<sup>5</sup> 30% of adolescent girls worry about their weight.

### Indicators:

- **Eligibility for and use of food subsidy and meal delivery programs:** Food and nutrition programs offer food to those who lack money to purchase food through the Food Stamp Program and to protect nutritionally vulnerable sub-populations through the WIC (Women, Infants and Children) Program.
- **High blood cholesterol prevalence:** High blood cholesterol is a predictor of heart disease and other chronic illness, that is, illnesses that are slow to develop and last a long time. Screening for high blood cholesterol identifies people at high risk for heart disease allowing targeted interventions to prevent disease from progressing.



- **Heart disease, cancer, and stroke mortality** (See Chapter 9 of this Volume): Heart disease is the leading cause of death in the U.S. and in the City of Cambridge. Risk factors for heart disease include high blood pressure, smoking, diabetes, and high blood cholesterol. Stroke shares these underlying risk factors. Physical inactivity and being overweight are also associated with heart disease. Eliminating the risk factors that cause these conditions (such as poor diet and lack of physical activity) can prevent chronic illness. Cancer is a diverse group of diseases with different risk factors and different preventive measures but many cancers are linked to lifestyle choices including nutrition and physical activity.
- **Diabetes prevalence:** Diabetes is caused by a decreased ability to produce or respond to the hormone insulin. The complications of diabetes can be decreased by reducing smoking, high blood pressure, high cholesterol, and obesity.
- **Overweight prevalence:** Obesity, the most common nutritional problem in the United States, is associated with increased risk for heart disease, diabetes, certain cancers, and other long-term chronic health problems.
- **Physical activity:** Regular physical activity helps build and maintain healthy bones and muscles, controls weight, and reduces feelings of depression and anxiety, and promotes psychological well-being.<sup>6</sup> Physical inactivity increases the risk of dying prematurely, dying of heart disease, and developing diabetes, colon cancer, and high blood pressure.
- **Dietary behaviors and physical activity among high school and middle school students:** Physical inactivity and poor diet together account for at least 300,000 deaths in the United States each year. Only tobacco use contributes to more preventable deaths.<sup>7</sup> In Cambridge, 43% of high school students consumed the recommended five or more servings of fruits and vegetables each day; 63.6% reported vigorous activity three or more days each week; and 35.2% reported moderate activity five or more days each week.

<sup>1</sup> Troiano, R.P. and K.M. Flegal, Overweight Children and Adolescents: Description, Epidemiology, and Demographics.

<sup>2</sup> Robert McGowan, Cambridge Public Schools

<sup>3</sup> City of Cambridge, Dept. of Human Services; percentages underestimate eligibility and need as parents must submit an income declaration to qualify.

<sup>4</sup> 1997 Massachusetts Youth Risk Behavior Survey Results, Massachusetts Department of Education.

<sup>5</sup> 1998 Teen Health Survey, Cambridge Public Schools

<sup>6</sup> U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, March 1997.

<sup>7</sup> McGinnis, J.M., and W.H. Foege, Actual causes of death in the United States, JAMA 1993, 270 (18): 2207-12.

**Table 7-1****YEAR 2000 OBJECTIVES, MASSACHUSETTS AND CAMBRIDGE RATES**

	HP2000 Goal	Mass Rate	Cambridge Rate
Cambridge Food Pantry Network, number families served monthly <sup>1</sup>	*	*	3200 <sup>1</sup>
Food Stamp recipients (rate per 1000)	*	62 <sup>2</sup>	15 <sup>3</sup>
Percent of elementary school children receiving free or reduced-price school lunch	*	45% <sup>4</sup>	46% <sup>4</sup>
Diabetes in total population prevalence	2.5%	4.0% <sup>5</sup>	*
High blood cholesterol prevalence Adults 18+ years of age	20%	25% <sup>5</sup>	*
Overweight prevalence			
Adults	20%	26% <sup>5</sup>	*
Men (35-64)	*	36% <sup>5</sup>	*
Women (35-64)	*	21% <sup>5</sup>	*
Adolescents 12-19	15%	*	28%(12-14 yr.) <sup>6</sup>
Children 5-12	*	*	19% <sup>6</sup>
WIC participants (children)	*	*	25% <sup>7</sup>
Head Start Participants	*	*	28% <sup>8</sup>

\*=data not available



## YEAR 2000 OBJECTIVES, MASSACHUSETTS AND CAMBRIDGE RATES

	HP2000 Goal	Mass Rate	Cambridge Rate
Ever diagnosed with			
Heart disease	*	5% <sup>5</sup>	*
Chronic obstructive pulmonary disease			
All adults	*	5% <sup>5</sup>	*
Over 50 years	*	7% <sup>5</sup>	*
Cancer other than benign skin cancer			
All adult	*	5% <sup>5</sup>	*
Over 50 years	*	11% <sup>5</sup>	*
Asthma			
All adults	*	8% <sup>5</sup>	*
Over 50 years	*	8% <sup>5</sup>	*
Osteoporosis			
Men	*	2% <sup>5</sup>	*
Women	*	4.6% <sup>5</sup>	*
Percent who meet average daily goal			
Vegetable/fruit (5 servings)			
Adults 18+ years	50%	26% <sup>9</sup>	*
Adolescents (grades 9-12)	*	21% <sup>10</sup>	43% <sup>11</sup>
Vigorous physical activity 3+ days/week			
People 6+ years of age	75%	*	*
Adolescents (grades 9-12)	61%	64% <sup>10</sup>	
Moderate physical activity			
Adolescents (grades 9-12)	30%	*	35.4% <sup>11</sup>
Regular and vigorous physical activity			
Adolescents (grades 9-12)	*	*	18% <sup>11</sup>
Sedentary lifestyle			
Adults 18+ years	15%	22.3% <sup>9</sup>	*
Worry about weight (too heavy or too thin)			
Adolescent girls (grade 9-12)	*	*	34% <sup>11</sup>
Adolescent boys (grade 9-12)	*	*	12% <sup>11</sup>

\*=data not available



## YEAR 2000 OBJECTIVES, MASSACHUSETTS AND CAMBRIDGE RATES

	HP2000 Goal	Mass Rate	Cambridge Rate
Currently trying to lose weight			
Adults	*	38% <sup>8</sup>	*
Women	*	44%	*
Men	*	31%	
Adolescent girls (grade 9-12)	*	63% <sup>10</sup>	*
Adolescent boys (grade 9-12)	*	23% <sup>10</sup>	*

\*=data not available

<sup>1</sup> Additional smaller food banks also provide for Cambridge residents.

<sup>2</sup> Food Stamp Program, 1995

<sup>3</sup> Food Stamp Program, August 1998

<sup>4</sup> USDA Food and Nutrition Service, FY98

<sup>5</sup> 1997 Massachusetts Behavioral Risk Factor Survey

<sup>6</sup> Robert McGowan, Cambridge Public Schools

<sup>7</sup> Cambridge WIC Program (wt/ht $\geq$  90%ile), 1997

<sup>8</sup> Cambridge Head Start Program, July 1998

<sup>9</sup> 1996 Massachusetts Behavioral Risk Factor Survey

<sup>10</sup> 1997 Massachusetts Youth Risk Behavior Survey Results

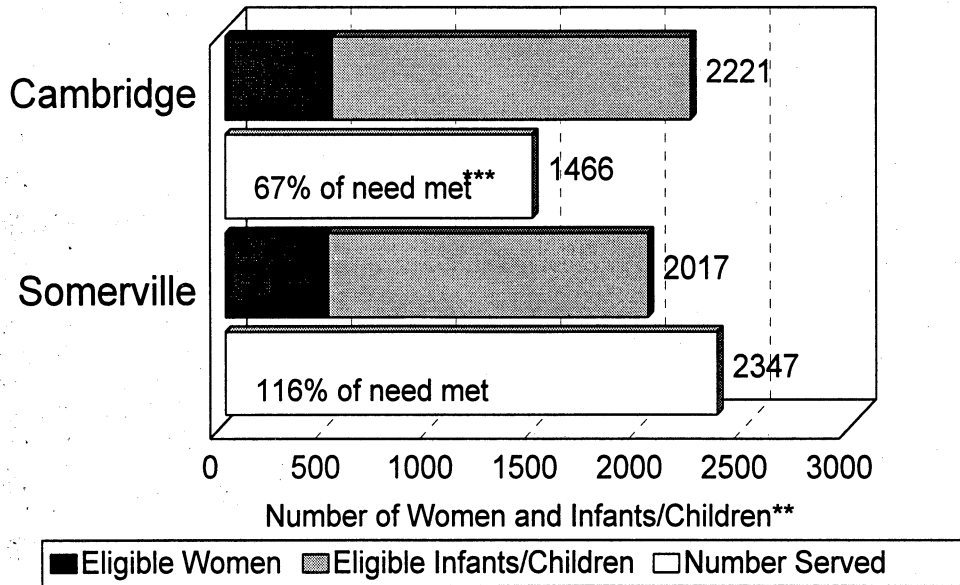
<sup>11</sup> 1998 Teen Health Survey



**Figure 7-1**

**WIC Program Recipients**

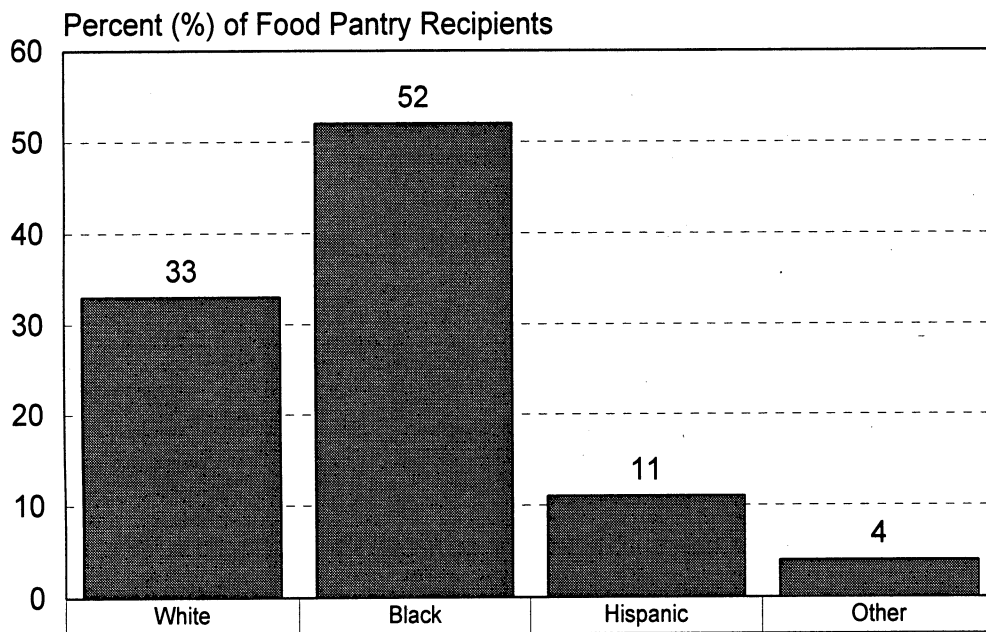
Estimated Number Eligible and Number Served  
Cambridge and Somerville Residents: April, 1998\*



\* Number actively served at end of fiscal year  
 \*\* <5 years of age  
 \*\*\* Need for WIC services estimated by state WIC program  
 Source: Massachusetts WIC Program, Mass. DPH

**Example of how to read this figure:**

The state WIC Program estimated that 2221 women and children in Cambridge should be eligible to participate in April 1998; however, 1466 (67%) were actually enrolled in the program.

**Figure 7-2****Use of Food Pantries in Cambridge by Race**

N = 650 families served each month

Source: Cambridge Economic Opportunity Committee 1998

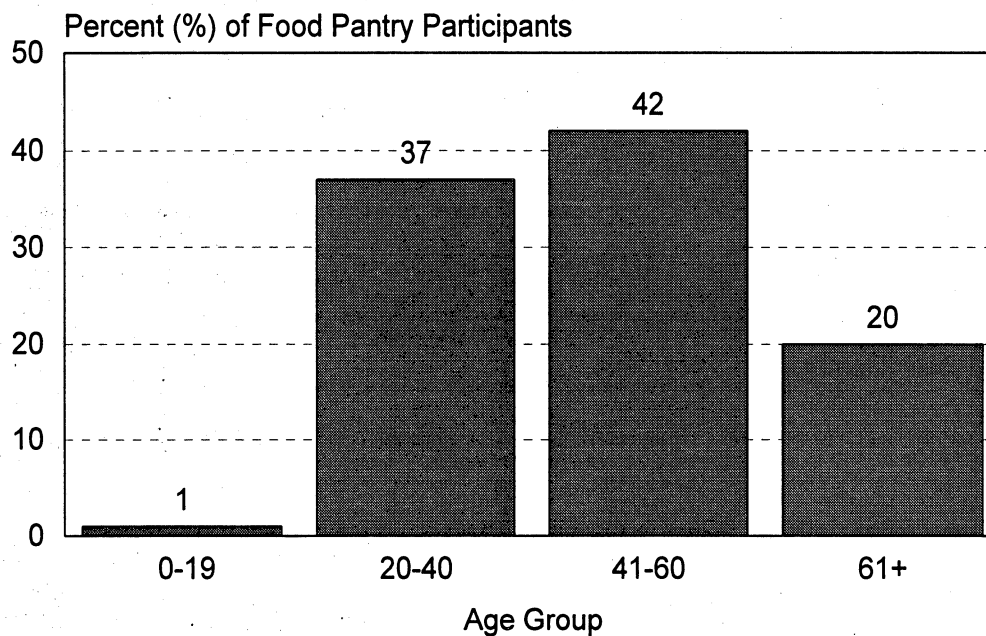
***Example of how to read this figure:***

Among Cambridge Food Pantry recipients in 1998, 52% were Black, 33% White, and 11% Hispanic.

**Figure 7-3**

## Cambridge Food Pantry Use by Age

Cambridge: 1998



N = 650 families served each month

Source: Cambridge Economic Opportunity Committee 1998

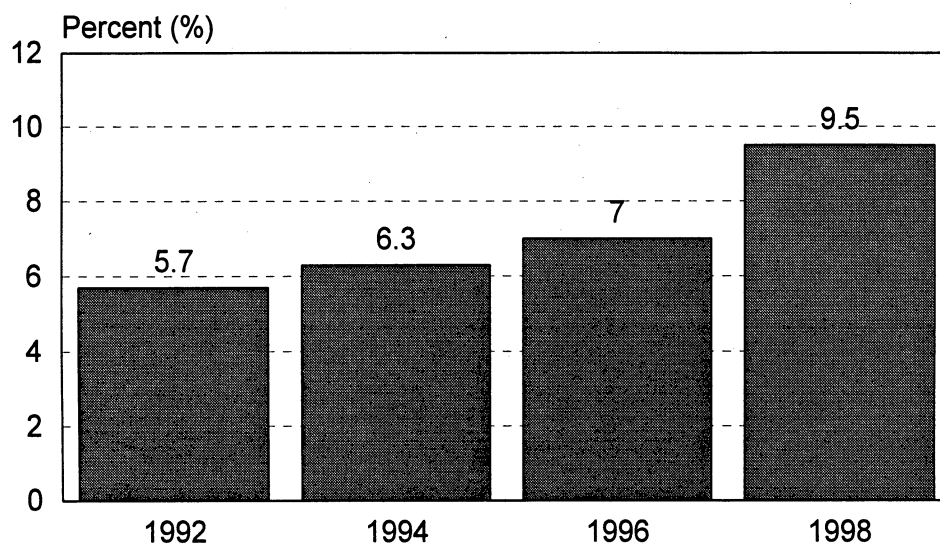
*Example of how to read this figure:*

Among Cambridge Food Pantry recipients in 1998, 37% were 20 to 40 years old, 42% were 41 to 60 years, and 20% were 61 years or older.

**Figure 7-4**

## High School Students Who Went Hungry\* for Lack of Money

Cambridge Rindge and Latin School: 1992-98



\* Were you ever hungry in the last year because there was not enough money to buy food for your home?

Source: Teen Health Surveys 1992-98

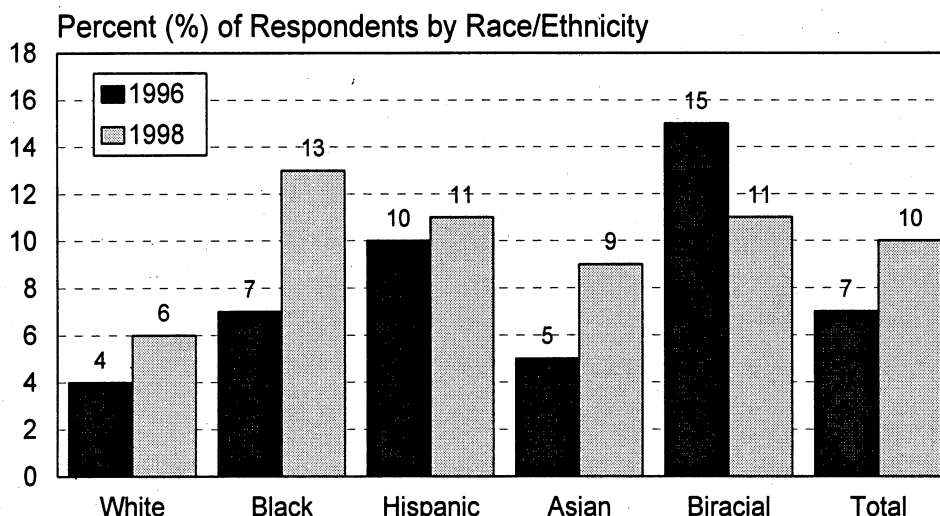
### *Example of how to read this figure:*

The percent of Cambridge high school students who reported going hungry for lack of money increased steadily from 5.7% in 1992 to 9.5% in 1998.

**Figure 7-5**

## High School Students Who Went Hungry\* for Lack of Money by Race

Cambridge Rindge and Latin School: 1996-98



\* Were you ever hungry in the last year because there was not enough money to buy food for your home?

Source: Cambridge Public Schools Teen Health Survey

Total students in survey: 1996 = 1,556; 1998 = 1367

### *Example of how to read this figure:*

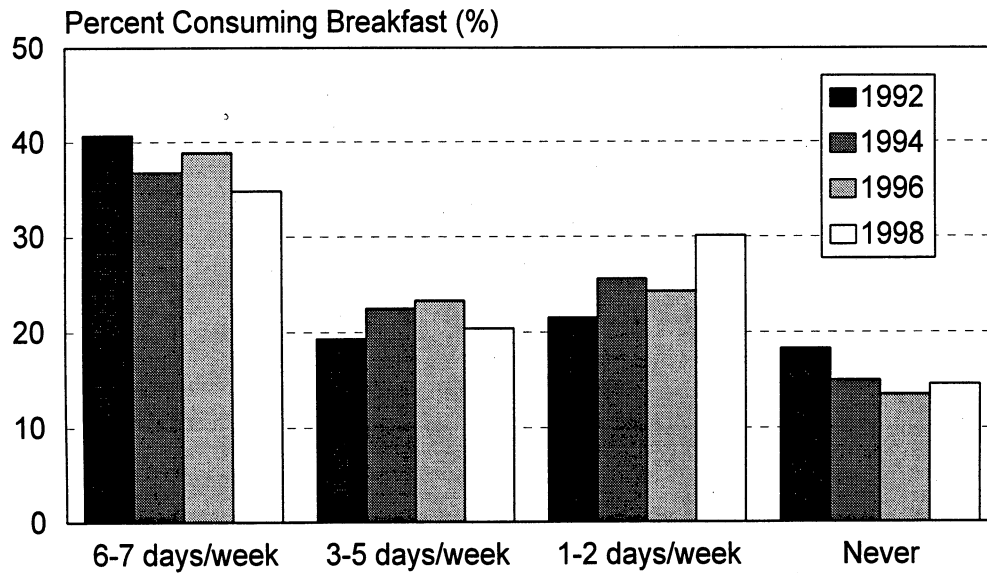
The percent of Cambridge high school students who reported going hungry for lack of money increased from 7 to 10% between 1996 and 1998. While the percent increased in every group except biracial, the rise was greatest among Blacks and Asians.



**Figure 7-6**

## High School Students Who Report Eating Breakfast

Cambridge Rindge and Latin School: 1992-98



Source: Cambridge Public Schools, Teen Health Surveys, 1992-1998

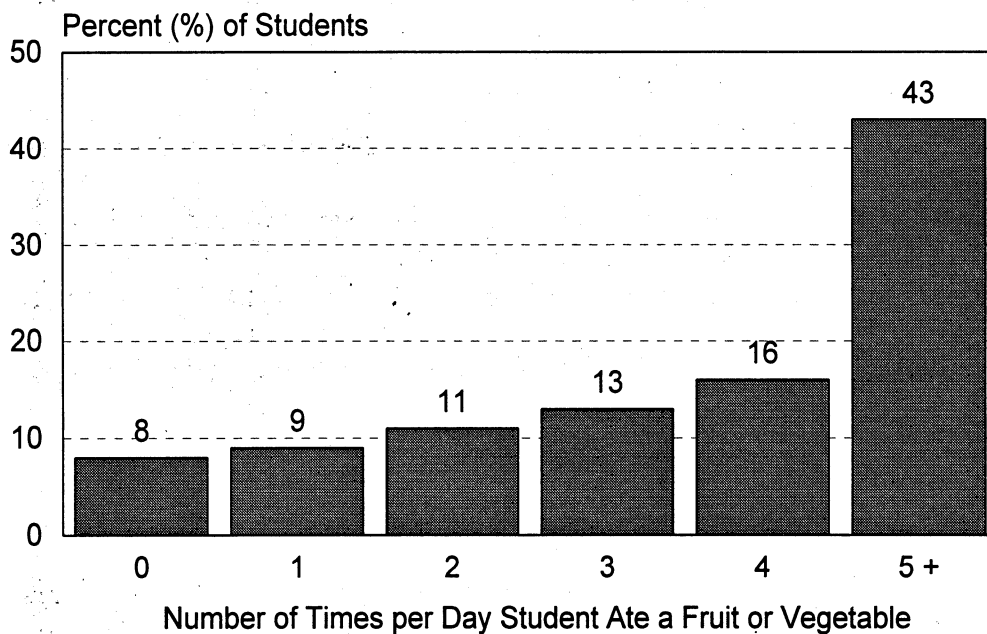
*Example of how to read this figure:*

Between 1992 and 1998 fewer than 40% of high school students reported eating breakfast daily. This percentage has decreased over the past six years, as did the percent who reported never eating breakfast.

**Figure 7-7**

## Daily Consumption of Fruits and Vegetables

Cambridge Rindge and Latin School: 1998



N= 1384

Source: Teen Health Survey, 1998

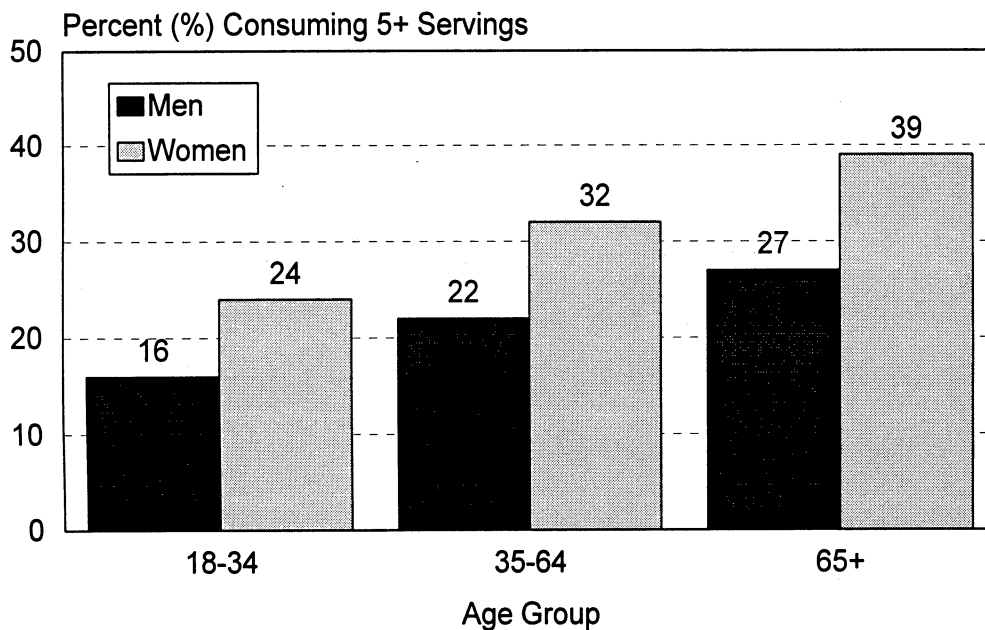
***Example of how to read this figure:***

Only 43% of Cambridge high school students consumed the recommended 5 daily servings of fruits and vegetables.

**Figure 7-8**

## Daily Consumption of Five or More Servings of Fruits and Vegetables

Massachusetts Adults: 1996



Source: Massachusetts Behavioral Risk Factor Survey, 1996

***Example of how to read this figure:***

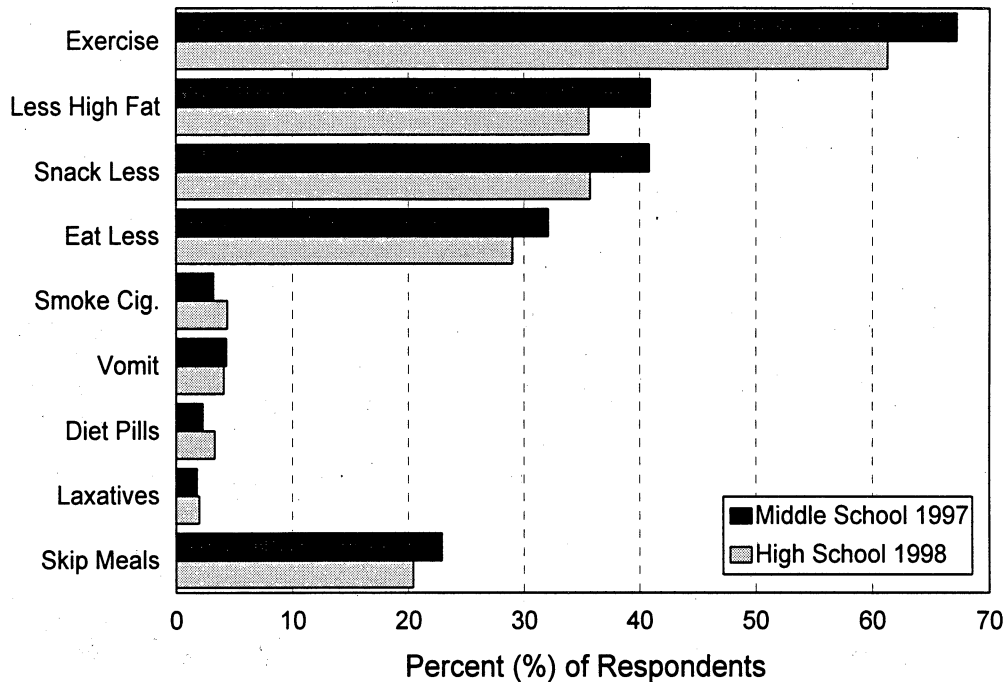
A larger percentage of adults in Massachusetts aged 65 years or more consumed the recommended 5 daily servings of fruits and vegetables than adults in younger age groups. Women were more likely than men to consume the recommended 5 daily servings of fruits and vegetables in all age groups.



**Figure 7-9**

## Weight Control Practices of Students

In Cambridge High School and Middle School: 1997-98



Total students in high school N=1377; middle school n= 1373  
 Source: Teen Health Survey, 1998 and Middle School Survey, 1997

***Example of how to read this figure:***

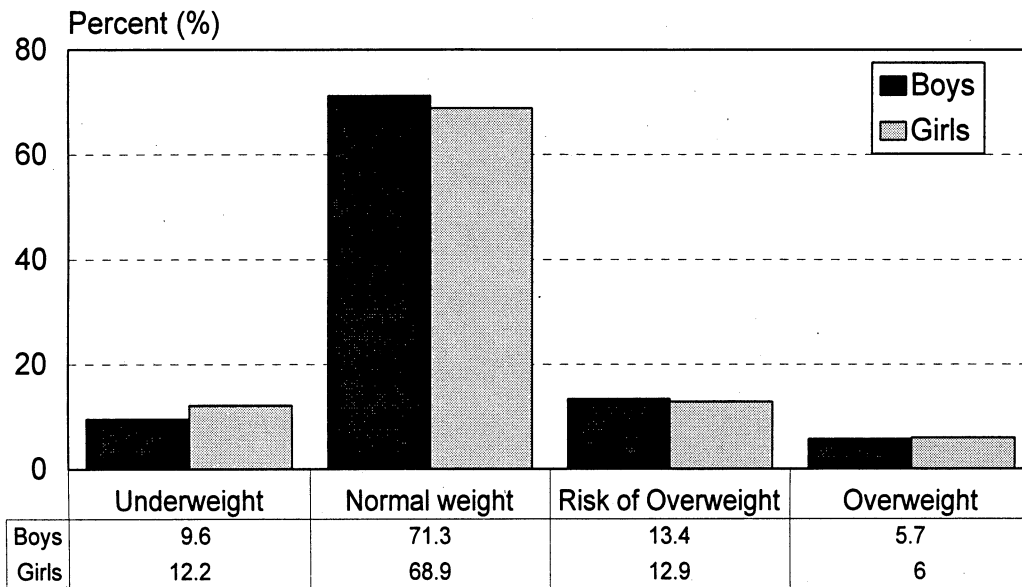
Many Cambridge middle school and high school students reported using exercise, lower dietary fat, eating less, and snacking less to control weight; however, some students rely on unhealthy weight loss methods such as skipping meals, smoking, diets pills, and laxatives.



**Figure 7-10**

## Body Mass Index Screening

Cambridge Elementary School Children: 1997-98



Boys n = 2298; Girls n = 2209

Source: Robert McGowan, Physical Education Department Cambridge Public Schools.

***Example of how to read this figure:***

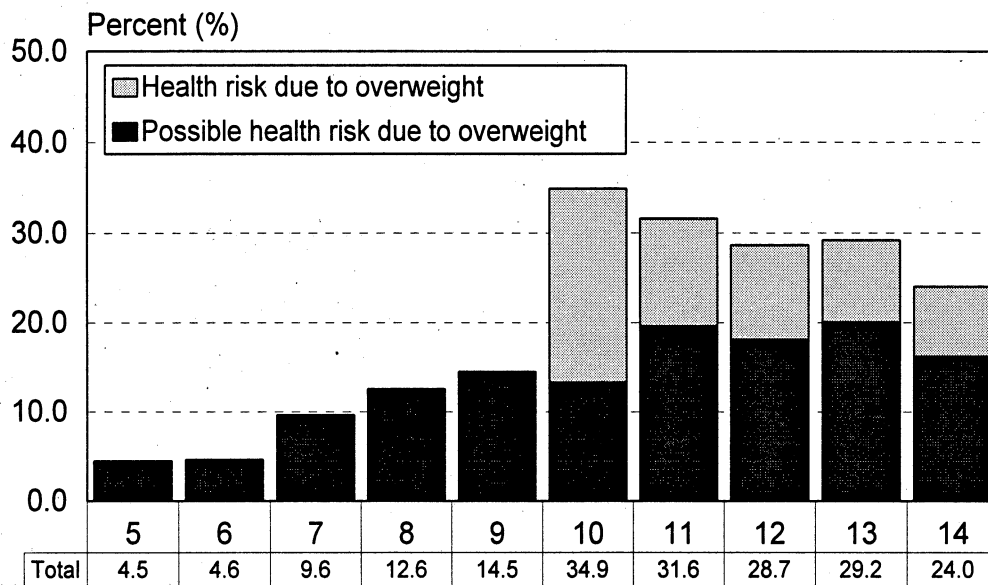
5.7% of boys and 6% of girls in Cambridge elementary schools were overweight; an additional 13.4% of boys and 12.9% of girls were at risk of overweight, that is, their body mass index was at the upper level of the normal range for body mass index for children of their age and sex.



**Figure 7-11**

## Overweight Children by Age

Cambridge Elementary Schools: 1997-98



Boys N = 2298; Girls N = 2209

Source: Robert McGowan, Cambridge School Department

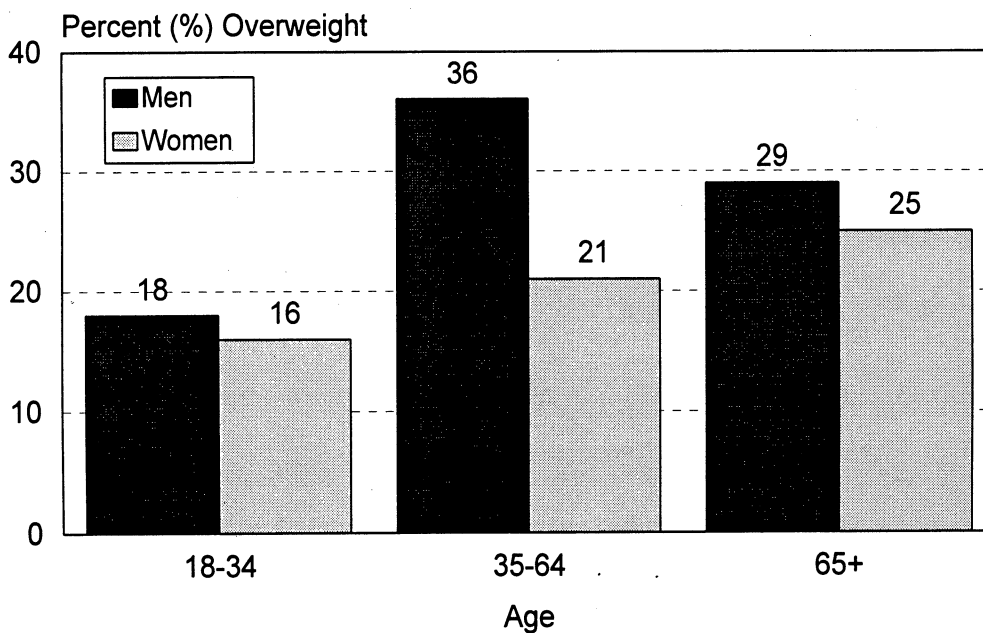
***Example of how to read this figure:***

The percent of overweight Cambridge elementary school children peaked at age 10 (34.9%) and declined slightly to 24% at age 14 years.

**Figure 7-12**

## Prevalence of Overweight Adults

Massachusetts: 1997



Source: Massachusetts Behavioral Risk Factor Survey 1997

***Example of how to read this figure:***

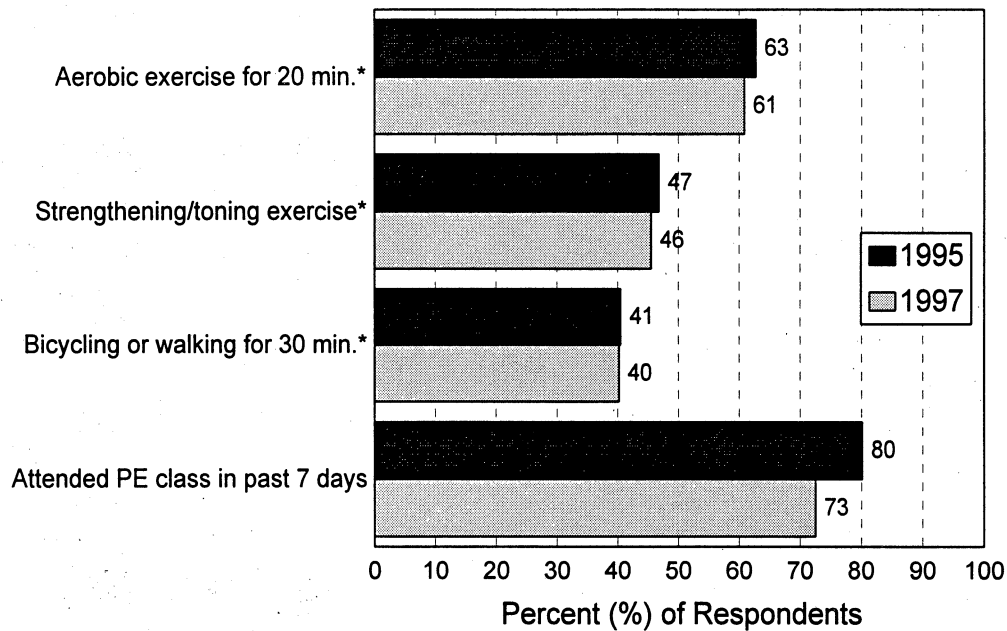
The percent of overweight Massachusetts women rose from 16% among 18-34 year olds to 25% of those 65 years and older. The pattern was different for men with overweight peaking at 36% of men aged 35-64 years and then dropping to 29% of those 65 years and older.



**Figure 7-13**

## Physical Activity of Massachusetts High School Students

Grades 9-12: 1995-97



\* On 3 or more days one week prior to survey administration.  
 Source: 1995, 1997 Massachusetts Youth Risk Behavior Survey

***Example of how to read this figure:***

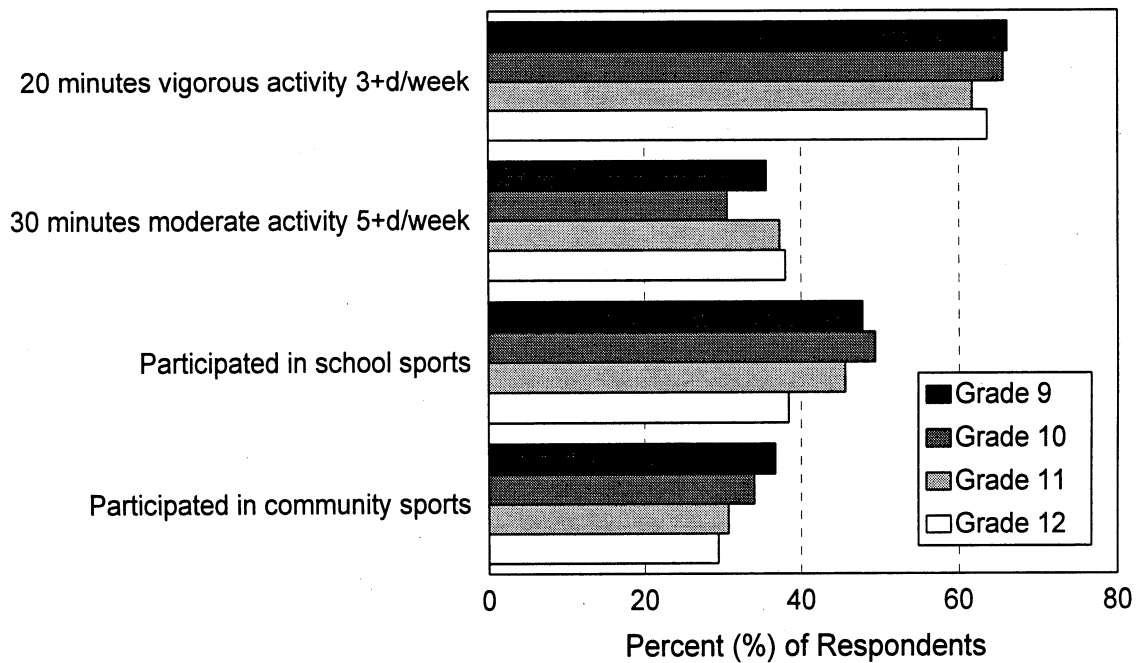
Among Massachusetts high school students, four measures of physical activity decreased slightly between 1995 and 1997.



**Figure 7-14**

## Physical Activity of High School Students by Grade

Cambridge Rindge and Latin School: 1998



Source: Teen Health Survey 1998; N= 1376

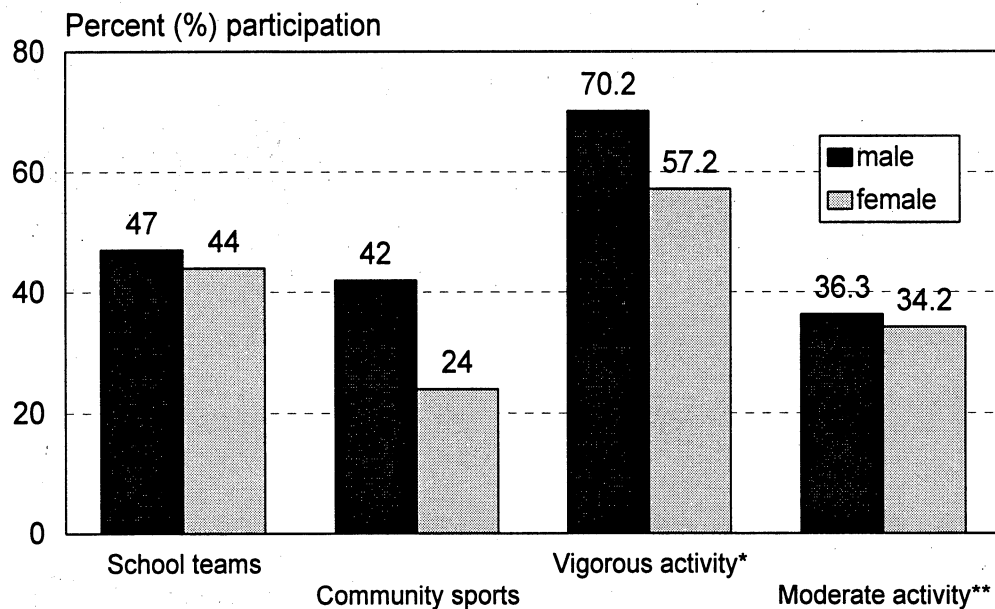
***Example of how to read this figure:***

Participation in organized school and community sports drops with increasing grade level among Cambridge high school students. However, about 60% of students continued to report vigorous activity 3 or more days a week and almost 40% reported moderate activity 5 or more days each week in all grades.

**Figure 7-15**

## Physical Activity of High School Students by Sex

Cambridge Rindge and Latin School: 1998



Males N=695; Females N=677  
Source: Teen Health Survey, 1998

\*20 minutes 3+ days/week  
\*\*30 minutes 5+ days/week

### *Example of how to read this figure:*

Boys and girls reported similar rates of participation in school teams and moderate activity; however, 18% more boys than girls participated in community sports and 13% more reported vigorous activity on 3 or more days a week.



## 8. Maternal & Infant Health

- An average of 1040 infants were born to Cambridge residents annually during 1992-96 (five years). The average annual birth rate<sup>1</sup> during this period was 10.9 per 1,000 residents.
- During 1992-96, the average annual percentage of low-weight infants in Cambridge was 6.3% of all live births. Ten percent of births to Black women were low-weight, as were 5.7% of births to Hispanic women, and 5.6% of births to White women.
- During 1992-96, 4.5% of newborns had teenaged mothers.
- The percentage of women who received inadequate<sup>2</sup> or no prenatal care was approximately 17.5% overall for Cambridge during 1992-96.

### Indicators:

- **Low birth weight:** Low birth weight, defined as a birth weight less than 2500 g (5.5 pounds), is the most important determinant of infant mortality. In addition, low birth weight babies who survive have an increased risk of birth defects, mental retardation, many other physical ailments, and child abuse and neglect.
- **Access to prenatal care:** Inadequate prenatal care is associated with increased incidence of low birth weight and infant mortality. The Institute of Medicine and the American Academy of Pediatrics estimate that each dollar spent on prenatal care prevents the need to spend \$2 to \$10 on high-technology care for low birth weight babies.
- **Racial/ethnic differences:** Inadequate prenatal care often is not evenly distributed across racial and ethnic groups. Groups with lower rates of prenatal care can be targeted by health planners to improve access to care and decrease incidence of low infant birth weights.
- **Health behavior during pregnancy:** Mothers' behavior during pregnancy can affect infant health in a variety of ways. Drug exposure puts babies at greater risk of complications during pregnancy and correlates with low birth weights. Mothers' consumption of alcohol is associated with fetal alcohol syndrome that includes a wide variety of abnormalities. Tobacco use is associated with low birth weight infants and the complications arising from low birth weight.



- **Births to teens (women less than 20 years):** Pregnancies among teens are at high risk for poor outcomes for both mother and baby. Consequences may include prenatal and birth complications, difficulty with neonatal care, and infant mortality. The infants face a greater risk of impaired development and a poor start in life. In addition, mothers who are themselves children face risks of dropping out of school, becoming welfare dependent, and limiting their life options. These represent huge preventable personal and social costs.
- **Teen sexuality:** Behavioral practices such as sexual abstinence or the use of contraceptives among sexually active teens can protect against teen pregnancy and its associated risks. Condoms also protect against sexually transmitted disease, including HIV/AIDS.

**Table 8-1****YEAR 2000 OBJECTIVES, MASSACHUSETTS AND CAMBRIDGE RATES**

	HP 2000 Goal	Mass. Rate	Cambridge Rate
Infant mortality per 1,000 live births	7	5.8 <sup>1</sup>	8.3 <sup>1,3</sup>
Low weight births (% of births)	1%	6.2% <sup>1</sup>	6.3% <sup>1</sup>
Births to teens (% of births to women less than 20 years old)		7.6% <sup>1</sup>	4.5% <sup>1</sup>
Percentage of births to women with publicly financed prenatal care	*	27% <sup>1</sup>	23% <sup>1</sup>
Prenatal Care <sup>2</sup> (percentage of women with live births who obtain):			
Prenatal care in the first trimester	90%	88% <sup>1</sup>	86% <sup>1</sup>
Adequate prenatal care <sup>2</sup>	*	83% <sup>1</sup>	83% <sup>1</sup>

\*=Data not available

Birth Data Source: Bureau of Health Statistics, Research, and Evaluation, Mass. DPH

<sup>1</sup> 1992-96 average annual percentage or rate per 1,000 live births where applicable.

<sup>2</sup> Prenatal care is defined as "adequate" when it begins in the first trimester and includes 9 or more prenatal visits.

Intermediate prenatal care is when it begins in the second trimester or earlier, with 8 or fewer visits. Inadequate prenatal care is four visits or less, regardless of when it begins.

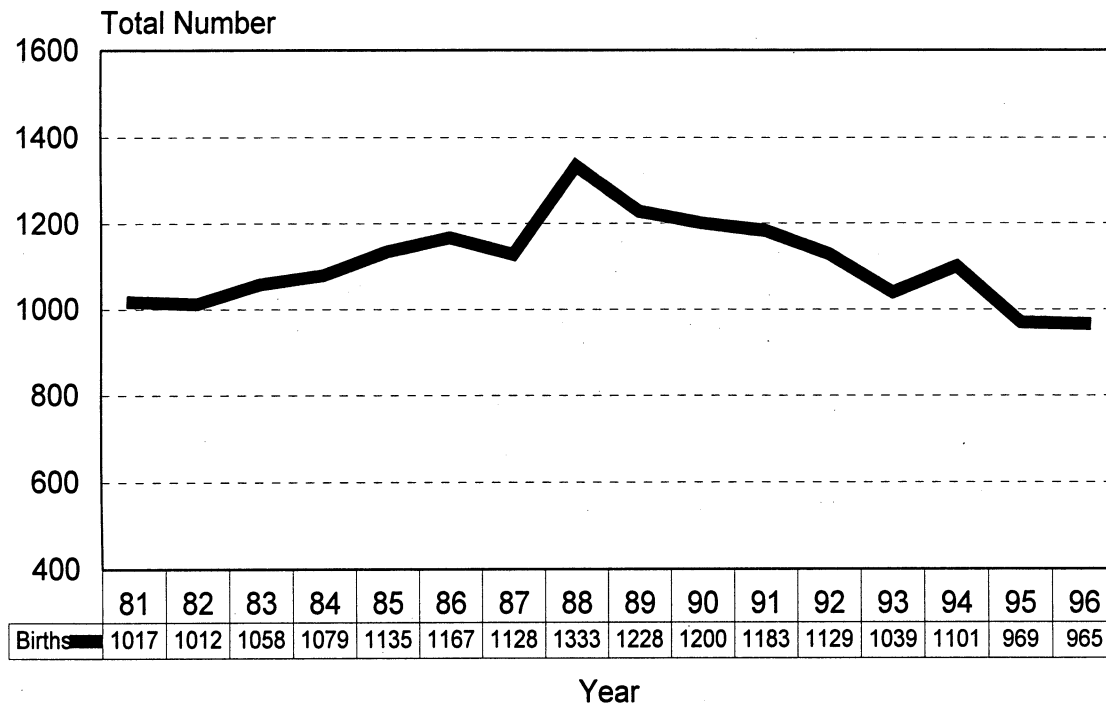
<sup>3</sup> Infant mortality rate is calculated based on 1992-93 data since the number of death is less than 5 for 1994-96 and numbers less than 5 are not reported.



**Figure 8-1**

### Births to Cambridge Residents

1981-96



Source: Bureau of Health Statistics, Research and Evaluation, Massachusetts Department of Public Health

*Example of how to read this figure:*

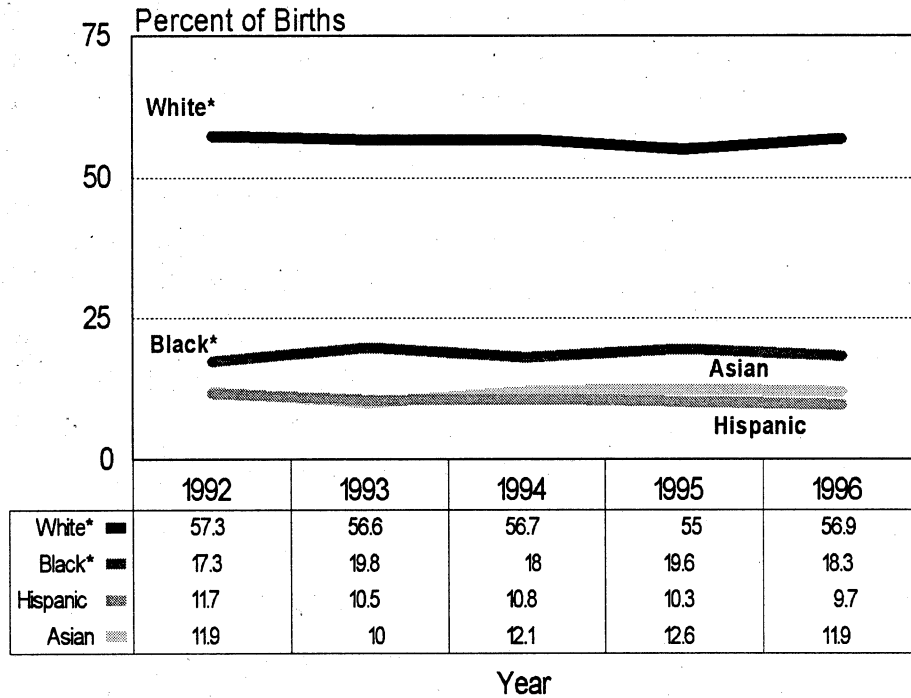
Annual births in Cambridge rose from approximately 1000 in 1981 to a peak of 1333 in 1988. They then declined steadily to below 1000 per year by 1995.



**Figure 8-2**

### Births by Race/Ethnicity

Cambridge: 1992-96



\*Non-Hispanic

Source: Bureau of Family and Community Health, in collaboration with the Bureau of Health Statistics, Research and Evaluation, Massachusetts Department of Public Health

***Example of how to read this figure:***

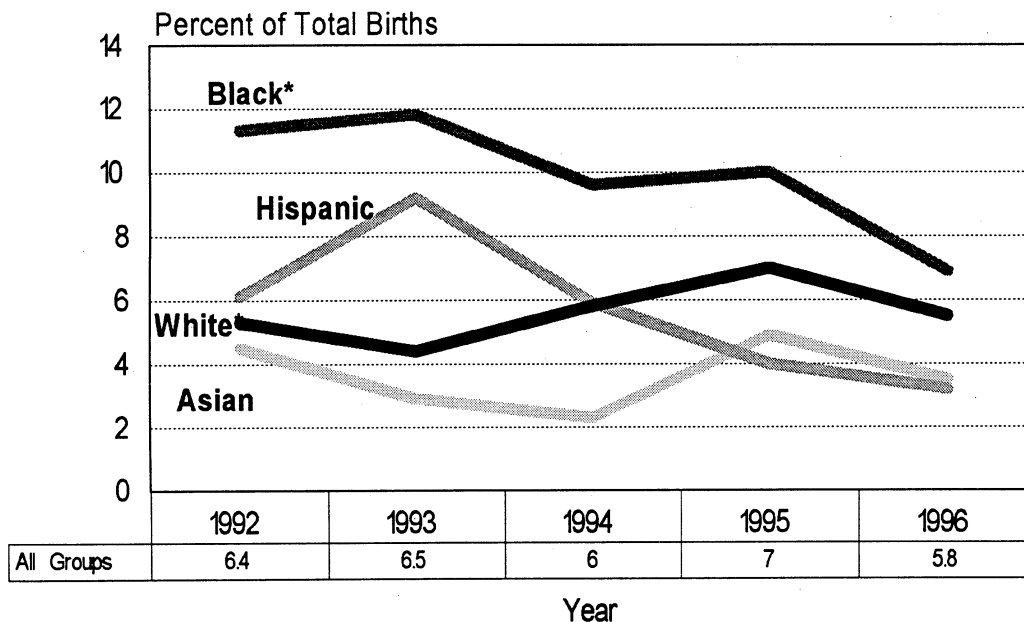
In 1996, 57.3% of births were White, 17.3% Black, 11.9% Asian, and 11.7% Hispanic. These proportions have not changed substantially since 1992.



**Figure 8-3**

### Low Weight Births by Race/Ethnicity

Cambridge: 1992-96



\* Non-Hispanic

Source: Bureau of Family and Community Health, in collaboration with the Bureau of Health Statistics, Research and Evaluation, Massachusetts Department of Public Health

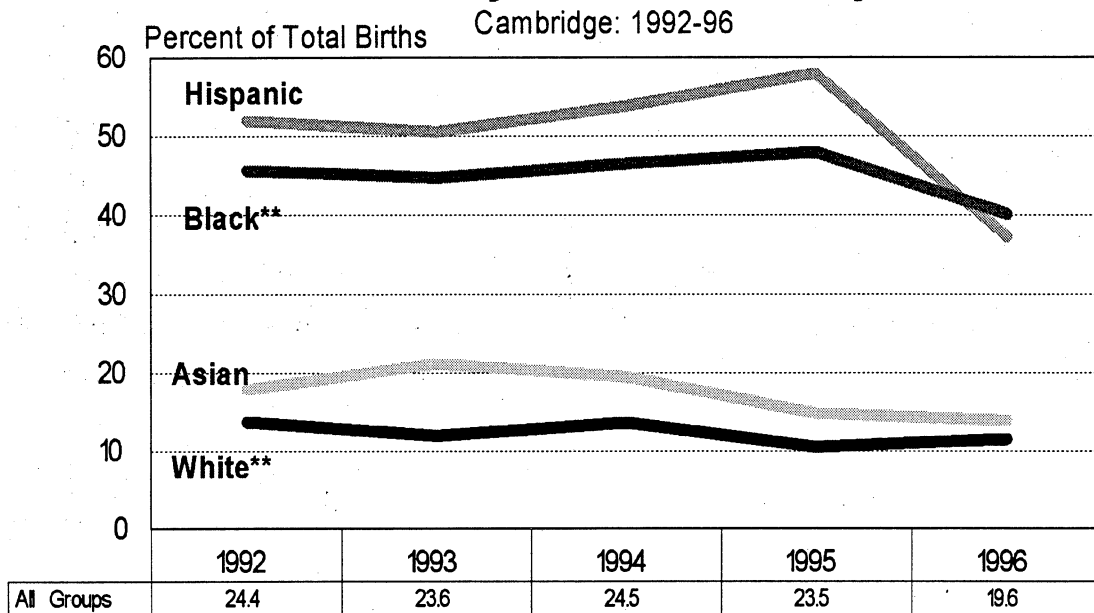
*Example of how to read this figure:*

While the percent of low-weight births in Black women in Cambridge declined from almost 12% in 1992 to under 8% in 1996, it still remains higher than the percent of low weight births to women in other racial groups.



**Figure 8-4**

**Births to Women with Publicly Financed\*  
Care by Race/Ethnicity**



\*Publicly financed prenatal care includes Medicaid, Medicare, Healthy Start, Free Care and other government sources. Healthy Start is a program funded by the state of Massachusetts for low-income women who do not qualify for Medicaid.

\*\*Non-Hispanic

Source: Bureau of Family and Community Health, in collaboration with the Bureau of Health Statistics, Research and Evaluation, Massachusetts Department of Public Health

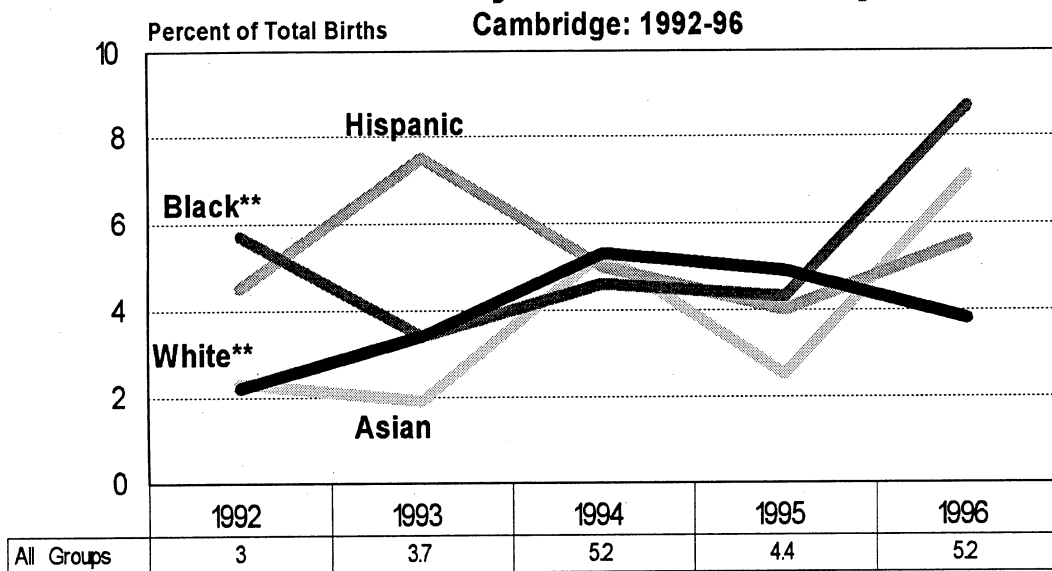
**Example of how to read this figure:**

Among Hispanic and Black women, publicly financed decreased to below 40% between 1992 and 1996. The percent of publicly financed care for Asian and White women declined slightly during this period.



**Figure 8-5**

## Births to Women with Inadequate\* Prenatal Care by Race/Ethnicity



\*Includes those with no prenatal care; see chapter overview for definition of inadequate prenatal care. The increase in 1996 reflects a data adjustment due to a changes in data collection. Percent may be based on numerator less than 5 for some years shown.

\*\*Non-Hispanic

Source: Bureau of Family and Community Health, in collaboration with the Bureau of Health Statistics, Research and Evaluation, Massachusetts Department of Public Health

***Example of how to read this figure:***

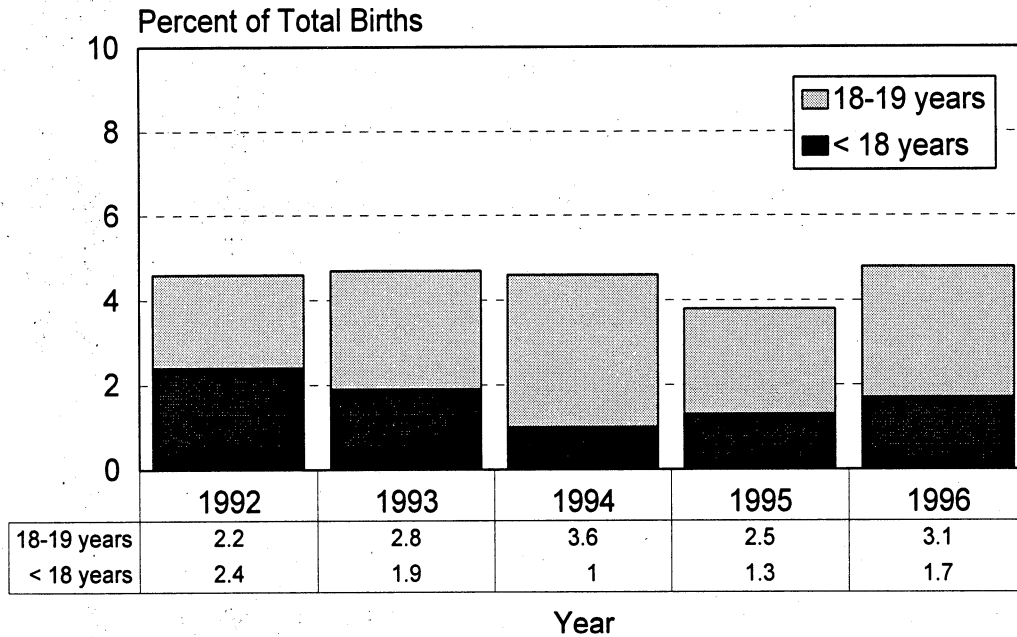
The rates of inadequate prenatal care increased from 3% in 1992 to greater than 5% in 1996.



**Figure 8-6**

### Births to Teens\*

Cambridge: 1992-96



\* Age  $\leq$  19

Source: Bureau of Family and Community Health, in collaboration with the Bureau of Health Statistics, Research and Evaluation, Massachusetts Department of Public Health

***Example of how to read this figure:***

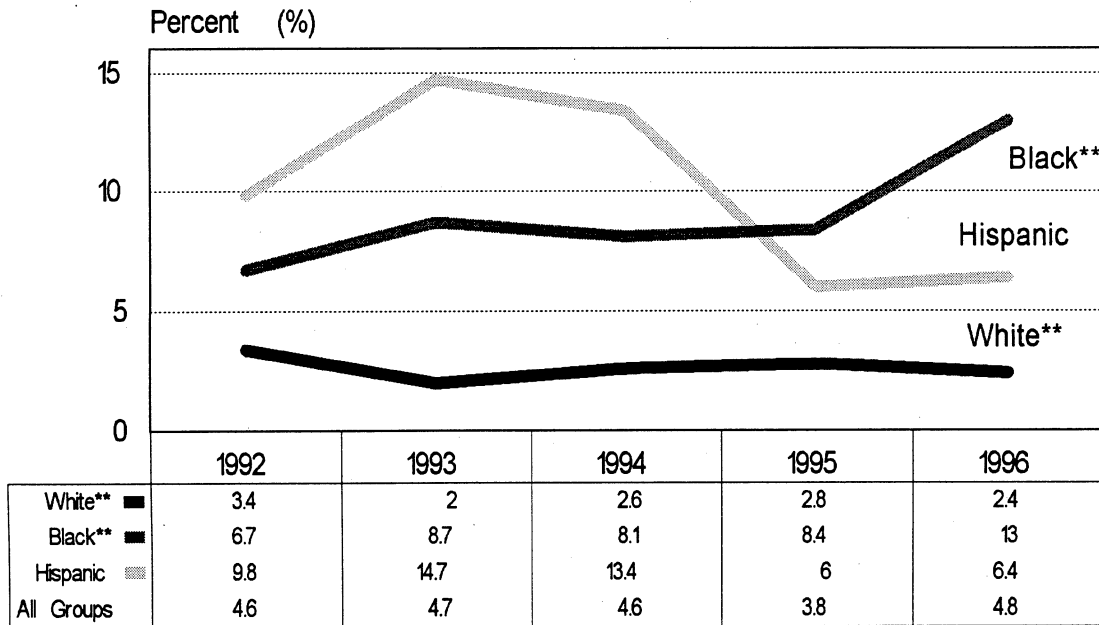
Childbirths to teens younger than 18 years of age comprise less than 2% of total births in Cambridge.



**Figure 8-7**

### Births to Teens\* by Race/Ethnicity

Cambridge: 1992-96



\*Age ≤ 19

\*\*Non-Hispanic

Source: Bureau of Family and Community Health, in collaboration with the Bureau of Health Statistics, Research and Evaluation, Massachusetts Department of Public Health

***Example of how to read this figure:***

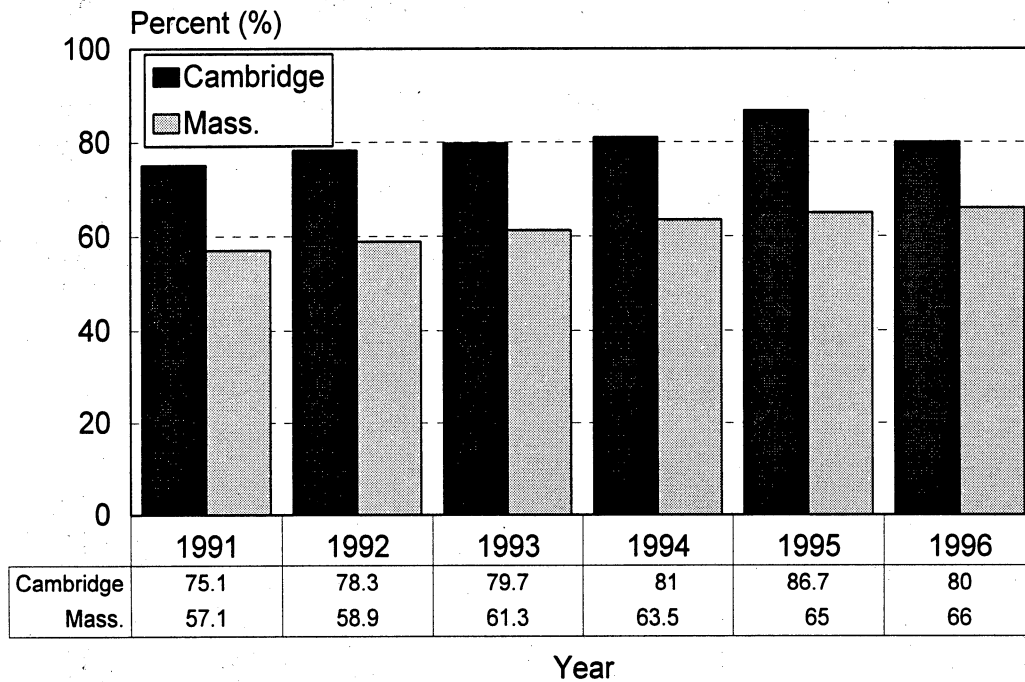
The percent of teen births increased among Blacks, decreased among Hispanics and stayed the same among Whites between 1992 and 1996.



**Figure 8-8**

### Breastfeeding Rates at Discharge from Hospital

Cambridge: 1991-96



Source: Natality (Vital Records), MassCHIP, Mass DPH, V2.0 r168.0, June 15, 1998

*Example of how to read this figure:*

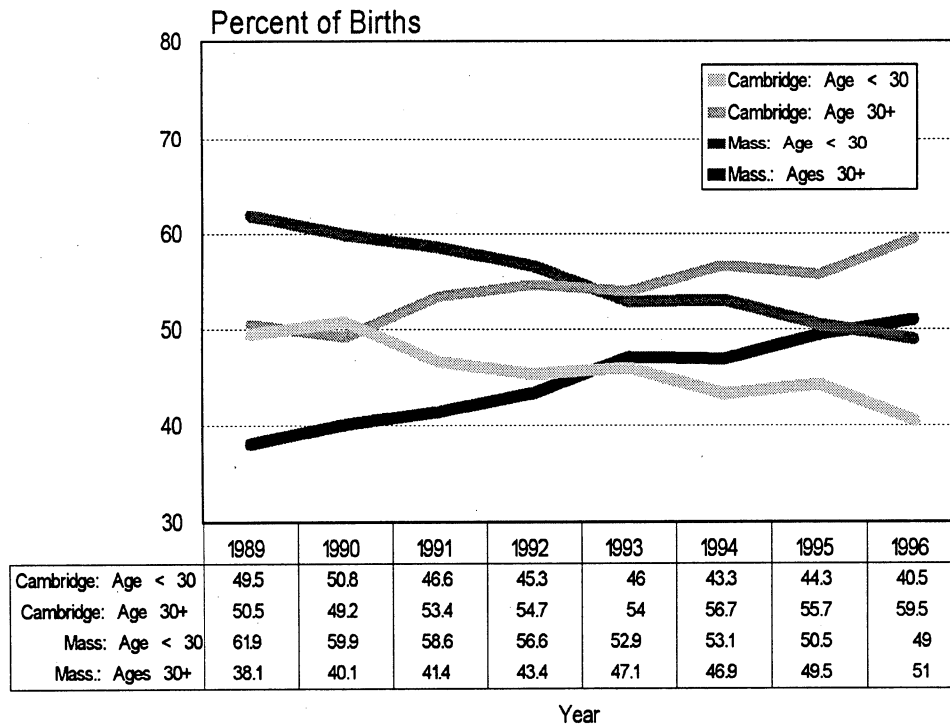
Rates of breastfeeding were higher in Cambridge than state-wide. Between 1991 and 1996, 80% of Cambridge mothers indicated that they were planning to breastfeed their babies compared to 62% of Massachusetts mothers.



**Figure 8-9**

### Birth Trends by Mother's Age

Cambridge: 1989-96



Source: Natality (Vital Records), MassCHIP, Mass DPH, V2.0 r168.0, July 14, 1998

*Example of how to read this figure:*

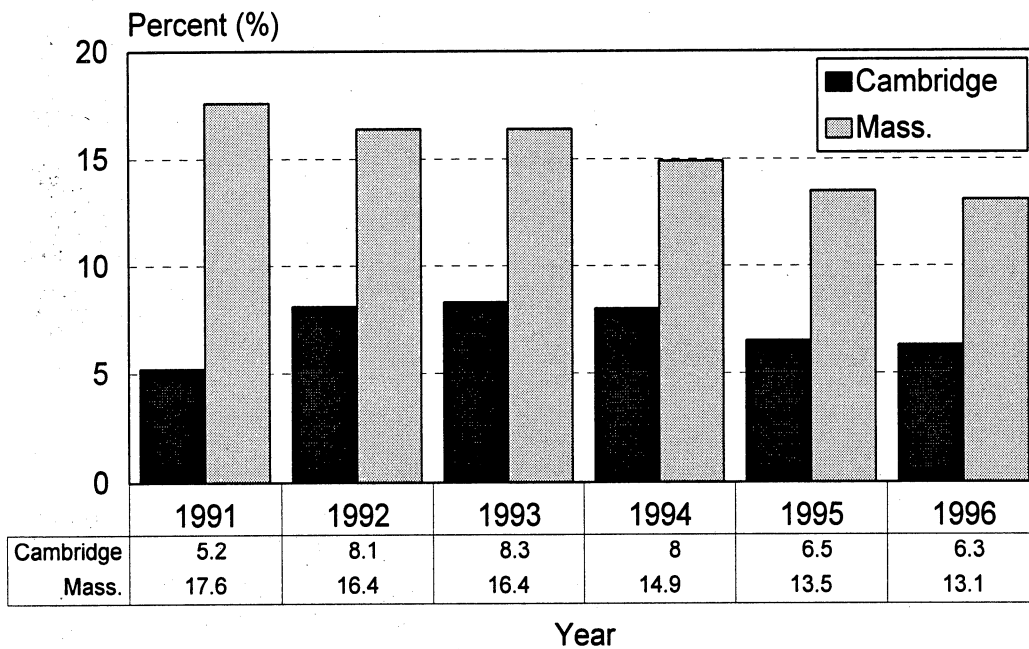
By 1996, 59.5% of births were to women over 30 years of age, a proportion that has increased steadily in Cambridge and state wide since 1989.



**Figure 8-10**

### Tobacco Use During Pregnancy Reported by Mother

Cambridge: 1991-96



Source: Natality (Vital Records), MassCHIP, Mass DPH, V2.0 r168.0, June 15, 1998

***Example of how to read this figure:***

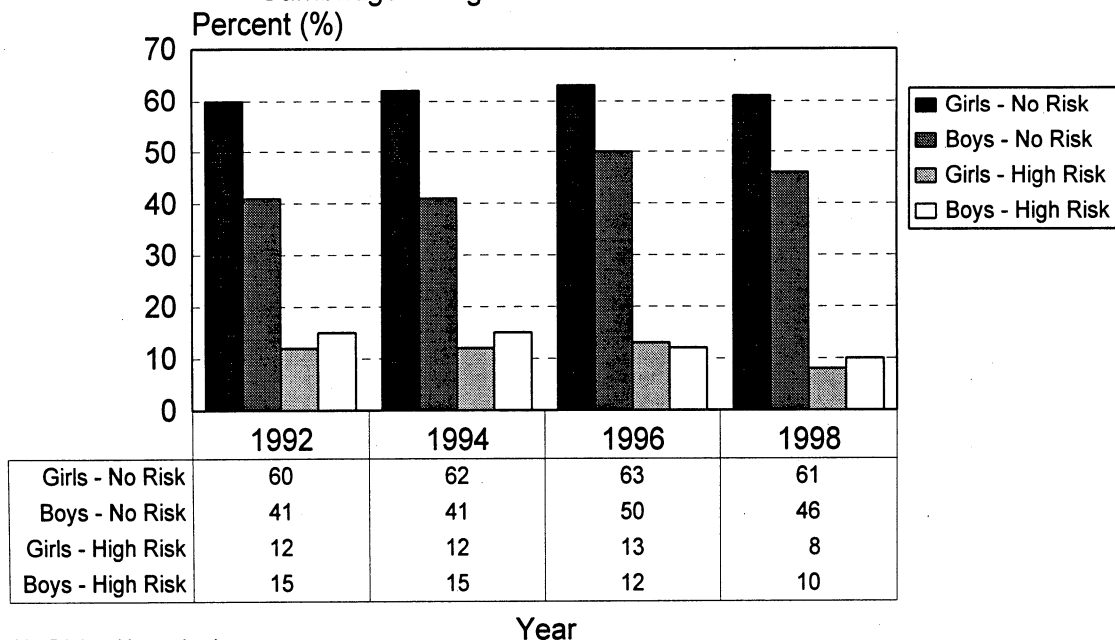
Only 6.3% of Cambridge mothers reported smoking tobacco during their pregnancy, a rate that is half the state-wide rate, and which has decreased steadily since 1992.



**Figure 8-11**

### Risk of Pregnancy for High School Students

Cambridge Rindge and Latin School: 1992-98



No Risk = Never had sex

High Risk = Sexual intercourse in past 3 months without using birth control

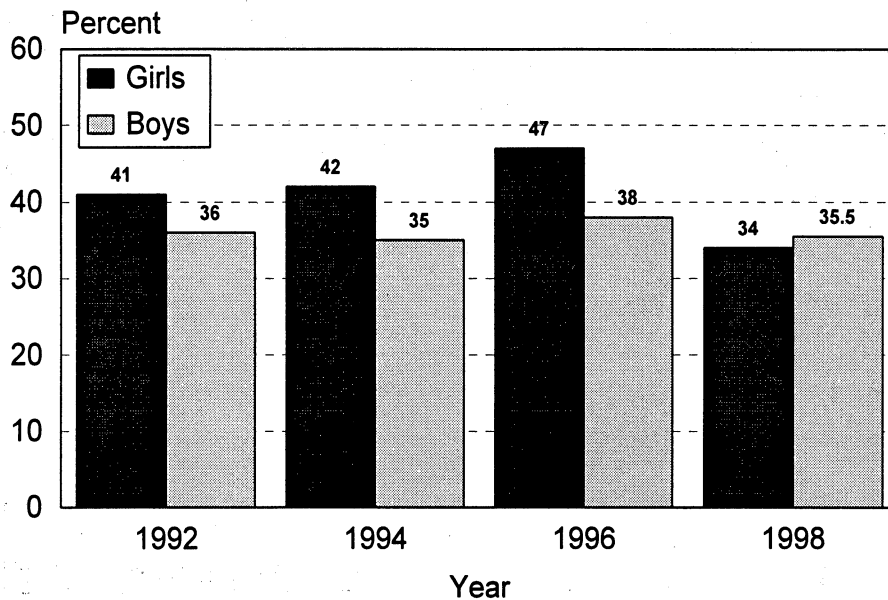
Source: Teen Health Survey, Cambridge Rindge & Latin School

***Example of how to read this figure:***

In 1998, 8% of high school girls and 10% of boys reported having had sexual intercourse without using birth control during the preceding 3 months. These rates are 33% lower than in 1992.

**Figure 8-12****Percent of Those Sexually Active Not Always Using  
Reliable Contraception\***

Cambridge Rindge and Latin School: 1992-98



\* Students were asked 'do you or your partner do something to prevent a pregnancy when you have sexual intercourse?'

Source: Teen Health Survey, Cambridge Rindge & Latin School

***Example of how to read this figure:***

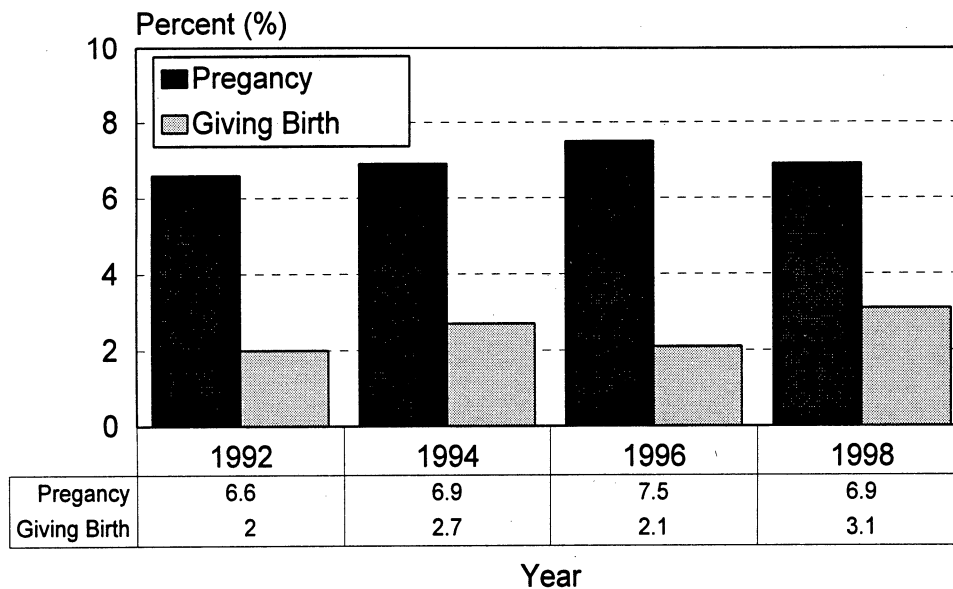
Among sexually active high school students, the proportion of girls not always using reliable contraception was greater than boys from 1992-96; however, in 1998 the percent failing to use reliable contraception was similar for boys and girls.



**Figure 8-13**

## Pregnancy and Childbearing in High School Girls

Cambridge: 1992-98



Source: Teen Health Survey 1992-98, Cambridge Rindge & Latin School

*Example of how to read this figure:*

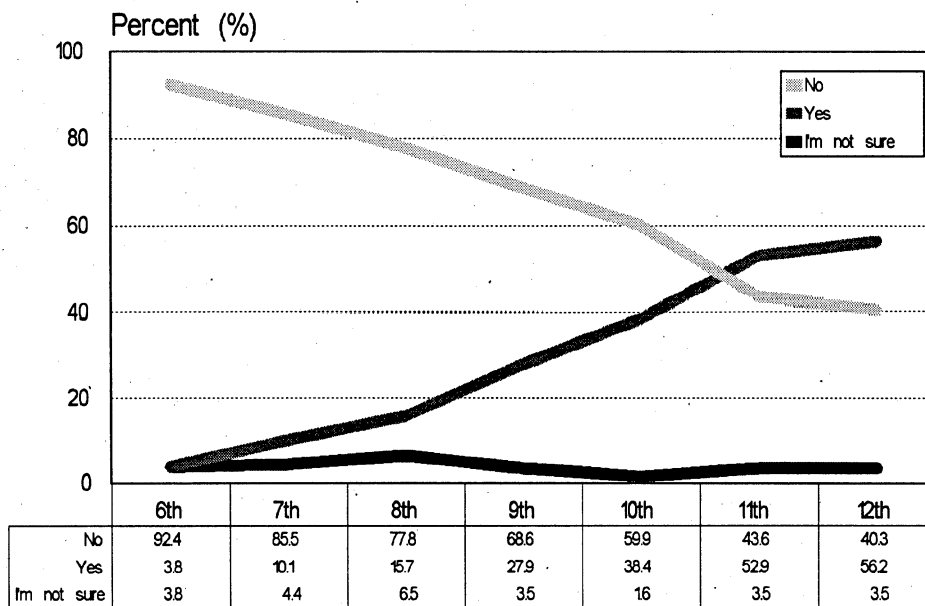
In 1998, seven percent of high school students reported pregnancy and 2.5% gave birth, rates that have increased somewhat since 1992.



**Figure 8-14**

## Sexual Intercourse by Grade

Cambridge Middle & High School Students: 1997, 1998



Source: Middle Grade Health Survey 1997 (No: n=1175, Yes: n=134, I'm not sure: n=67), Teen Health Survey 1998, Cambridge Rindge & Latin School, (No: n=785, Yes: n=620, I'm not sure: n=38)

**Example of how to read this figure:**

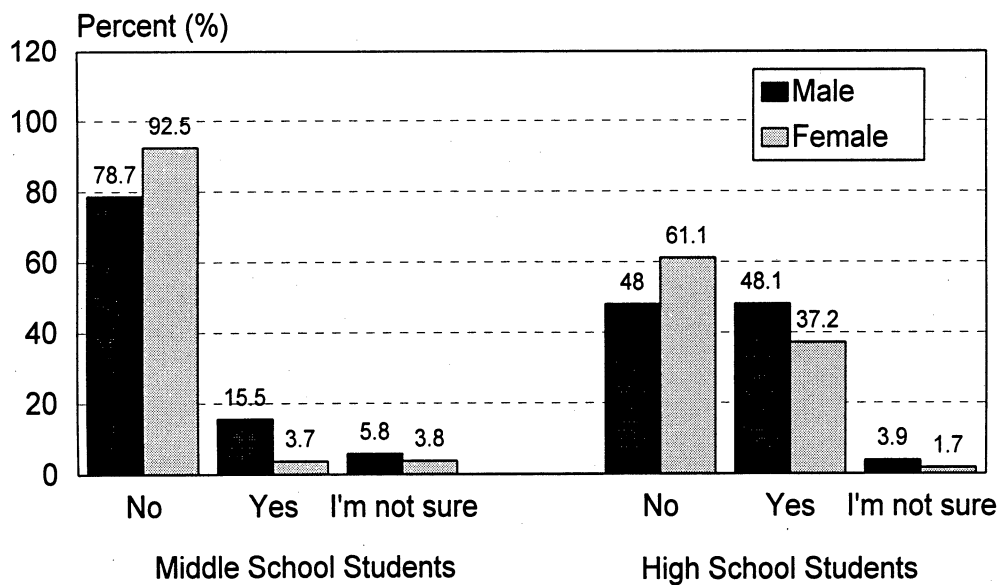
More than half of the students in grades 11 and 12 reported that they have had sexual intercourse.



**Figure 8-15**

## Sexual Intercourse by Sex

Cambridge Middle & High School Students: 1997, 1998



Source: Middle Grade Health Survey 1997, Teen Health Survey 1998, Cambridge Rindge & Latin School.

***Example of how to read this figure:***

Among middle school students, 15.5% of boys and 3.7% of girls reported having sexual intercourse while among high school students, 48.1% of boys and 37.2% of girls reported sexual intercourse.



## 9. Mortality

- From 1992-96, the average number deaths per year for Cambridge residents was 676. The average annual age-adjusted rate for this time period was 445 deaths per 100,000.
- Causes of death in Cambridge are similar to Massachusetts and the U.S. overall.
- The mortality rate for heart disease and cancer have decreased since 1993 in Cambridge.
- AIDS/HIV was the leading cause of death in the age group 25-64 in Cambridge.
- The mortality rate for heart disease and cancer was higher for men than women and higher for Blacks than those of other races.

### Indicators:

- Causes of death
- Mortality by age, race/ethnicity, and gender

**Table 9-1****YEAR 2000 OBJECTIVES, MASSACHUSETTS AND CAMBRIDGE CAUSE-SPECIFIC MORTALITY RATES**

Cause of Death	Cambridge Number	Cambridge Rate <sup>1</sup>	Mass. Rate <sup>1</sup>	U. S. Rate (1995) <sup>1</sup>	Healthy People 2000 Target
All Causes	3,382	444.5	449.3	502.9	*
Heart Disease	944	110.1	120.7	138.2	100.0
Cancer (total)	832	132.5	133.9	129.8	130.0
Lung Cancer	211	37.4	37.6	*	42.0
Colorectal Cancer	111	16.1	14.0	*	13.2
Breast Cancer <sup>2</sup>	80	22.9	22.6	*	20.9
Prostate Cancer <sup>3</sup>	46	14.2	15.3	*	*
Cerebrovascular Disease	180	18.0	20.2	26.7	20.0
Influenza/Pneumonia	173	15.8	14.4	13.0	*
Chronic Obstructive Pulmonary Disease (COPD)	137	17.5	17.5	20.9	25.0
Diabetes Mellitus	103	14.3	11.0	*	34.0
AIDS/HIV-related	59	14.5	12.1	*	*
Unintentional Injury	60	7.9	14.7	29.2	29.3
Motor vehicle-related	19	3.0	7.8	*	*
Suicide	39	6.9	7.5	*	10.5
Chronic Liver Disease/Cirrhosis	37	6.3	7.4	*	6.0
Homicide	12	2.3	4.0	*	7.2

\* = data not available



1 Average annual rate per 100,000 residents (age-adjusted)

2 Rate based on total female population.

3 Rate based on total male population.

Sources: 1) Mortality (Vital Records), MassCHIP v2.0 r168.0, Massachusetts Department of Public Health, July 30, 1998.

2) Cambridge Death Data 93-96. Bureau of Health Statistics, research and Evaluation, Mass. DPH

## Table 9-2

### LEADING CAUSES OF MORTALITY BY AGE

CAMBRIDGE, 1993-96

Age	Cause of Death	Number	Rate <sup>1</sup>
15-24 year	Suicide and Homicide	6	6.1
	All Other Causes	7	7.1
	Total	13	13.1
25-44 years	AIDS and HIV-related	70	33.6
	Cancer	31	14.9
	Heart Disease	13	6.2
	Suicide	13	6.2
	Unintentional Injury <sup>2</sup>	13	6.2
	Chronic Liver Disease/Cirrhosis	6	2.9
	Influenza/Pneumonia	5	2.4
	Homicide	4	1.9
	Diabetes	4	1.9
	COPD	4	1.9
	Cerebrovascular Disease	1	0.5
	All Other Causes	51	24.5
	Total	215	103.1
	45-64 years	Cancer	167
Heart Disease		90	105.5
AIDS/HIV-related		17	19.9
Diabetes		15	17.6
Cerebrovascular Disease		14	16.4
Suicide		12	14.1
COPD		11	12.9
Chronic Liver Disease/Cirrhosis		8	9.4
Pneumonia/Influenza		8	9.4
Unintentional Injury <sup>2</sup>		5	5.9
Homicide		5	5.9
All Other Causes		72	84.4
Total		424	497.0



## LEADING CAUSES OF MORTALITY BY AGE - CONTINUED

CAMBRIDGE, 1993-96

Age	Cause of Death	Number	Rate <sup>1</sup>
65-74 years	Cancer	192	729.1
	Heart Disease	158	600.0
	COPD	34	129.1
	Diabetes	24	91.1
	Influenza/Pneumonia	16	60.8
	Cerebrovascular Disease	14	53.2
	Chronic Liver Disease/Cirrhosis	8	30.4
	Unintentional Injury <sup>2</sup>	6	22.8
	Atherosclerosis	2	7.6
	All Other Causes	92	349.3
	Total	546	2073.3
75+ years	Heart Disease	500	2017.3
	Cancer	257	1036.9
	Influenza/Pneumonia	105	423.6
	Cerebrovascular Disease	100	403.5
	COPD	61	246.1
	Diabetes	44	177.5
	Unintentional Injury <sup>2</sup>	25	100.9
	Chronic Liver Disease/Cirrhosis	6	24.2
	Atherosclerosis	4	16.1
	Suicide	3	12.1
	All Other Causes	368	1484.8
Total	1,473	5943.1	

<sup>1</sup> Age-specific rate per 100,000 based on the 1996 MISER estimation. Deaths where age is not known are not included in the table (n=1).

<sup>2</sup> Includes motor vehicle-related deaths.

Source: Vital Records, Bureau of Health Statistics, Research and Evaluation, Mass. DPH

**Table 9-3**
**LEADING CAUSES OF DEATH BY RACE/ETHNICITY AND SEX  
CAMBRIDGE, 1992-96**

		Race/Ethnicity*			
		Total	White	Black	Hispanic
<b>Heart Disease</b>					
Total	number	943	813	110	10
	rate	110.5	115.0	125.8	39.3
Males	number	454	383	57	7
	rate	168.2	172.2	221.3	75.4
Females	number	489	430	53	<5
	rate	70.5	75.0	71.7	*
<b>Cancer</b>					
Total	number	831	700	111	5
	rate	132.1	140.1	149.9	16.2
Males	number	417	348	54	<5
	rate	171.2	177.9	207.0	*
Females	number	414	352	57	<5
	rate	106.8	115.2	118.5	*

Rates per 100,000 residents are age adjusted to the 1940 standard population.  
Death where age is not known are not included in the table (n=1).

\*Cannot report for categories with small numbers (<5).

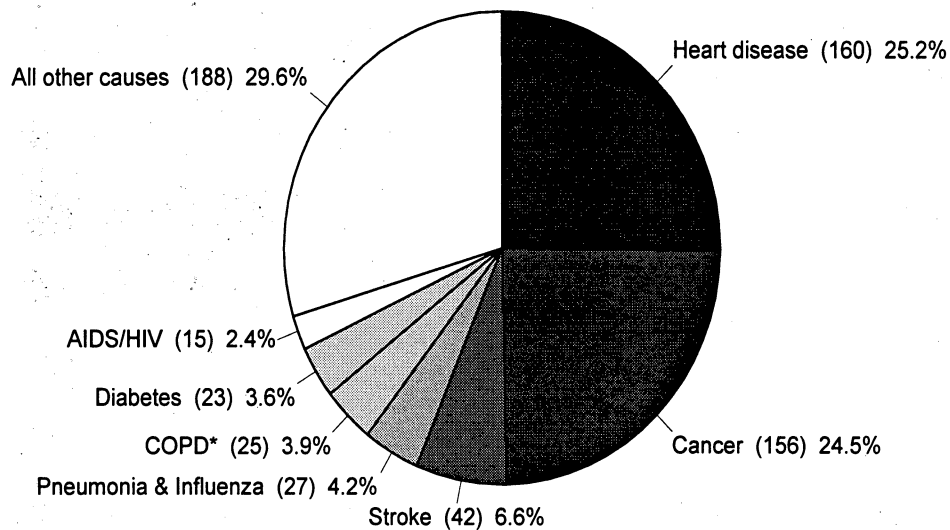
*Example of how to read this table:*

Heart disease and cancer mortality was substantially higher among Blacks than other groups; male rates were also higher than female rates.

**Figure 9-1**

## Leading Causes of Death

Cambridge Residents: 1996



Total number of deaths = 636

\* Chronic Obstructive Pulmonary Disease

Source: Mortality (Vital Records), MassCHIP v2.0 r168.0, Massachusetts Department of Public Health, July 28, 1998.

### *Example of how to read this figure:*

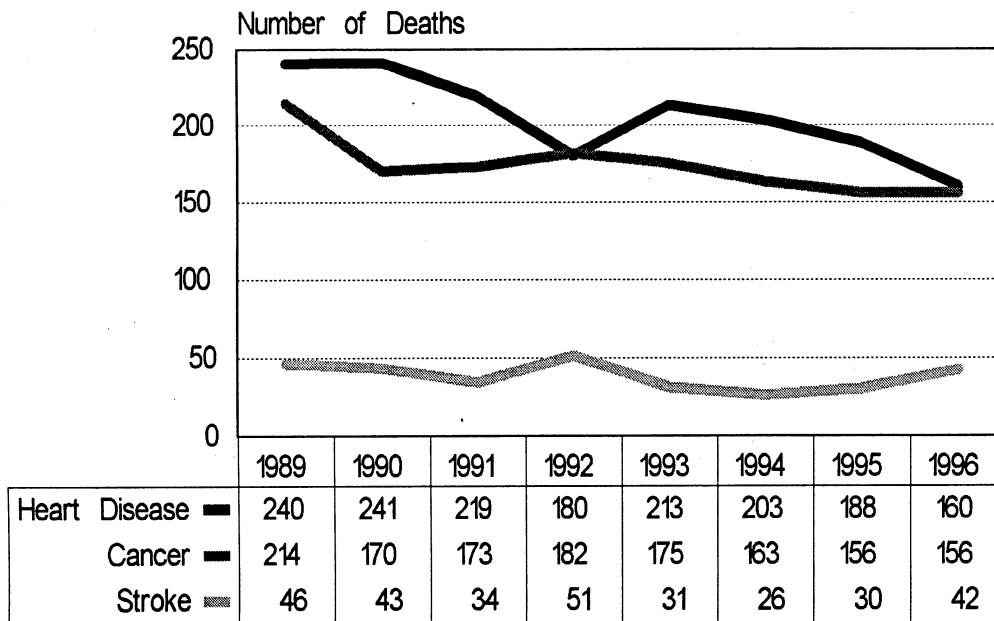
In 1996, half of all deaths were attributable to heart disease and cancer.



**Figure 9-2**

### Heart Disease, Cancer, and Stroke Deaths by Year

Cambridge Residents: 1989-96



Source: Mortality (Vital Records), MassCHIP v2.0 r168.0, Massachusetts Department of Public Health, July 28, 1998.

***Example of how to read this figure:***

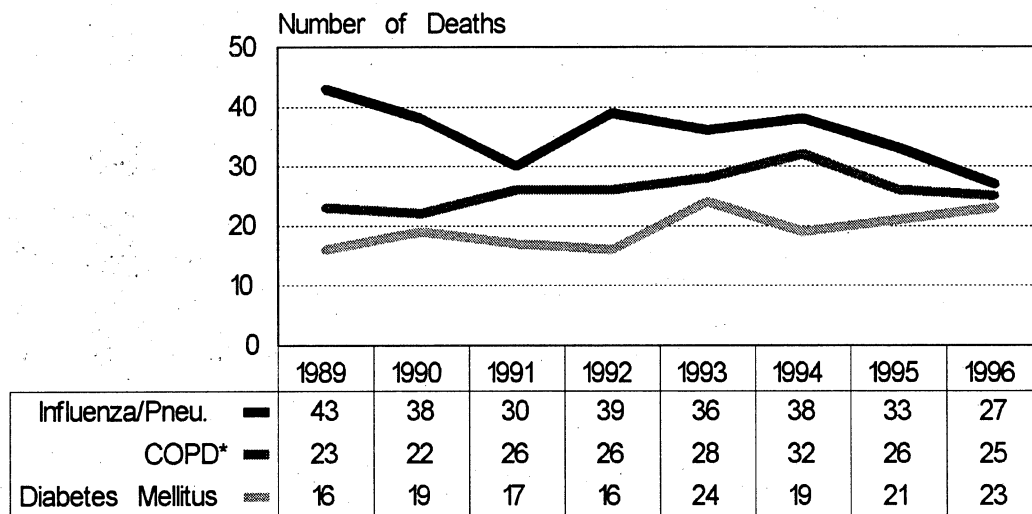
Between 1989 and 1996, there was a substantial decrease in the number of deaths attributable to heart disease ( 240 to 160) and cancer ( 214 to 156).



**Figure 9-3**

### Influenza/Pneumonia, COPD, and Diabetes Deaths by Year

Cambridge Residents: 1989-96



\*Chronic Obstructive Pulmonary Disease

Source: Mortality (Vital Records), MassCHIP v2.0 r168.0, Massachusetts Department of Public Health, July 28, 1998.

***Example of how to read this figure:***

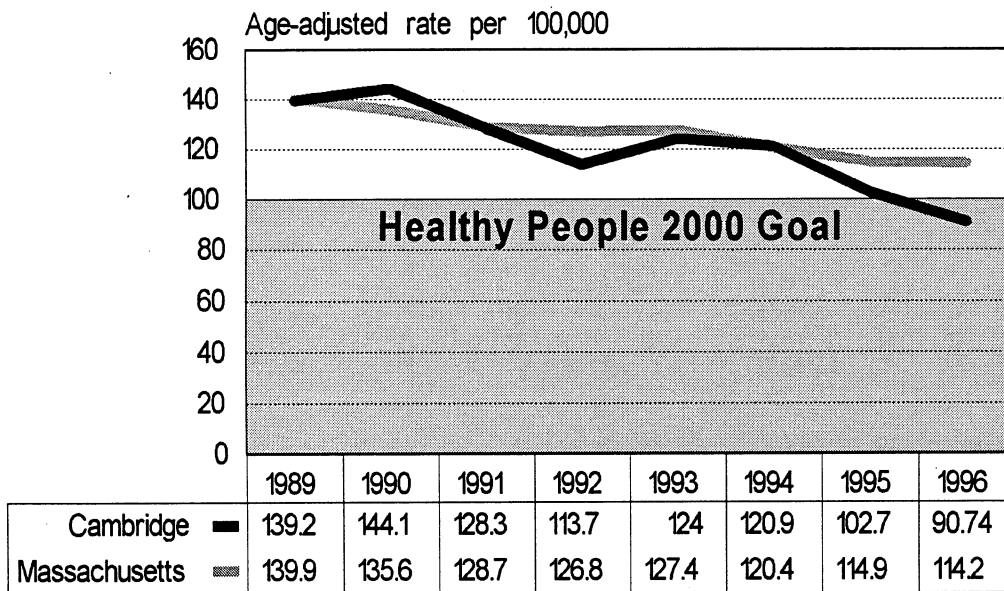
The deaths from influenza/pneumonia have fluctuated in the range of 27 to 43 per year. However, the deaths from diabetes have increased by 44% from 1989 to 1996.



**Figure 9-4**

### Heart Disease Mortality

Cambridge and Massachusetts Residents: 1989-96



Source: Mortality (Vital Records), MassCHIP v2.0 r168.0, Massachusetts Department of Public Health, July 30, 1998.

***Example of how to read this figure:***

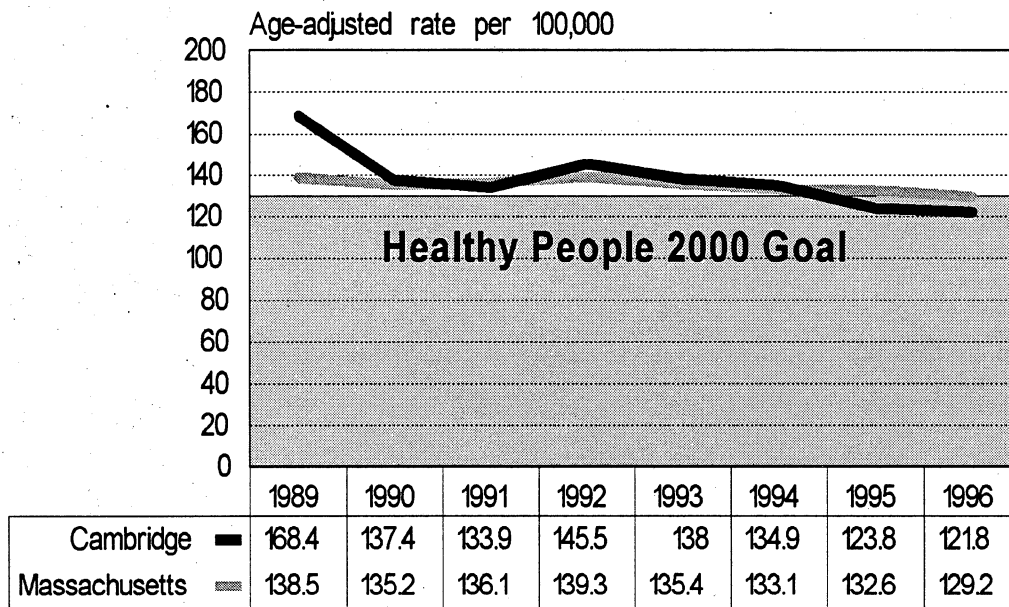
In 1996, the age-adjusted death rate for heart disease was 90.7 per 100,000 in Cambridge which was lower than the Healthy People 2000 Goal for the first time. The deaths from heart disease have declined significantly from 1989 to 1996 by 35%, compared to an 18% decrease for Massachusetts.



**Figure 9-5**

### Cancer Mortality

Cambridge and Massachusetts Residents: 1989-96



Source: Mortality (Vital Records), MassCHIP v2.0 r168.0, Massachusetts Department of Public Health, July 30, 1998.

***Example of how to read this figure:***

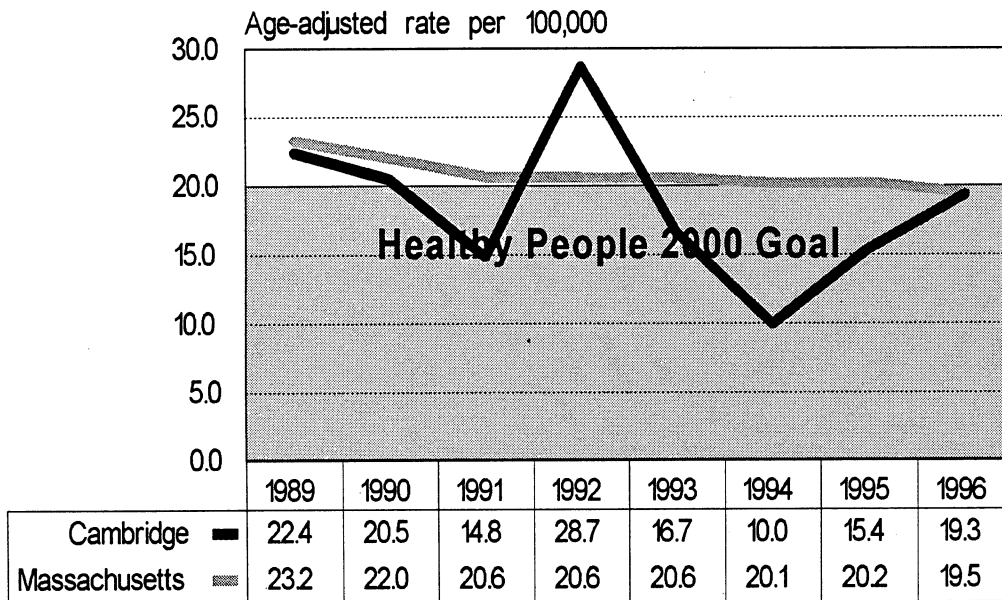
By 1995, the declining death rate from cancer dipped below the Healthy People 2000 Goal for the first time.



**Figure 9-6**

### Stroke Mortality

Cambridge and Massachusetts Residents: 1989-96



Source: Mortality (Vital Records), MassCHIP v2.0 r168.0, Massachusetts Department of Public Health, July 30, 1998.

*Example of how to read this figure:*

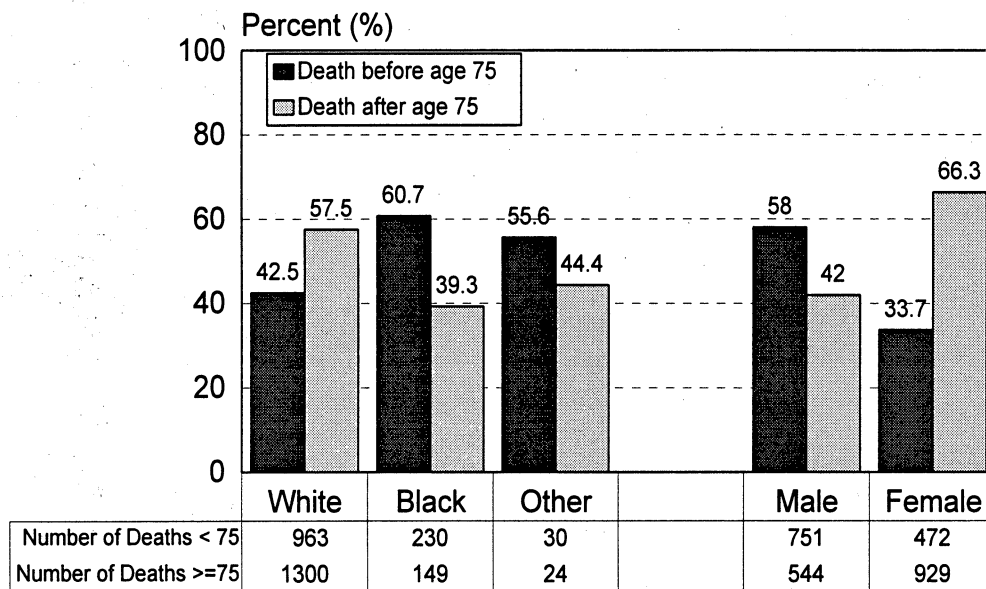
Stroke mortality rates in Cambridge, though erratic from 1989 to 1996, were similar to state-wide rates at the end of the time period.



**Figure 9-7**

### Death Before Age 75 by Sex and Race

Cambridge: 1993-96



The number of deaths was summed up from 1993-96.  
Source: Massachusetts Dept. of Public Health

***Example of how to read this figure:***

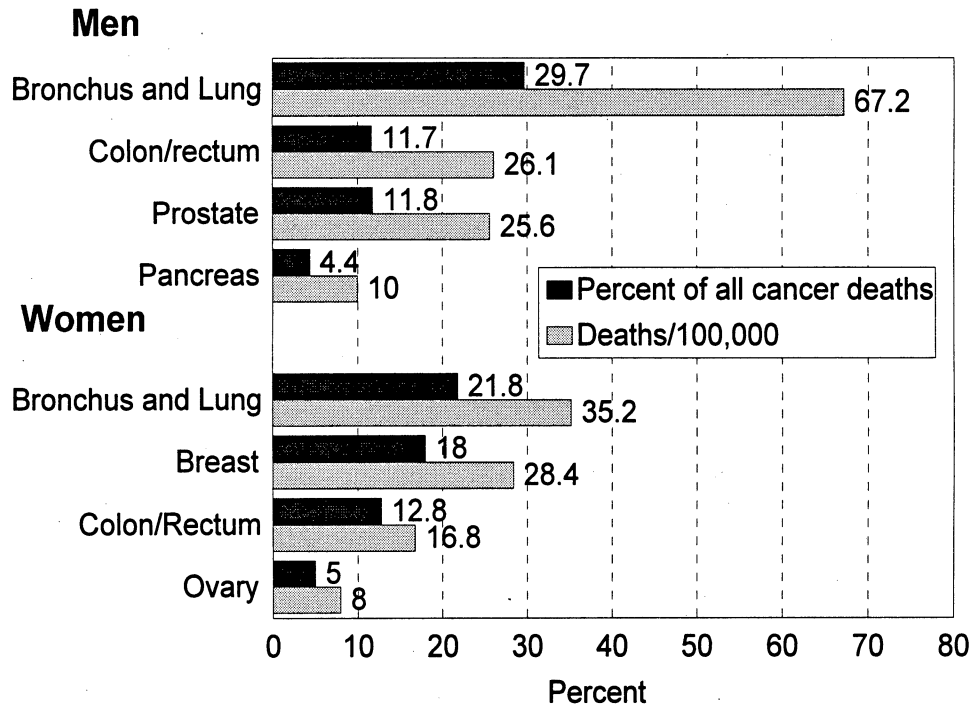
Among total deaths from 1993-96, 61% of Blacks died before age 75 compared with 42% of Whites. More men (58%) died before age 75 than women (33.7%).



**Figure 9-8**

## Leading Types of Cancer Deaths

Massachusetts: 1990-96



Source: Cancer Incidence and Mortality in Massachusetts, 1990-95

*Example of how to read this figure:*

More men died of lung cancer than from colon, prostate and pancreatic cancers combined, the second, third and fourth most frequent cancers.

More women died from lung cancer than from breast cancer.



## 10. Other Communicable Disease (Reportable)

- There are over 40 communicable diseases that healthcare providers must report confidentially to local health departments and the Massachusetts Department of Public Health.
- For the time period 1990 to 1997, 239 to 420 cases per year of reportable communicable diseases (excluding AIDS, STD, and TB) in Cambridge residents were reported to the Massachusetts DPH by the Cambridge Health Department. These exclude investigated cases reported to surrounding towns and cities for those who work in Cambridge (restaurants, schools, etc.).
- Excluding STDs, most other reportable cases were attributable to enteric disease,<sup>1</sup> with Campylobacteriosis, Salmonellosis, and Giardiasis occurring most frequently.
- Some vaccine-preventable diseases such as pertussis, measles, rubella, and mumps continue to occur in Cambridge, although infrequently.
- Annual rates of new cases of tuberculosis are higher in Cambridge than the state overall and lower than in Boston. However, due to public health action, the case rates have declined steadily over the past decade.

### Indicators:

- Reportable communicable disease incidence
- Tuberculosis incidence
- AIDS incidence<sup>2</sup>
- Sexually transmitted disease incidence<sup>2</sup>
- Immunization rates<sup>3</sup>

**Table 10-1****YEAR 2000 OBJECTIVES, MASSACHUSETTS AND CAMBRIDGE RATES**

	HP 2000 Goal	Mass. Rate	Cambridge Rate
Measles (per 100,000)	0.0	0.27 <sup>4</sup>	0.9 <sup>5</sup>
Rubella (per 100,000)	0.0	0.02 <sup>4</sup>	1.5 <sup>5</sup>
Mumps (per 100,000)	0.2	0.07 <sup>4</sup>	0.0 <sup>5</sup>
Pertussis (per 100,000)	0.4	9.72 <sup>4</sup>	15.2 <sup>5</sup>
<i>Salmonella</i> species (per 100,000)	16	20.96 <sup>4,6</sup>	33.0 <sup>5,6</sup>
<i>Campylobacter jejuni</i> (per 100,000)	25	24.73 <sup>4,7</sup>	72.2 <sup>5,7</sup>
Acute Hepatitis (per 100,000)			
A	23	4.3 <sup>4</sup>	9.8 <sup>5</sup>
B	40	1.3 <sup>4</sup>	3.3 <sup>5</sup>
C	13.7	0.8 <sup>4</sup>	0.2 <sup>5</sup>
Bacterial meningitis (per 100,000)	4.7	2.3 <sup>4</sup>	6.5 <sup>5</sup>
Tuberculosis incidence (per 100,000)	3.5	4.5 <sup>4</sup>	9.4 <sup>5</sup>

\*=data not available

1 These diseases affect the gastrointestinal system and typically cause stomach upset, diarrhea, and/or vomiting.

2 See Chapter 5, HIV/AIDS and STDs

3 See Chapter 2, Access to Health Care

4 1997 incidence rate per 100,000

5 1993-97 average annual incidence rate per 100,000 is reported because of small annual frequency (n < 5).

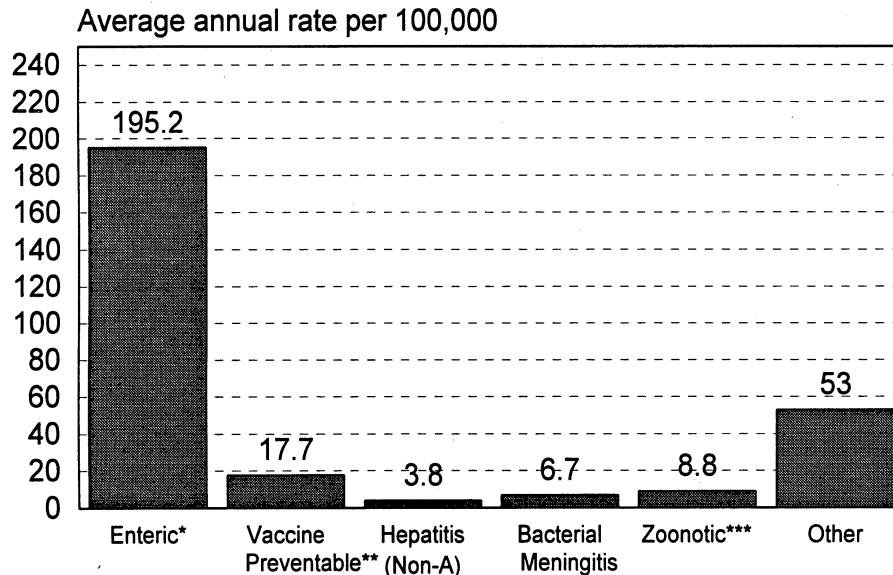
6 Does not include *typhimurium*.

7 Rate includes all species of *Campylobacter* (*jejuni* is the most common).

**Figure 10-1**

## Reportable Communicable Disease

Cambridge: 1993-97



\* Includes Hepatitis A

\*\* Vaccine-preventable cases include measles, rubella, mumps, pertussis, and Haemophilus influenza (no reported cases of diphtheria, polio, or tetanus)

\*\*\*Cases include Lyme disease and malaria

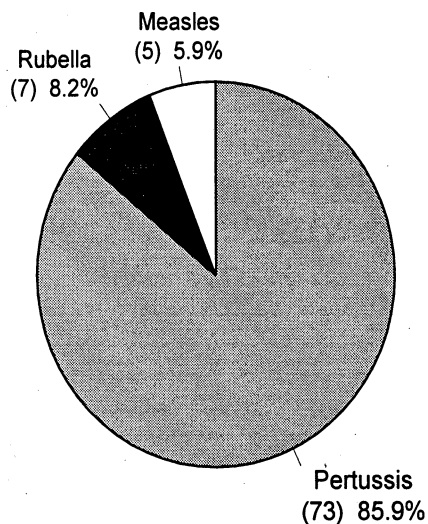
Source: Communicable Disease Surveillance Program, Mass. DPH

### *Example of how to read this figure:*

The vast majority of communicable diseases reported to the State Department of Public Health (DPH) are enteric infections, including hepatitis A.

**Figure 10-2****Vaccine Preventable Disease**

Reported Cases and Percentage in Cambridge:1993-97



Total reported cases, 1993-97

\* No cases of Haemophilus influenza and mumps were reported.

Source: Communicable Disease Surveillance Program, Mass. DPH

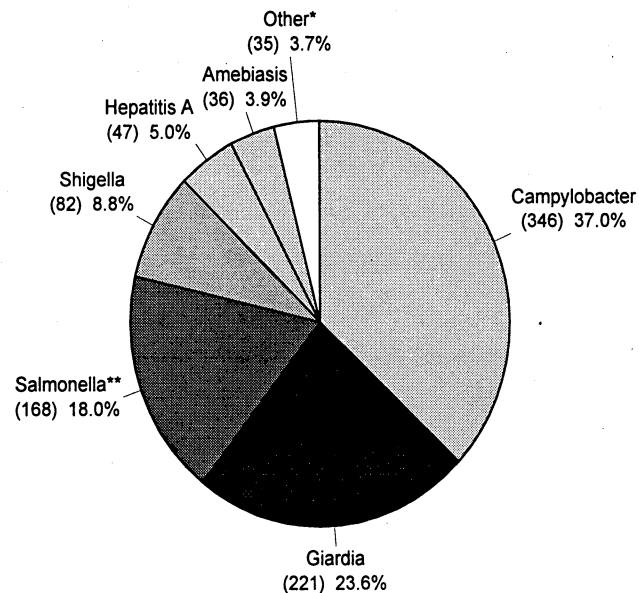
***Example of how to read this figure:***

Pertussis comprised 86% of reported communicable diseases that are preventable by immunization. Influenza and pneumococcal pneumonia, which are prevalent and preventable by immunization, were not routinely reported to the DPH.

**Figure 10-3**

## Enteric Communicable Disease

Reported Cases and Percentage in Cambridge: 1993-97



Reported cases are added up for 5 years, 1993-97.

\* Includes Cryptosporidium, Cyclospora, E.Coli, Toxoplasmosis, Vancamycin resistant enterococcal, and Yersina enterocolitis.

\*\* Includes typhimurium.

Source: Communicable Disease Surveillance Program, Mass. DPH

### *Example of how to read this figure:*

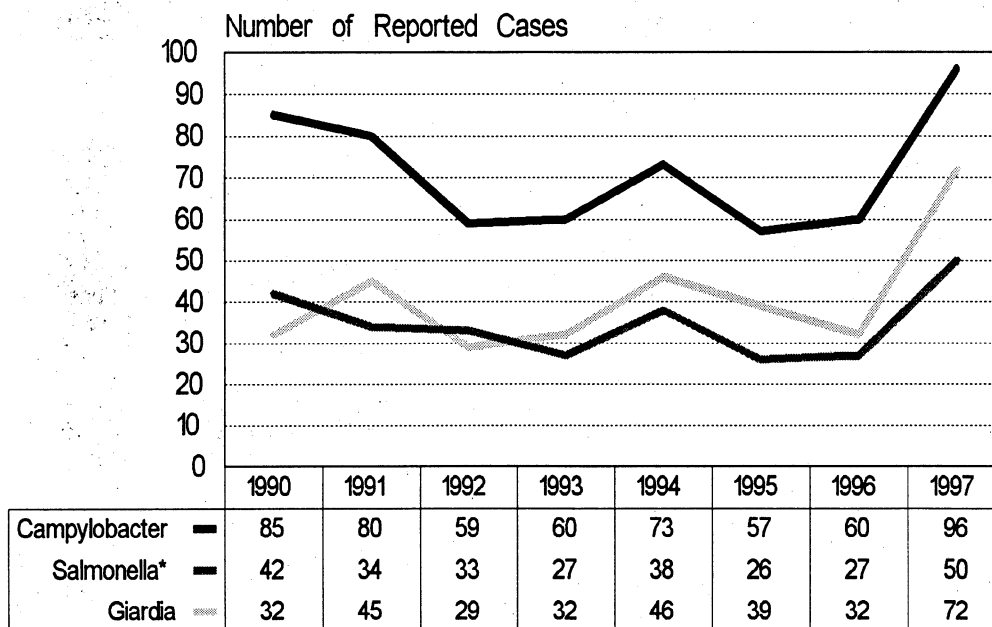
Campylobacter, Giardia, and Salmonella comprised over three-fourths of reported enteric diseases (those transmitted through fecal-oral route).



**Figure 10-4**

### Enteric Communicable Disease

Cases Reported in Cambridge: 1990-97



\*Includes typhimurium

Note: Increases in enteric diseases in 1997 reflect a change in surveillance to direct report to DPH from the diagnostic laboratories resulting in a more accurate count of cases.

Source: Communicable Disease Surveillance Program, Mass. DPH

*Example of how to read this figure:*

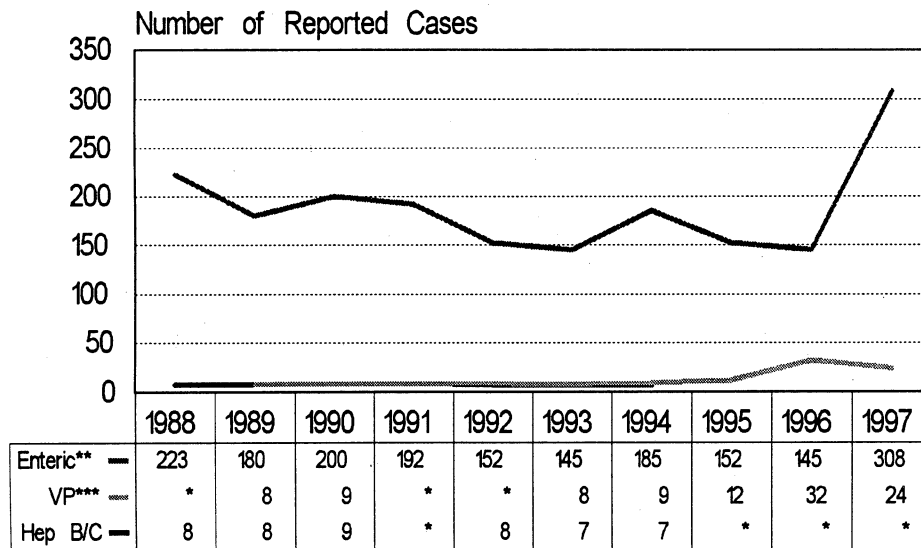
Fluctuations in reporting the major enteric diseases paralleled one another. The rise during the past two years may reflect a change in surveillance methods resulting in a more accurate count.



**Figure 10-5**

### Reportable Communicable Disease

Cambridge: 1988-97



\* < 5 cases

\*\* Includes hepatitis A

\*\*\* Vaccine-preventable include measles, rubella, mumps, pertussis, and Haemophilus influenza (no reported cases of diphtheria, polio, or tetanus).

Note: Increases in enteric diseases in 1997 reflect a change in surveillance to direct report to DPH from the diagnostic laboratories resulting in a more accurate count of cases.

Source: Communicable Disease Surveillance Program, Mass. DPH

**Example of how to read this figure:**

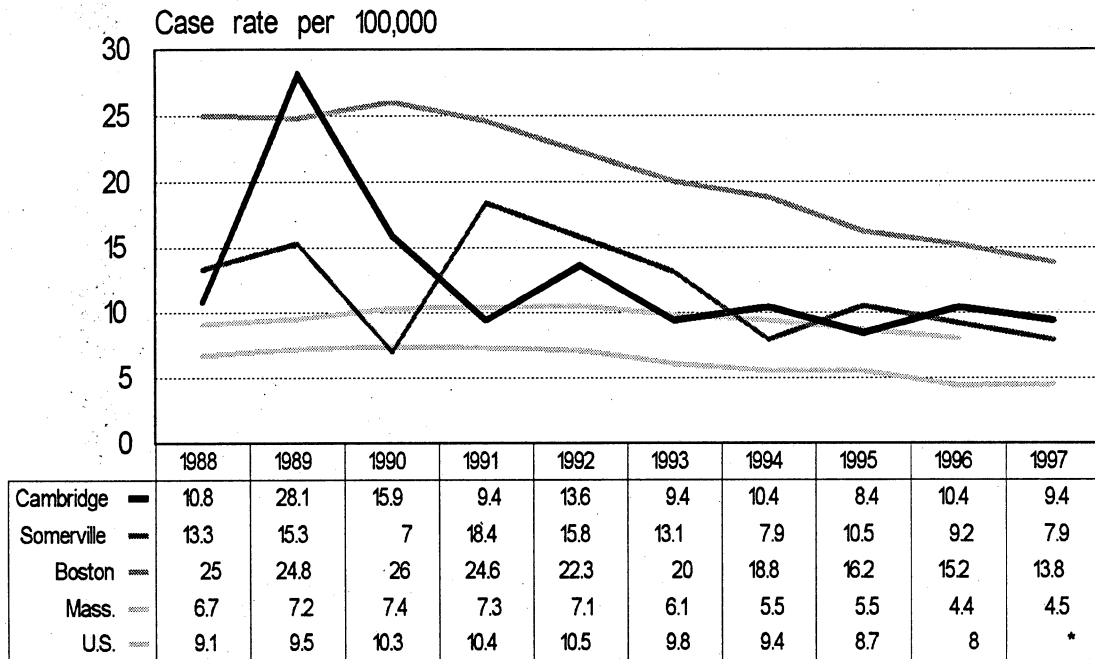
Vaccine preventable cases have increased during the past few years. This rise may reflect a change in surveillance methods resulting in a more accurate count.



**Figure 10-6**

### Tuberculosis Incidence Rates

Cambridge, Somerville, Boston, Mass., and U.S.\*: 1988-97



\* U.S. rate not yet available

Source: TB Surveillance Program, Mass. DPH and Cambridge Public Health Dept.

***Example of how to read this figure:***

Tuberculosis case rates in Cambridge and Somerville have varied erratically over the decade, an indication of the small number of cases. However, although the case rates are approximately twice the state-wide rates, all continue to decline.



## Table 10-2

### NEW TUBERCULOSIS CASES

CAMBRIDGE, SOMERVILLE, BOSTON, AND MASSACHUSETTS, 1988-97

City/Town	Year									
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Cambridge	10	25	14	9	13	9	10	8	10	9
Somerville	10	11	5	14	12	10	6	8	7	6
Boston	132	142	149	141	128	115	108	93	87	79
Mass.	382	421	438	436	428	366	329	330	262	268

Sources: TB Surveillance Program/Mass. DPH and Cambridge Public Health Dept.

**Appendix: Data Sources****Massachusetts Department of Public Health**

AIDS Surveillance Program  
Bureau of Communicable Disease Control  
305 South Street  
Jamaica Plain, MA 02130

Childhood Lead Poisoning Prevention Program  
470 Atlantic Avenue  
Boston, MA 02210

Communicable Disease Surveillance Program  
Bureau of Communicable Disease Control  
305 South Street  
Jamaica Plain, MA 02130

Division of Sexually Transmitted Disease Control  
Bureau of Communicable Disease Control  
305 South Street  
Jamaica Plain, MA 02130

Division of Tuberculosis Prevention and Control  
Bureau of Communicable Disease Control  
305 South Street  
Jamaica Plain, MA 02130

Executive Office of Health and Human Services  
Department of Public Health  
State Laboratory Institute  
305 South Street  
Jamaica Plain, MA 02130

Injury Prevention and Control Program  
Bureau of Family and Community Health  
250 Washington Street  
Boston, MA 02108



Massachusetts Community Health Information  
Profile (MassCHIP)  
250 Washington Street  
Boston, MA 02108

Massachusetts WIC Program  
250 Washington Street  
Boston, MA 02108

Registry of Vital Records and Statistics  
Bureau of Health Statistics, Research and Evaluation  
470 Atlantic Avenue  
Boston, MA 02210

Weapon-Related Injury Surveillance System (WRISS)  
250 Washington Street  
Boston, MA 02108

#### **Additional State Sources**

Division of Health Care Finance and Policy  
(Uniform Hospital Discharge Data Set)  
Two Boylston Street  
Boston, MA 02116

Executive Office of Communities and Development  
Commonwealth of Massachusetts  
100 Cambridge Street, Room 1804  
Boston, MA 02202

Massachusetts Department of Environmental Protection  
Bureau of Waste Prevention  
1 Winter Street  
Boston, MA 02108

Massachusetts Poison Control Center  
Boston Children's Hospital  
300 Longwood Avenue  
Boston, MA 02115

**Local Sources**

Cambridge Food Pantry Network/Cambridge Equal Opportunity Commission  
11 Inman Street  
Cambridge, MA 02139

Cambridge Police Department  
5 Western Avenue  
Cambridge, MA 02139

Cambridge Prevention Coalition/Substance Abuse Task Force  
19R Brookline Street  
Cambridge, MA 02139

Cambridge United for Smoking Prevention  
City of Cambridge Department of Human services Programs  
51 Inman Street  
Cambridge, MA 02139

City of Cambridge Community Development Department (1990 U.S. Census  
Information)  
57 Inman Street  
Cambridge, MA 02139

Immunization Action Project of Cambridge, Chelsea, and Somerville  
1493 Cambridge Street  
Cambridge, MA 01239

Public Health Nursing, School Health Program, and Tobacco Control Program  
Cambridge Department of Public Health  
1493 Cambridge Street  
Cambridge, MA 01239

Teen Health Survey and Middle School Survey  
Cambridge School Department  
159 Thorndike Street  
Cambridge, MA 02141



## Publications

Annual Report of the American Association of Poison Control Centers (1996)

Toxic Exposure Surveillance System (TESS)

American Association of Poison Control Centers

3201 New Mexico Avenue, Suite 310

Washington, DC 20016

Behavioral Risk Factor Surveillance System (BRFSS):

1996 results from the Behavioral Risk Factor Surveillance System

Chronic Disease Surveillance Program

Bureau of Health Statistics, Research and Evaluation

Massachusetts Department of Public Health

250 Washington Street

Boston, MA 02108

Healthy People 2000 Review 1994/Healthy People 2000 Review 1997

Department of Health and Human Services

Public Health Service

Centers for Disease Control and Prevention

Nation Center for Health Statistics

6525 Belcrest Road

Hyattsville, MD 20782

Massachusetts Youth Risk Behavior Survey Results (1997)

Massachusetts Department of Education

350 Main Street

Malden, MA 02148

Massachusetts Tobacco Survey (1993)

A Report to the Massachusetts Department of Health

Lois Biener, Floyd J. Fowler, Jr. & Anthony M. Roman

Center for Survey Research

University of Massachusetts, Boston

**1999**

**CAMBRIDGE PUBLIC HEALTH ASSESSMENT**



A Report from the Cambridge Health Alliance

**Miscellaneous**

Data Center of the Metropolitan Area Planning Council  
60 Temple Place  
Boston, MA 02111

United States Environmental Protection Agency  
Center for Environmental Information and Statistics  
[http://www.epa.gov/ceisweb1/ceishome/ceis\\_home.html](http://www.epa.gov/ceisweb1/ceishome/ceis_home.html)

1999

~~98~~

S-96

Consent Agenda #10  
February 1, 1999

965

# 1999

## **CAMBRIDGE PUBLIC HEALTH ASSESSMENT:**

**A Report from the Cambridge Health Alliance**



### **VOLUME 1**

**Programs and Services**



January 15, 1999

Robert W. Healy  
City Manager  
City Hall  
Cambridge, MA 02138

Dear Mr. Healy,

The Cambridge Health Alliance proudly submits the 1999 Public Health Assessment: A Report from the Cambridge Health Alliance, Vol I and II. These documents represent the third annual installment to the City Council, and provide a comprehensive review of the work of the Alliance as well as an analysis of the public health of the City of Cambridge.

Volume I provides extensive descriptive information about the programs and services of the Alliance. Special emphasis is placed on activities to address priority areas identified by the Joint Public Health Board. Emphasis is also given to programs addressing the needs of populations at higher health risk, including children, men of color, and elders. Volume II includes updated and expanded quantitative information on the priority health areas, as well as areas of traditional public health concern. This year, a section on environmental health has been added.

Considerable attention has been given to exploring and evaluating new ways to present the information so that it will be useful to the various users. We expect that readers will find this year's two volume submission both substantive in content and user-friendly as well. Lynn Schoeff, Director of Community Health and Ellen Kramer, Director of the Health Information Unit, led this year's assessment project and did a superb job in compiling and synthesizing the work of many contributing writers. I am also grateful to Harold Cox, our Chief Public Health Officer, who worked tirelessly on this project.

Our overall goal is to provide the City with information that will help us better understand the public health concerns facing our community as well as provide data that will inform public health policy and programming. We look forward to engaging the City Council, City administration, and the citizens of Cambridge in a dialogue about this information so that we can continue to fulfill our mission which is to improve the health of our city.

Sincerely,

John G. O'Brien  
Chief Executive Officer



Affiliated  
with  
Harvard  
Medical  
School

# 1999

# CAMBRIDGE PUBLIC HEALTH ASSESSMENT



A Report from the Cambridge Health Alliance

## Table of Contents

<i>Acknowledgments</i> .....	<i>i</i>
<i>City Council and City Manager</i> .....	<i>ii</i>
<i>Boards</i> .....	<i>iii</i>
<i>Cambridge Health Alliance Organizational Chart</i> .....	<i>iv</i>
<b>Executive Summary</b> .....	<b>1</b>
<b>Section 1: Introduction to Priority Public Health Areas</b> .....	<b>11</b>
1. Access.....	12
2. Violence Prevention.....	20
3. Environmental Health.....	23
4. HIV/AIDS.....	30
5. Substance Abuse.....	33
6. Health Promotion .....	35
A. Health of the City.....	35
B. Tobacco Control.....	39
C. Public Health Nursing Services.....	42
D. School Health Services.....	46
E. 1997-98 Children's Dental Health Program.....	48
F. Lead Poisoning Prevention.....	51
G. Breast and Cervical Cancer Screening.....	54
<b>Section 2: Introduction to Populations at Risk</b> .....	<b>57</b>
1. Agenda for Children.....	58
2. Men of Color.....	61
3. Geriatric Services.....	70
4. Neville Manor.....	75
<b>Section 3: Cambridge Health Alliance Services</b> .....	<b>77</b>
1. Clinical Services.....	77
2. Public Health Department.....	83



## Acknowledgments

The compilation of Volumes 1 and 2 of the *1999 Cambridge Public Health Assessment: A Report from the Cambridge Health Alliance* was made possible through the efforts of several individuals. As we have prepared this document and move forward with the planned work, we will continue to seek the active participation of service providers, community leaders, and residents of Cambridge.

### Authors:

Jeffrey Beard, Esq.  
Shari Brenner, MPH  
Ginny Chomitz, PhD  
Pat Crombie, RN, MSN  
Jean Granick, MSW  
Ellen Kramer, ScD  
Joyce Lefevre, RDH  
Sherry Riva, MPP  
Lynn Schoeff, MEd  
Joseph West

David Bor, MD  
Kathy Campbell, MSN, CRNP  
Harold Cox, MSSW  
Donna Fox, MPH  
Paul Hollings  
Ricki Lacy, RN, MS  
Sam Lipson, MS  
Loretta Saint Louis, PhD  
Lee Swislow, RN, MS  
Richard Wright

**1999**

**CAMBRIDGE PUBLIC HEALTH ASSESSMENT**



A Report from the Cambridge Health Alliance

**Cambridge City Council and City Manager**

The Cambridge Health Alliance would like to acknowledge the leadership of the City of Cambridge for their advocacy of and commitment to Public Health.

Francis H. Duehay, Mayor

Kathleen L. Born

Henrietta Davis

Anthony D. Galluccio, Vice Mayor

Kenneth E. Reeves

Sheila Doyle Russell

Michael P. Sullivan

Timothy J. Toomey, Jr.

Katherine Triantafillou

Robert W. Healy, City Manager

# 1999

## CAMBRIDGE PUBLIC HEALTH ASSESSMENT



A Report from the Cambridge Health Alliance

### Cambridge Health Alliance Board of Trustees

Richard deFilippi, PhD, Chair\*

Robert H. Arnold

William Craig

John Francis

Camara Jones, MD, MPH, PhD

David Osler, MD

Karen Routt

Eugene Brune\*

Elaine DeRosa

Mary Ann Hart, RN\*

James Maloney

Estelle Paris, RNC

Ellen Semonoff\*

Terry Cline, PhD\*

Gerard P. Donahoe

Ralph Hergert\*

John O'Brien, CEO

Neil Rosenberg

\* Executive Committee Members

### Cambridge Health Alliance Joint Hospital Board

Terry Cline, PhD, Chair

Barbara Ackermann

Melvin Chalfen, MD

Elaine DeRosa

Margaret S. Joyce

Estelle Paris, RNC

Daniel Berkowitz, MD

Audrey Cunningham

Paul Erickson, MD\*

Pearl Morrison

Ellen Semonoff

Carol Cerf

Richard deFilippi, PhD

Ralph Hergert

John O'Brien, CEO

Jonathan Stearns

\*Medical Staff President

### Cambridge Public Health Subcommittee Board

Mary Ann Hart, RN, Chair

Barbara Ackermann

Terry Cline, PhD

Elaine DeRosa

Camara Jones, MD, MPH, PhD

Carol Cerf

Linda Cundiff, RN, MSN

Laurie Tennant-Gadd

John O'Brien, CEO

Melvin Chalfen, MD

Richard deFilippi, PhD

Jill Herold

Estelle Paris, RNC

### Joint Public Health Board

Jack Hamilton, Co-Chair

Carol Cerf

Elaine DeRosa

Frances Gayron

Genita Johnson

Estelle Paris, RNC

Mary Ann Hart, RN, Co-Chair

Melvin Chalfen, MD

Karen Edlund, RN

Myrland Guillaume

Camara Jones, MD, MPH, PhD

Linda Cornell

Laurie Tennant-Gadd

Jill Herold

Margaret Mamigonian

### Neville Manor Board

Neil Rosenberg, Chair

Terry Cline, PhD

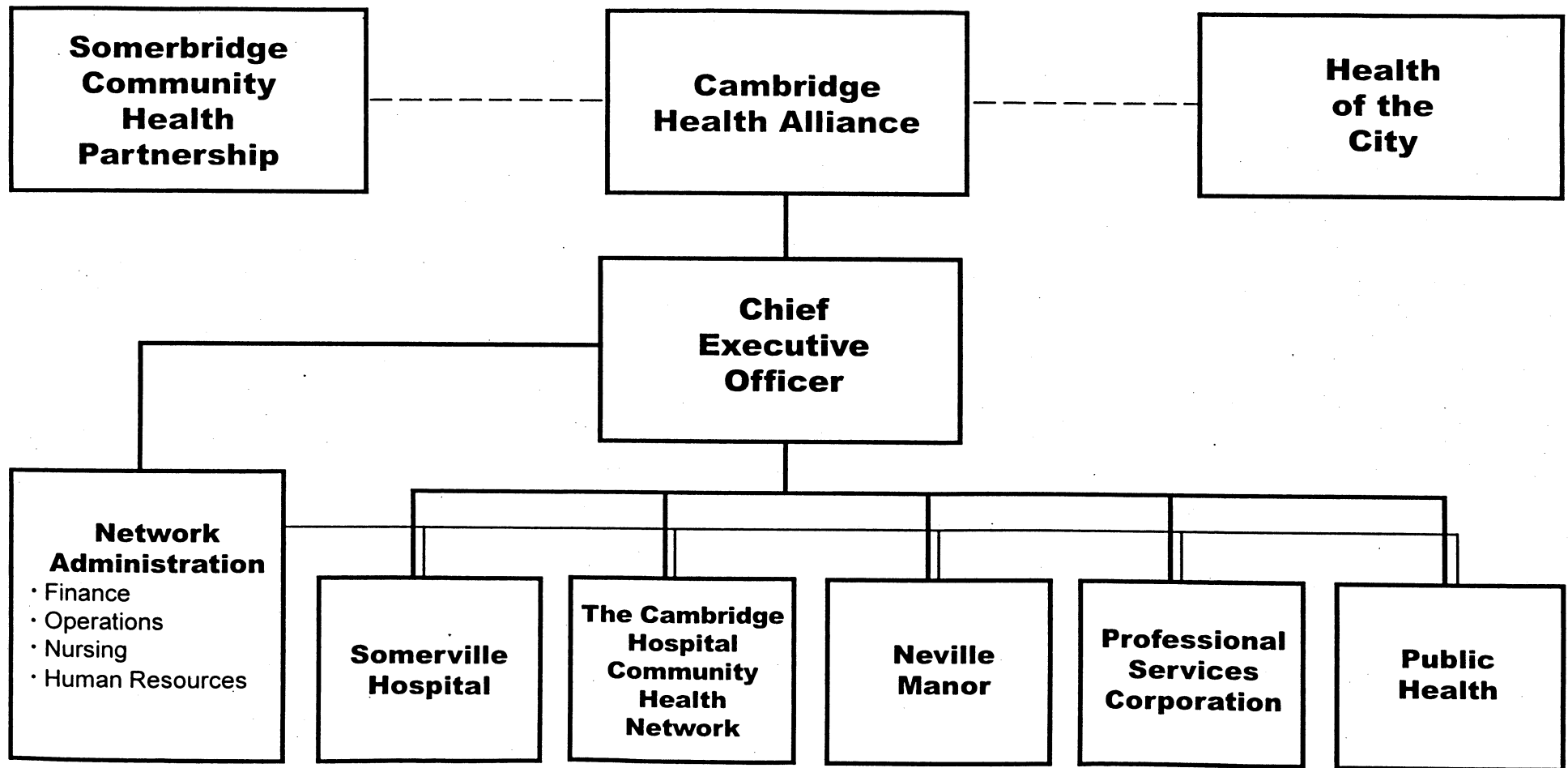
John O'Brien, CEO

William Craig

Estelle Paris, RNC

John Francis

# Cambridge Health Alliance Network Organizational Structure





## Executive Summary

This edition of the Cambridge Public Health Assessment is the third annual report submitted to the City Council by the Cambridge Health Alliance (also known as the Cambridge Public Health Commission).

The *1999 Public Health Assessment: A Report from the Cambridge Health Alliance* merges the approaches used in the two prior reports. It updates, expands, and organizes the data reported in the first Public Health Assessment in 1997 into priority health areas identified in the second Public Health Assessment in 1998. This document highlights the community engagement and collaborative improvement efforts that were identified in the 1998 report as critical to improving the health of the citizens of Cambridge.

The *1999 Public Health Assessment: A Report from the Cambridge Health Alliance* is presented in two volumes. The two volumes complement each other, yet each volume is designed to stand on its own.

Volume 1, *Programs and Services*, describes the activities of the Alliance during this past year, but is not a comprehensive presentation of the work of all health and human service programs in Cambridge. This volume consists of three sections. The first, "Priority Public Health Issues," includes chapters on Access to Health Care, Violence Prevention, Environmental Health, HIV/AIDS, Substance Abuse and Health Promotion. Each chapter presents accomplishments, community engagement, and emerging issues within the context of the issue.

The second section, "Populations at Risk," includes chapters on three specific populations at higher health risk: Children; Men of Color; and Elders. The third section, "Cambridge Health Alliance Services," focuses on health care and public health services provided by the Cambridge Health Alliance. This section reports the impressive level of clinical services that has been maintained while the REACH project re-builds the physical plant of The Cambridge Hospital.

Volume 2, *Cambridge Health Information*, is a compilation of data from multiple existing sources and is a comprehensive update of the original report of 1997. This extensive report reflects a careful selection of available information relevant to program design and evaluation, service provision, population surveillance, and epidemiological research. This volume, along with the 1997 report, comprise the first efforts to organize and present data in ways that can inform City-wide program and policy decisions.



To this end, the gaps in what we know or what is collected speak to the importance of maintaining and expanding our current health information systems.

### **Highlights of Accomplishments**

For many years The Cambridge Hospital has been recognized for the excellent quality of the health care and public health services it has provided to the City even in the context of the challenging health care environment. Building on that history the Cambridge Health Alliance is drawing in additional resources through partnerships with other health care leaders and is increasing collaboration and support of community partners.

Accomplishments within each priority and population chapter are highlighted below.

### ***Priority Public Health Issues:***

#### Access

Several activities undertaken by the Alliance in the past year resulted in the following accomplishments:

- Outreach for community health improvement has grown considerably. Multi-lingual, multi-cultural community health workers with expertise in specific health issues, share best practices within the Alliance and with outreach workers in other agencies.
- Health Care for the Homeless has enhanced service delivery and financial resources through more effective billing practices.
- A new South Asian Mental Health Team was developed in response to changing demographics in Cambridge.
- Also responding to changes in the population served, Interpreter Services has expanded and conducted cultural competency assessment and language classes for Alliance staff members.
- Network Health has increased access and prestige to uninsured individuals and families through the growth of managed care coverage.

Relevant data in Volume 2 includes demographics, population density, WIC program recipients, number of uninsured individuals, and numbers of homeless individuals.

#### Violence Prevention

Alliance staff provided leadership on the Domestic Violence Free Zone (DVFZ) initiatives. The work has ensured that the employee assistance program provides assessment and referrals to appropriate services for City employees involved in domestic violence. The DVFZ Core Group has been instrumental in providing training on domestic violence for staff members in Human Services, Police, the Housing Authority,



and the Cambridge Health Alliance. Developing recommendations for services for children who witness violence has been a major thrust of the work as well.

Included in Volume 2 are data about violent crime trends, injury rates, and adolescent experience of violence.

#### Environmental Health

In 1998, the Environmental Health Unit (EHU) in the Cambridge Public Health Department was developed and became a lead agency in the oversight of contaminated sites in Cambridge. At the request of the EHU, the Massachusetts Department of Environmental Protection is carrying out its first targeted audit of a property (the Polaroid site) which had otherwise completed the regulatory process. The EHU staff are also engaged in on-going community dialogs regarding W.R. Grace, Russell Field, and Cambridge Research Park.

Volume 2 includes relevant information on air quality, sanitation violations, enteric illness, de-leading notification, and chemical poisoning.

#### HIV/AIDS

The Zinberg Clinic and other components of the multi-disciplinary AIDS Program have continued to provide high quality, comprehensive primary care to patients infected with HIV. This work is coordinated with other HIV prevention initiatives such as the needle exchange program, which served approximately 230 people in 1998.

For data regarding HIV rates, modes of transmission, and other sexually transmitted disease rates, see Volume 2.

#### Substance Abuse

The Cambridge Health Alliance continues to provide a range of treatment services for individuals and families suffering from substance abuse. In 1998 the Alliance provided leadership in a collaborative improvement project involving a number of substance abuse treatment and prevention programs. Training in Continuous Quality Improvement methodology was provided to program leaders. Through this project a common goal regarding substance abuse prevention in Cambridge and Somerville was developed. Projects will be piloted in the coming year.

Data informing the project can be found in Volume 2. This includes alcohol, tobacco, and drug use among adolescents; hospital admissions for drug and alcohol problems; and deaths related to alcohol and drugs.



### Health Promotion

The Health Promotion chapter is extensive and, like the Access chapter, reports on a number of Alliance programs.

- Health of the City, working closely with the School Department, has provided leadership in the area of physical activity and nutrition. Health of the City has provided linkages with universities, effectively enhancing the City's "brain trust."
- The Public Health Department has been active in tobacco control with particular emphasis on limiting youth access to tobacco and on minimizing exposure to environmental tobacco smoke.
- Public health nurses have provided essential public health services including control and prevention of tuberculosis and other communicable diseases.
- School health nurses provided nursing care, health education, and screening in all Cambridge public schools and consultation to several private schools.
- The Children's Dental Health Program conducted dental education and screening to 1,415 elementary school students. Screenings were also provided in seven pre-schools.
- The Alliance lead-poisoning prevention program provided hazard reduction training in home visits and telephone counseling to over 80 families. There was a significant decrease in lead levels in those children following intervention.
- Breast and cervical cancer screening were provided at no charge to women who are uninsured or under-insured. Over 700 women were served in 1998.

There are extensive data sections in Volume 2 that relate to health promotion. Among them are communicable diseases, immunizations, vaccine preventable diseases, TB incidence rates, dental screening, cancer incidence, and nutrition.

### ***Populations at Risk:***

#### Children

The Agenda for Children, a City-wide effort to improve the health and welfare of the children of Cambridge, has made great progress during the past year under the joint leadership of the Kids' Council, the Cambridge Health Alliance, the Department of Human Service Programs, the School Department, the Police Department, and the Cambridge Community Foundation. In 1998, hundreds of community members were successfully involved in the development of goals and two were chosen for concentrated efforts. The goals are "Children and youth need access to supervised activities in a nurturing environment at all times" and "Children and their families need to be able to read." Action teams are being created and program initiatives should be in place in 1999.



The data in Volume 2 that relates to children's health include demographics of the children and families in Cambridge, immunizations in children under age two, and vaccine-preventable illnesses.

### Men of Color

The Men of Color health program conducted aggressive outreach to adolescents and men of color in Cambridge, facilitating their access to primary health care. The program staff is working with the advisory group to develop new outreach strategies to build on such successful projects as Hoops 'n' Health and community-based prostate cancer education and screening.

Volume 2 includes data about morbidity and mortality by race and gender.

### Elders

In 1998 the Geriatric Task Force published a Geriatric Services Directory. Links among programs providing services to elders were strengthened. The Elder Falls project is a collaborative public health initiative aimed at reducing the number of hospitalizations for injuries due to falls.

A proposal to update Neville Manor and to create a new 100-bed nursing home complemented with 71 units of affordable, assisted-living is an important initiative. This proposal was developed in cooperation with the community and City Council.

Volume 2 includes data about elders hospitalized for falls and other preventable conditions.

### **Community Engagement**

To improve the health of the public and to improve Alliance services, the Cambridge Health Alliance maintains a strong commitment to working with community members, including those who live or work in Cambridge. Sharing tools that we have found useful, such as Continuous Quality Improvement (CQI) methods, has allowed us to develop a common language with our community partners. At the same time, we have learned from our partners and have tailored the improvement work to the particular needs and character of Cambridge.

Each chapter in Volume 1 includes some discussion of outreach and partnership with community members. Partners include community-based organizations, citizen groups, religious organizations, other health care providers and concerned individuals, among others.



A sample of the Alliance's successful community engagement activities is highlighted below.

Community input in planning and advisory activities:

A great deal of effort has been made to draw members of the Cambridge community into planning activities related to the Cambridge Health Alliance. Among the projects which have benefited from active local input are the REACH project (the expansion of the facility at the main Cambridge Hospital campus), the development of the new Windsor Neighborhood Health Center, and needs-assessment and advisory groups at other Neighborhood Health Centers.

Community participation in program development and implementation:

Through community engagement activities already discussed in the Highlights of Accomplishments, the Cambridge Health Alliance has been able to develop several important initiatives over the past year. Among these are the Agenda for Children, the Substance Abuse Prevention Improvement Project, and a series of violence response and prevention services.

Outreach to community to improve access to services:

The Alliance has worked effectively to improve access to health care for underserved populations. Opportunities for collaboration have included work with the Men of Color Health Program, Somerbridge Immigrant Task Force, Network Health, the Latino Service Providers, and other groups with shared concerns.

Community education regarding critical public health topics:

The Cambridge Health Alliance regularly engages residents in communicating toxicological, communicable disease, and other critical health information. The Environmental Health Unit works closely with the Alewife Neighbors, Inc., East Cambridge Planning Board, and the Cambridgeport Neighborhood Initiative to address neighborhood concerns about hazardous waste sites, to educate on chemical risks, and to understand how exposure threats are perceived by local residents. Public health nurses regularly respond to community concerns about communicable disease exposure through consultation and education to individuals, families, community groups, and employee groups.

Collaboration with community partners and service providers:

The Cambridge Health Alliance continues to facilitate task forces that include health care and human service professionals. Among the groups active in helping the Alliance shape the response to population-specific needs are the Healthy Children's, School Health, Men of Color, Women's Health, and Geriatrics Task Forces.



## Summary of Emerging Issues

Each chapter in this volume discusses emerging issues within its particular domain. Upon reflection it is clear that there are a number of common themes.

**Developing and nurturing partnerships.** The Cambridge Health Alliance has made great progress in reaching out to community members and in establishing true partnerships. Relationships with other organizations have improved and common agenda have been identified leading us toward maximized use of human and financial resources. Such partnerships will allow us to improve services provided, not only by the Alliance, but by community-based organizations, community groups, and City departments as well.

**Technological and information systems advancements.** There have been significant technological advances throughout the Alliance, particularly in computer systems. The Information Systems Department has provided leadership in transforming the ways in which the organization shares information. Such improvements contribute to improved patient care and help guarantee that records are accessible and accurate. Additionally, many departments within the Alliance, including the Public Health Department, have internal Intranet web pages that improve access to important information within the Alliance. The nurses in all the public schools in Cambridge are about to move into the computer age as well. They will be linked to Alliance and School Department systems as they employ a central database for student health records. The Massachusetts Department of Public Health has provided leadership in data collection, positively affecting work in HIV/AIDS, Breast Health, lead poisoning prevention, and other Alliance programs. Further, the Health Information and Environmental Health Units are establishing solid databases upon which many are beginning to rely.

**Monitoring and assurance functions.** The Public Health Department has enhanced its monitoring and assurance functions over the past few years. Some of these tracking duties are statutory obligations for Health Departments. Other surveillance and tracking is important for monitoring health status, responding to emerging problems, and evaluating public health programs. The annual assessment summarized herein is part of this responsibility to protect the public health of Cambridge in a responsive, energetic, and creative fashion. The Alliance embraces this challenge and believes that breaking new ground in areas such as environmental oversight, tobacco control, immigrant health, and children's dental screening demonstrates that this commitment is paying dividends across the City.

**Opportunities for health promotion.** Many previously established Cambridge Health Alliance programs are finding and creating new opportunities for health promotion and disease prevention. Patient education has been enhanced throughout Alliance primary



care practices with new materials and approaches designed for the diverse patient population. The School Health program has successfully engaged children and their families for required immunization through kindergarten registration. Staff training regarding such issues as domestic violence, cultural competency, and clinical protocols also strengthen prevention activities.

**Environmental and infectious disease challenges.** Along with the good news there are concerns that remain. Public health challenges include the need to adjust to changing infectious disease threats, especially drug-resistant bacteria and emerging epidemics. Environmental tobacco smoke, carbon monoxide, uncontained asbestos, and pest droppings represent respiratory threats which may be aggravating asthma and other bronchial diseases in the most vulnerable individuals. Food-borne infections associated with produce, meat, and seafood may result from national or international causes, but deliver their human toll within the bounds of our community. Other environmental threats, particularly those posed by hazardous waste, capture the attention of residents and of the public health community.

**Public health concerns in Cambridge.** Some concerns are defined by information derived from this report rather than broad, nationally recognized issues. Data indicate that there is a decreasing trend in lead screening for children in Cambridge that must be better understood. Other data point to a disturbing increase in adolescent use of alcohol, tobacco, and marijuana and call for increased vigor and creativity in addressing this serious problem. Still another public health concern that continues to draw interest is childhood obesity. Successful investigation of such concerns demands strong collaboration among pediatric providers, public health professionals, and municipal development agencies.

**Financial challenges.** Financial challenges remain as well. Many of our valuable grant-funded programs such as Children's Dental Health, Breast and Cervical Cancer Initiative, and Men of Color, are dependent on time-limited grants. If these programs are to continue or expand, other resources must be identified. There are increasing resource needs in other areas such as interpreter services and case management. Healthcare for the Homeless provides an example of enhancing resources without incurring additional costs through effective cost reimbursement. It is imperative to identify and transfer knowledge of best practices for maximizing existing resources.

Network Health has thus far been a successful endeavor, improving health care access for uninsured, underinsured, and Medicaid and Medicare recipients. Improving on the success of this project and expanding to new markets is essential.

# 1999

## CAMBRIDGE PUBLIC HEALTH ASSESSMENT



A Report from the Cambridge Health Alliance

The annual assessment continues to provide the Cambridge Health Alliance with the opportunity to report on successes and review opportunities for growth and improvement. For 1999, the document has been framed in terms of accomplishments, community engagement, and emerging issues, allowing us to take stock of the past year's work and look ahead to the next horizon.



## Introduction to Priority Public Health Areas

In 1992, the Health Policy Board engaged in a challenging process of prioritizing public health concerns in the City of Cambridge. The seventeen areas identified and prioritized through this effort became the subject matter of the *1997 Public Health Assessment*, the first of the annual reports submitted to the City Council by the Cambridge Public Health Commission.

Last year, the *1998 Public Health Assessment: Improving the Health of Cambridge*, identified six of those public health issues as the focus of our work for 1998, determined that community engagement was necessary in order to make stride in these areas, and laid out a plan to do so.

This section of the *1999 Public Health Assessment: A Report from the Cambridge Health Alliance* reports on those six priority public health issues: Access; Violence Prevention; Environmental Health; HIV/AIDS; Substance Abuse; and Health Promotion. Each chapter includes a report on accomplishments and community engagement in 1998 followed by a discussion of emerging issues.



## 1. Access

### Introduction

The Cambridge Health Alliance operates a number of programs to enhance access to health care in keeping with our long-standing mission and commitment to provide quality health care services to all people and meet community needs.

These access programs fall largely into three categories: health outreach and promotion, linguistic and cultural programs, and health coverage access through Network Health and free care programs. (See *Volume 2, Chapter 2.*)

### Health Outreach for Community Health Improvement

#### Accomplishments

##### Community Affairs

This department is headed by the Senior Director for Community Affairs under the Alliance's Chief Operating and Chief Nursing Officer. Its foremost mission is to improve the health status of the community in collaboration with the Cambridge Public Health Department. Community Affairs staff works with and reaches out to the communities, including those populations that do not traditionally enter the health care system, to make health care services known and accessible to all. Education and outreach activities are focused on health care issues, services, and how to access the health care network. The strong community links of this department uniquely position it to ensure that the Alliance programs effectively respond to the needs of the community.

Community Affairs operates many of the state and federally funded community health outreach and health promotion services of the Alliance. These include Health Care for the Homeless, WIC, Family Planning, Women and Adolescent Health, HIV Prevention and Services, Breast Health Initiative, Tobacco Cessation Program, Interpreter Services, and the Somerbridge Community Health Partnership. The consolidation and integration of these programs in one department and their co-location at one site has resulted in increased efficiency and capacity.

##### Community Health Workers

This past year has seen a growth in the number of bilingual and bicultural outreach staff working throughout the Cambridge Health Alliance. Their language skills and cultural perspective provide a unique contribution that enhances the communication and dialogue



between immigrants and the Alliance. The role of outreach is paramount in maintaining culturally appropriate medical services and expands the range of health access.

The Cambridge Health Alliance has over 17 community health workers who represent communities that speak Spanish, Haitian Creole, French, Portuguese, Cape-Verdean, Hindi, and Bengali. They are all funded by grants that require their work to be concentrated on a certain health problem or a population. Monthly training and networking opportunities have been organized by leaders in Community Affairs and the Public Health Department.

#### Health Care for the Homeless

There was a focused effort to enroll Health Care for the Homeless patients in Network Health this year. A Network Health Enrollment Coordinator worked at the Albany Street and Salvation Army shelters, enrolling residents in an appropriate health plan. This program also expanded health care access within family shelters by adding 20 hours of nursing care in family shelters in Cambridge each week. The nurse screens for health problems and assists residents in connecting with appropriate health services.

#### Primary Care Expansion

There has been an increase in health access and services at many of the primary care sites. The need for additional provider capacity has resulted in evening and weekend hours. Services including nutrition, social work, occupational health, and ob/gyn have also expanded. Increased efforts by nursing staff have resulted in enhanced educational programs about asthma and diabetes for patients.

#### South Asian Mental Health Team

In response to the increasing Asian and Asian-American populations in Cambridge and the need for culturally sensitive and competent services, the South Asian Mental Health Team was formed through the Department of Psychiatry. The program serves adults, children, couples, and families. Therapy, evaluation, research, and consultation to other health care providers are available. Services are available in several Indian dialects and Mandarin. Patients speaking other languages can be seen with interpreters.

#### **Community Engagement**

##### Cambridge Welfare Reform Task Force

The Cambridge Health Alliance participated in the research project *Welfare in Transition: Consequences for Women, Families, and Communities* in collaboration with the Cambridge Welfare Reform Task Force and Radcliffe Public Policy Institute.



A group of health care providers, outreach workers, and social workers presented accounts of the impact of welfare reform on patients. Particular attention to health care access and basic needs such as housing, food, and clothing were highlighted.

#### Collaborative Outreach Activities

There have been several events sponsored in the City that have been successful collaborative outreach efforts. Some examples include Women's Health Day, Area 4 Neighborhood Clean Up, Immigrant Health Day, and Riverfest. Collaboration with community-based agencies such as Concilio Hispano, CEOC, MAPS, Cambridge Multi Service Center, Cambridge Area 4 Community Connections Coalition, and local churches has created unique opportunities for health education, information, and health services. The goal of connecting people to primary and preventive care is a constant in all outreach efforts.

#### **Emerging Areas**

##### Health Center Advisory Groups

Revitalized community advisory groups are planned for four neighborhood health centers (East Cambridge, North Cambridge, Windsor Street, and Riverside Health Centers). It is hoped these groups will serve as local task forces to guide community health assessment and service planning in the neighborhoods.

##### Assessing Access: Local Needs Assessments

Neighborhood-based health needs assessments will be started, with Area 4 as the first priority in 1999. The opening of the new Windsor Street Health Center is an opportunity to expand services to increase access in that neighborhood. Alliance staff in Community Affairs, Windsor Street Health Center, and the Cambridge Public Health Department will work with Concilio Hispano, the Margaret Fuller House, and other community organizations to do this work.

##### Health Care for the Homeless

There is an opportunity to increase comprehensive primary care services to the homeless in Cambridge through this program. Adding the first support-staff position to the program will increase billable visits and Network Health participation will in turn support program expansion. The program will also seek additional funding for a nurse practitioner to provide direct services in the family shelters and serve as a link to health centers for these transient families, many of whom are escaping abusive situations.



## Linguistic and Cultural Programs

### Accomplishments

#### Increased Staff Diversity

During 1998 the staff of Interpreter Services expanded to keep up with the growing volume of patients with limited proficiency in English. There are now four full-time Portuguese interpreters, three Spanish, and two Haitian Creole. In addition, more than 100 freelance interpreters provide assistance in many other languages. Interpreter services are available at the Cambridge Hospital and in the neighborhood health centers.

#### Increase in Use of Interpreters

During 1998 there has been an increase of about 70% in contacts with Portuguese-speaking patients than in 1997. This increase is due to patients who have recently emigrated from Brazil. There has also been a significant increase in Spanish-speaking patient contacts; 57% higher than in 1997. New Spanish-speaking patients are mostly from Central America, especially El Salvador. Contacts with Haitian patients remained about the same. Other growth areas have been among patients from the Indian subcontinent, China, and Ethiopia.

#### Improved Data Collection for Patient Languages

Interpreter Services engaged in a joint effort with Admitting and Registration staff to improve the accuracy of patient language identification in the computer record. As a result, accuracy in language identification has improved from 40% to more than 80%.

#### Language Classes

To assist Alliance employees in serving our diverse patient population, language classes are now offered in Portuguese, Spanish, and Haitian Creole. All classes are taught by professional language teachers and are free to hospital employees.

#### Language Tag Program: Helping Patients Find Who They Can Talk To

As the numbers of patients who speak primarily other languages has increased there is a greater need for bilingual staff to assist them. Since patients may not know who speaks their primary language, in 1998 we introduced language tags for bilingual staff. This has been particularly important with the construction at Cambridge Hospital. Patients who don't speak English now know who to stop in the hall to ask for directions.

#### Cultural Competency Assessment

During the summer of 1998 the Cambridge Health Alliance was a test site for a cultural competence self-assessment tool developed by the National Public Health and Hospital



Institute, the New York Academy of Medicine, Harvard Medical School, and Beth Israel-Deaconess Hospital. The Alliance earned the highest possible rating of a “cultural diversity learning organization.” Focusing on quality improvement in the area of diversity continues to set the Cambridge Health Alliance apart as a national leader in this area.

## **Community Engagement**

### Massachusetts Immigrant Health Access Coalition

This is a state-wide advocacy group for immigrant health led by Health Care for All in which leaders in the Interpreter Services Department have been active members. Participation with the coalition provides an opportunity to network with other health care providers and advocates, to share best practices, and to advocate for immigrant-friendly policies.

### Somerbridge Immigrant Health Task Force

Somerbridge Community Partnership has been restructured to focus primarily on immigrant health issues. It provides advocacy, community organizing, empowerment, and leadership development. The Somerbridge Immigrant Health Task Force consists of local advocacy organizations and government agencies that serve the new immigrant populations. It has been instrumental in advocating for policy changes that affect health access and services for immigrants. Members of this task force actively participated in hiring the new Somerbridge Director.

## **Emerging Areas**

### Immigration Trends

Immigrants from Brazil, Haiti, and Latin America still comprise the largest immigrant groups in Cambridge. There are also growing numbers of smaller populations from India, Bangladesh, Asia, and from nations of the former USSR. The many requests for interpreters of “special languages” with the Alliance reflects these demographic changes in the City. The most dramatic increases in the need for interpreters have been, by percentage, in Chinese languages (132% increase), Indian languages (83%), Portuguese (83%), Ethiopian languages (71%), and Spanish (69%). While there have also been increased requests for interpreter services in Haitian Creole (8%) and Russian (7%), the growth is less significant.



### Cultural Competency Training

The Departments of Interpreter Services and Organizational Development are collaboratively developing a training program for Alliance staff. The goals of the training are to:

- Raise awareness about cultural aspects of health care.
- Emphasize the link between culturally respectful care and patient satisfaction.
- Help staff understand the needs of the patient and customer populations they serve.
- Identify resources to assist staff on this topic.

Several pilot training sessions have already occurred.

### Impact of Increase in Interpreter Staff

The number of patients who do not speak English well enough to communicate with their doctors without an interpreter has grown faster this year than ever before. To meet the communication needs of patients, providers, and staff, more interpreter time is necessary and increasing cost is anticipated.

It is essential to pursue a multifaceted strategy to control costs related to communication. First and foremost is to actively recruit bilingual providers and other staff. There must also be greater efficiency in delivering interpreter services. Automated scheduling of interpreters will be piloted on a small scale in January 1999. More permanent positions for interpreters, including multitask positions in the neighborhood health centers, are being created.

*For relevant data regarding Immigrant Populations see Volume 2, Table 1-2, Figure 1-10, and Figure 1-11.*

### **III. Network Health and Free Care**

Network Health is now in its second year of operation as a provider-sponsored pre-paid health plan owned and operated by the Cambridge Health Alliance. Network Health offers two products: one for Massachusetts Medicaid (known as MassHealth) members and the other for uninsured individuals who are not eligible for MassHealth. Network Health is the platform from which the Alliance will explore opportunities in other markets, including expanding access to the working uninsured.

About 755,000 people, 12.6% of Massachusetts residents, lack health insurance. The Cambridge Health Alliance provides services to a large uninsured population. In FY98 the Alliance provided approximately \$59 million in services to uninsured patients. This constitutes about 38% of gross patient service revenue. Significant services are also



delivered to clients covered under other public programs with Medicaid accounting for 26% and Medicare for 19% of gross patient service revenue.

### 1998 Accomplishments

Total Network Health enrollment has doubled since this time last year and continues to grow. Network Health Plan A (enhanced free care) has an enrollment of approximately 10,500 members and the Network Health MassHealth product has about 7,000 members.

Network Health, as one of six health plans serving the MassHealth population, has participated in the children's health care expansion launched in August 1998. Children in families with incomes up to 200% of the federal poverty level are eligible. Projections indicate expansion of coverage to 26,000 uninsured children according to the Massachusetts Division of Medical Assistance.

Despite notable health care expansions in Massachusetts over the last several years, access to service remains a concern for many uninsured individuals, especially for immigrants. Immigrants have limited eligibility under the recent health care expansions and are primarily eligible only in certain emergency circumstances. Many health care systems that have historically provided health care to immigrants, like the Alliance, must rely on the Uncompensated Care Pool (UCP) for reimbursement for these services.

Progress has been made by regional Immigration and Naturalization Service (INS) officials to clarify the public charge issue. This is an important effort in alleviating barriers to health care experienced by some immigrants who fear that using free care services may lead to unfavorable determinations for legal permanent resident status. The Alliance, members of the Massachusetts Hospital Association, and members of the immigrant advocacy community were successful in working with the INS to clarify their position on access to services covered under the UCP. The District Director of the INS stated, "that the use of the uncompensated care pool is not a reason for determining that a prospective immigrant is likely to become a public charge."

Notwithstanding such strides, continued efforts to decrease deterrents to health care access remain necessary. The Alliance will continue to provide health care services to all clients regardless of their ability to pay, their country of origin, or their immigration status, and will employ the highest standard in protecting patient confidentiality, as permitted by law.

The Cambridge City Council is recognized for creating an environment encouraging immigrant health-care access rights, as exemplified by the adoption of the Council resolution. We look forward to continuing our collaborative work on this matter.



Staff diversity is a key factor in customer service for our diverse patient population and a matter of health care access. Network Health provides multi-lingual capacity through its Member Services, Enrollment Counselors, and Outreach staff who speak many languages including Spanish, Portuguese, Haitian Creole, Hindi, and French. Doctors, nurses, and clinic staff also speak a variety of languages including Korean, Arabic, Portuguese, Spanish, French, Haitian Creole, and German.

### **Community Engagement**

Network Health, in partnership with many community organizations and social service agencies throughout Cambridge and other parts of our service area, has conducted extensive outreach about health care coverage programs in the community. Bilingual staff provide information and assistance in becoming eligible for health coverage by MassHealth and free care. A few highlights include work with the Cambridge Family Registration and Information Center in reaching out to school-age children and their families at the time of school registration; work with WIC (Women, Infants, and Children) food supplement program sites; and ongoing collaboration with food pantries and shelters to reach those in need.

It is clear that establishing trusting relationships with people within their community is the optimum way of connecting people to services. We look forward to reinforcing these collaborative efforts.

### **Emerging Areas**

The Cambridge Health Alliance and Network Health are committed to providing services and increasing access to the uninsured. There is significant need among working people without insurance for increased access to coverage.

Nationally, the proportion of people with employer-sponsored health coverage has declined, according to the Kaiser Commission on Medicaid and the Uninsured and the Census Bureau. A recent study by the Harvard School of Public Health also found that the majority of uninsured adults in Massachusetts were employed but lacked insurance because their employers did not offer plans or because they could not afford their share of the premium.

The Alliance currently provides health care services to many uninsured working families. Network Health plans to position itself to offer health care coverage programs to those families, as the Commonwealth envisions new expansions into this arena. Keeping health care options open for those who lose welfare will also be a key priority of the Cambridge Health Alliance.



## 2. Violence Prevention

### Introduction

For the past four years, the Cambridge Health Alliance has worked closely with other City departments to promote a comprehensive plan to reduce family violence. This plan was developed following the 1994 City Council resolution establishing Cambridge as a Domestic Violence Free Zone (DVFZ).

In April 1997, the City Manager authorized a Core Group to oversee the implementation of eleven initiatives outlined in the *Domestic Violence Free Zone Implementation Report*. This group provides support to City departments and community-based groups to reduce domestic violence. The Violence Prevention Coordinator, working out of the Public Health Department, provides direction to the DVFZ initiatives. The Core Group meets monthly and includes representation from the Police Department, the Department of Human Services, the Women's Commission, the School Department, and the Cambridge Health Alliance.

### 1997-98 Accomplishments

The DVFZ Core Group has focused primarily on three initiatives: 1) Ensuring that the employee assistance program provides adequate access to domestic violence services; 2) Assessing and supporting customized training needs by department; and 3) Developing services for children who witness violence.

#### Employee Assistance Program (EAP)

Renegotiating the City's EAP contract was a natural starting point for the group's efforts since the contract came up for review in September 1997. The Core Group met with the City's vendor to assess their domestic violence expertise. Subsequently, the Core Group worked on the selection process to ensure that the new vendor demonstrated a sufficient level of expertise in domestic violence. In partnership with the Personnel Department, the Core Group developed specific criteria to assess the family violence expertise of all bidders.

The Core Group continues to work with the current vendor, Health Resources, to ensure that City employees have access to appropriate services and referrals through the EAP. Building on this success the Cambridge Health Alliance is using a similar approach in contracting with an employee assistance program.



### Training

Two grants supported training programs for City departments. The first was a Community Oriented Policing to Combat Domestic Violence grant (COPS). Through this project, collaborative domestic violence teams were formed. Members included staff from the Cambridge Health Alliance Neighborhood Health Centers and the Cambridge Police Department. Over twenty-five health center staff and police officers participated in forty hours of training on domestic violence identification and intervention.

The second, a Violence Against Women Act (VAWA) grant, has provided domestic violence training for all staff of the Cambridge Housing Authority and the Department of Human Services Programs. Over 500 employees participated in this program. The grant also funded production of a multi-lingual video about domestic violence and area resources that will be available for training, public information, and community discussion.

### Children Who Witness Violence

Interest and concern about children who witness violence has been generated in the City by individuals and programs working with traumatized children. There have been increased training and funding opportunities with recent state-wide attention to this issue.

In May 1998 we presented a report entitled *Building an Integrated Community Response to Children Who Witness Violence in Cambridge*. The recommendations in this report are currently guiding the Core Group's work on this initiative. In addition, the Violence Prevention Coordinator has convened a working group to assist with the implementation of these recommendations and to prepare for anticipated funding opportunities. We have recently received a grant from the Massachusetts Violence Prevention Task Force to increase the number of support groups for children who witness violence and to provide training to child-care providers and school personnel.

### Administrative Response Teams

Another violence prevention project in which the Cambridge Health Alliance has been integrally involved is the development of Administrative Response Teams in the Cambridge Public Schools.

In the aftermath of the tragic homicide of a child last year, the Superintendent of Schools worked closely with City leaders and the Alliance to respond to the children, parents, and school personnel so deeply affected by the tragedy. Following this collaborative city-wide response, the Superintendent wished to ensure that an adequate crisis response system was in place prior to any future emergencies. Working in partnership with the Child Psychiatry Department, the Superintendent created teams in all schools. The purpose of the Administrative Response Team is to coordinate and respond appropriately



to critical situations that may affect the educational, social, psychological, or physical well-being of Cambridge school children and communities.

### **Community Engagement**

The DVFZ is by nature a collaborative initiative shared by the Cambridge Health Alliance, the Police, Housing Authority, Human Services, and the Schools. There are many community-based agencies integral to this work, among them Transition House, Respond, Emerge, Cambridge Youth Guidance Center, and Cambridge & Somerville Legal Services.

Many people have been engaged in the child-focused work of the DVFZ. Over 100 people attended the presentation of our findings about children who witness violence. Among them were religious leaders, probation officers, youth workers, DSS workers, police, health care, and school professionals.

### **Emerging Areas**

The DVFZ Core Group has selected four initiatives for focus in 1999:

- Coordinate the submission of a proposal for services for children who witness violence.
- Work with the Cambridge Personnel Department to develop domestic violence policies.
- Support domestic violence trainings for City departments.
- Begin work on a public education campaign.

Recently we have seen a shift in funding priorities that may affect the domestic violence prevention efforts in Cambridge, with greater emphasis on law enforcement and shelters and away from prevention and community initiatives. This presents us with greater competition and fewer resources.

*For additional relevant data regarding Violence, see Volume 2, Chapter 3.*



### 3. Environmental Health

The Environmental Health Unit at the Cambridge Public Health Department is concerned with the broad range of human health outcomes that result from exposures to hazardous chemical agents, fibrous minerals, environmental allergens, genetically altered organisms, and waterborne or foodborne pathogens. These exposures have many potential sources at the work place, in school, and in the home. Monitoring and prevention activities that address these potential exposures require active cooperation with several city and state agencies. Since environmental exposures do not result from human-to-human transmission, many of these potential threats are not reported or tracked by traditional public health agencies. Nonetheless there is growing public concern for the negative impact that environmental exposures have directly on individuals and indirectly on their susceptibility to disease.

#### Accomplishments

- *Surveillance of local hazardous waste sites*

In the past year the Cambridge Public Health Department (CPHD) has become a lead agency within the City in the oversight of contaminated sites in Cambridge that have been identified by the Massachusetts Department of Environmental Protection (DEP). This new role has necessitated enhanced coordination with local neighborhood groups expressing concerns about these sites and a more rigorous scrutiny of public documents associated with the chemical releases identified.

- *Polaroid*

The Polaroid headquarters site on Memorial Drive was the first instance of site contamination to be investigated by the Cambridge Public Health Department (CPHD) in its expanded role. Notwithstanding prior submission of site reports concluding that there is no contamination at levels of concern, neighbors regarded the property, the site of metal plating and chemical manufacturing operations for nearly a century, as a potential source of harmful chemical exposure to abutting residents. After meeting with this local group (Cambridgeport Neighborhood Initiative), examining site documents, consulting with environmental professionals, and engaging the DEP, CPHD requested that the DEP open this previously resolved site for further testing. The DEP determined that this was a reasonable request and Polaroid eventually agreed to analyze additional samples for a broad range of metals. This additional data is currently being assessed by the DEP and CPHD to determine whether public health is being adequately protected.



- ***W.R. Grace***

The W.R. Grace property, near the Alewife Brook Parkway, has been under investigation for 13 years as a result of concerns over chemical manufacturing and testing operations occurring over several prior decades. Previous assessments have been conducted to characterize the risk posed to residents by those contaminants discovered beneath the site. These investigations have largely concluded that there is no significant risk of negative health effects to nearby residents from exposure to any of the identified chemicals on the site. Nonetheless, a more comprehensive public health risk assessment will be conducted in the next year to include more recent data from the property and more evolved risk characterization methods. Among the recent findings is the discovery of asbestos in the soil throughout the property. W.R. Grace has submitted an extensive testing plan to the DEP after significant input from nearby residents. The Alewife Study Group has represented resident concerns in this process and, along with other individuals, has played a primary role in identifying the previously unanticipated presence of asbestos on this property. CPHD is cooperating with the Community Development Department on public health concerns, but has not historically been the lead agency in this ongoing investigation.

- ***Russell Field***

Russell Field, owned by the City of Cambridge and located adjacent to the W.R. Grace property, has been the focus of a site investigation conducted by the Community Development Department in consultation with Alewife Neighbors, Inc. Because of concerns that the field may have been contaminated through migration from the adjacent W.R. Grace property during construction of the Red Line extension or from other sources, testing of the field was conducted between December 1997 and July 1998. While the results of these investigations indicate that contaminants are not present on the surface of the field in concentrations that might impact public health, follow-up testing to ascertain the extent and source of contamination found in subsurface soil and groundwater will take place. CPHD has participated in community and departmental discussions and has examined all available evidence in determining that there is no current significant risk posed to the public as a result of using Russell Field for recreational activities. Further site investigation will address the potential for long-term risk associated with this property in all its possible future uses.

- ***Cambridge Research Park***

The most recent site that has come under closer scrutiny by CPHD is the proposed Cambridge Research Park (also called the Com/Energy site). The current owner of this 10-acre lot on Third Street between Binney Street and Broadway is proposing a large building complex to include a hotel, apartments, offices, laboratory, and parking. The site was occupied by a coal gasification plant for much of this century and has been contaminated with resulting tar and toxic petroleum waste products several feet thick



below the surface of the current asphalt parking lot. Due to the scale of the contamination of the site CPHD has joined with the Community Development Department, the DEP, and the community-based East Cambridge Planning Team to assure that proper characterization is done and effective precautions are taken when this site is excavated. As a site that is both very well-situated and extensively contaminated, this property has the potential to become one of the largest and most valuable “brownfield” (urban hazardous waste site) reclamation projects in the state. As a large parcel located in a densely populated city, it is particularly important to assure that full compliance with waste site cleanup laws is guaranteed and that public health risks are vigorously contained. CPHD continues to monitor the regulatory status of this site and to respond to residential health and regulatory concerns that are relevant to this development proposal.

- ***Recombinant DNA Ordinance***

CPHD holds responsibility for the enforcement of the Cambridge Recombinant DNA Ordinance (Chapter 8.20) and administers the Cambridge Biosafety Committee for this purpose. CPHD currently regulates 52 laboratories conducting groundbreaking genetic research with vast implications for the fields of medicine, agriculture, and pharmaceutical manufacturing. While most of these laboratories are doing small-scale work at conservative safety levels, the Cambridge Biosafety Committee imposes strict adherence to the National Institutes of Health (NIH) Guidelines for Research Involving Recombinant DNA Molecules. Within the NIH Guidelines provisions are made for work with organisms and genetic material which pose a range of potential public health risks (e.g., human pathogens). Of four successively more restrictive “biosafety levels,” Cambridge only permits recombinant DNA work carried out at the first three (safest) levels. Laboratory presentations to the monthly committee meetings are followed by site visits to assure compliance with the NIH Guidelines and proper biosafety procedures. Recent activities undertaken by the Cambridge Biosafety Committee include the successful recruitment of a new member, a workshop for community representatives serving with each laboratory biosafety committee, and a revision of the Procedures and Protocols of the committee to reflect its current practices and to remove ambiguity in the administration of the ordinance.

- ***Database development***

CPHD has begun a process of gathering and indexing data from state and municipal agencies that may have long term impacts on the health and welfare of the public. The availability of such a set of databases should significantly improve the retrieval of public records of interest to individual residents throughout the City. Such valuable databases should also assist in the identification of social and geographic parameters predictive of, or associated with, greater environmental hazard exposures.



One such resource currently available is a database developed in-house for tracking all hazardous waste sites in Cambridge with detailed information on chemicals and concentrations discovered, specific laws and codes invoked, ownership information, use restrictions, structures located on site, and DEP site tracking information. This information can be of great assistance when responding to frequent requests for chemical release data on particular addresses and in vicinities around one location.

Another database consists of information regarding all inspections carried out by the Cambridge Inspectional Services Department. Each inspection for any combination of 30 categories of complaints is recorded from 1992 to present. Each record includes street addresses, complainant information, dates, inspection findings, and owner information. While many categories do not relate directly to hazardous environmental exposures (plumbing, electrical, occupancy), sanitation violations involving garbage, rodents, indoor air quality, dust, cockroaches, and other hygiene considerations can have a significant impact on health risks posed by chemical, mineral, or biological exposure hazards. Prior to obtaining this inspection data from the Inspectional Services Department, little or no analysis of this record had been done. A database is now under development that would also allow CPHD to track environmental exposure complaints received at the Environmental Health Unit. The nature of these complaints is discussed below.

In order to maximize the analytical potential of available data CPHD has initiated a Memorandum of Agreement with the Cambridge Management Information Systems Department (MIS). This agreement allows CPHD and MIS to openly share data unless otherwise restricted by confidentiality considerations and to explore the emerging geographic component of public health data being exploited by state and federal health and environmental agencies. By gaining the greatest benefit from data that has already been gathered by other agencies, CPHD expects to better anticipate and evaluate exposure concerns across the City. These analytical tools will also help CPHD target information and services to those neighborhoods or those individuals who can most benefit from them.

- ***Environmental Complaints, Toxicology Queries, and the Environmental Health Library***

Among the newly extended functions of the Environmental Health Unit is responding to public requests for information on environmental hazards and exposures. Since these concerns frequently are not strictly governed by any local agency, appropriate referrals and dissemination of accurate and clear occupational health and exposure information is the goal of the Environmental Health Unit. Complaints and exposure concerns most commonly received include indoor air quality (e.g., allergens, gases, respiratory irritants), nuisance odors, dust from construction activities, carbon monoxide from idling autos and



heaters, asbestos exposure during demolition, proper disinfection procedures after flooding, water quality concerns (e.g., lead, discoloration), pesticides, lead paint poisoning, and toxicological effects of other chemicals. In order to maintain the proper scientific and medical reference resources to address the wide span of public concerns, the Environmental Health Unit has established an environmental health library that will be available to all CPHD staff, student interns, and other City of Cambridge and Cambridge Health Alliance employees. This library now includes several CD-ROM databases, occupational health and medical toxicology reference texts, EPA/CDC chemical hazard and risk assessment reports, professional journals and newsletters, and a collection of web site links offering further resources.

- ***Local Emergency Planning Committee (LEPC) activities***

CPHD is a participating agency on the Cambridge Local Emergency Planning Committee (LEPC). The LEPC is responsible for preparing Cambridge to respond in the event of a chemical, biohazard, terrorist event, or other public safety emergency. CPHD involvement includes participation in all LEPC quarterly meetings and the annual city-wide emergency response exercises. In the event of such an emergency, CPHD would need to address evacuation concerns and coordinate with local hospitals to ensure that appropriate personnel and supplies are available. Though no evacuation was required, CPHD participated in the City's response to a large hydrochloric acid spill this summer to assure that area residents would be cleared if needed. As part of its preparation for such unforeseen incidents, CPHD has established a 24-hour/7-day on-call beeper to be carried at all times by one of several administrative directors.

### **Community engagement**

- ***Public meetings and citizen participation***

Community involvement often represents a task-defining factor in determining the approach that CPHD will take on a specific issue. Local interest in environmental exposure issues is generally driven by resident proximity to hazardous waste sites. Though the pool of interested residents may be limited by this fact, those who do become involved are often very committed to the issue and wary of public reassurances that seem to understate their fears. Since the nature of the hazards and the determination of risk are highly technical in nature there is continuing opportunity for miscommunication and suspicion. As soon as an issue has been identified to be of local concern it is important for CPHD and other City agencies to establish from the onset a productive and helpful relationship with those involved. Bringing medical and environmental professionals and other local or state agencies into these discussions can provide additional means for assuring that trust is maintained and that public health risks are evaluated from more than one perspective. It is our belief that CPHD has been able to establish this level of trust



with those groups we have engaged in the past year and it is our intention to continue to build these relationships in the future.

- ***Environmental Coordinating Committee***

CPHD maintains several key institutional relationships within the City of Cambridge. The shared interests between CPHD and other local agency partners are best reflected by involvement in the City Manager's Environment Task Force. Representing Water, Fire, Public Works, Inspectional Services, Community Development, Conservation Commission, and CPHD, this group seldom meets formally but works together on a daily or weekly basis as each incident warrants. While each department brings its own perspective to these coordinated responses, common interest in safe storage, disposal and use of chemicals, and biological hazards drives the cooperation.

- ***Household Hazards Education Project***

As part of its role in providing a resource for students of medicine and allied health sciences, CPHD coordinated a household hazard awareness project with a class of nursing students from UMass Boston. The goal of this project was to develop clear and accessible written material regarding storage, alternate-use, proper disposal, and other safety information for parents of young children. While some of this material is available elsewhere, there was an identified need to bring this information into one set of materials, to make it understandable to parents, and to provide locally relevant hazardous waste drop-off and poison control information. CPHD hopes to employ this teaching tool in its ongoing household hazardous waste education efforts.

### **Emerging areas**

- ***Indoor air quality monitoring and environmental tobacco smoke***

Among the most frequent exposure complaints received by the Environmental Health Unit are indoor air concerns. While many of the incidents arise from apparent causes and do not constitute imminent health hazards, some potential indoor air pollutants can be deadly. Carbon monoxide (CO) is both odorless and an extreme respiratory hazard. Exposures of moderate duration can result in asphyxiation or death because CO gas most frequently accumulates indoors in the winter from poorly tuned heaters during a time when homes are kept airtight. Other gases associated with poor indoor air quality include nitrogen dioxide (NO<sub>2</sub>), carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), ozone (O<sub>3</sub>), and sulfur dioxide (SO<sub>2</sub>). CPHD is in the process of obtaining a portable multi-gas detector which will aid in the investigation of indoor air complaints. Further, CPHD is proposing significant additional smoking restrictions on all bars and restaurants in Cambridge.



Exposure to environmental tobacco smoke is a critical contributor to indoor air quality problems, particularly carbon monoxide and particulates (smoke and soot). CPHD is concerned that the adverse health effects of exposure to tobacco smoke disproportionately affects employees in the food and beverage service industry, an occupationally exposed population with no means to protect their health from this established source of cancer and respiratory illness.

- ***Food safety***

In an era of low international tariffs and year-round expectations that fresh produce will be available, the microbial hygiene of perishables has come under increased scrutiny. As several outbreaks of *Cryptosporidia* have been traced to produce in recent years, irradiation, identification of points of risk in food handling, and increased FDA staffing have been examined as possible remedies. Though much information is available to the public on prevention of infection from these and other foodborne pathogens, much of it does not reach the individual consumer or grocer. CPHD anticipates that there is a great public interest in food safety information but that it needs to be delivered effectively.

- ***Cambridge Public Health web page***

CPHD endeavors to build its presence on the Internet over the near term future to provide an outlet for public health information that is not currently made available to many residents. Many environmental health topics and permitting details (recombinant DNA, laboratory animal, massage therapy) would be easily presented on a modest CPHD web page. Many other public health and environmental resources at state and federal agencies would also be referenced or linked. The Cambridge Health Alliance is currently shifting from the development of the Intranet pages which serve and inform the Alliance community, to the creation of an Internet page which will serve the public at large. CPHD expects the Alliance web page to be fully established over the next year.

- ***Household Hazardous Waste drop-off***

As a result of further development in the Alewife/Cambridge Park Drive area, the current household hazardous waste drop-off location will be forced to move before the first scheduled drop-off day next spring. The importance of finding an appropriate location that will serve the entire City is clear. As with other municipal resources, many residents of East Cambridge and Cambridgeport must travel quite far to participate. Selecting an appropriate site will also allow the program to occur more frequently, to be better publicized, and to accept more categories of hazardous waste in the future.

*For additional relevant data regarding Environmental Health, see Volume 2, Chapter 4.*



## 4. HIV/AIDS

### Introduction

As the HIV/AIDS epidemic approaches the end of its second decade, there is much publicity about medications that can diminish HIV (the virus that causes AIDS) to undetectable levels and about dramatic decreases in death rates due to AIDS-related complications. While this good news is true, there are many new challenges to be addressed. The new medications have helped a tremendous number of people with HIV enjoy a return to a much healthier state, although they are not effective for all individuals. They also often have prohibitive side effects, require a complicated adherence regimen, and are quite costly.

As HIV changes from an acute illness to a chronic disease, consumers, providers, and prevention programs face unique challenges. Current treatments provide considerable relief, but their long term success is still unknown. Many people living with HIV are dealing with the demanding treatment regimens and new psychological challenges. Service providers have higher caseloads as death rates decrease and clients live longer with complicated social service needs. The new medications are complex and constantly changing, and health care providers are spending an enormous amount of time acquiring the knowledge necessary to prescribe these medications appropriately, effectively, and safely. Prevention programs are facing difficult challenges as the motivation to stay uninfected decreases with medical advances. Many individuals, particularly young people, have been heard to say "it does not matter if I get HIV, I can just take the medicine."

### 1998 Accomplishments

Despite all of the challenges facing us in 1998, Cambridge has continued to rise to those challenges. Prevention programs exist to support individual and community attempts to decrease the number of new infections. One intervention that has repeatedly shown to decrease HIV-infection rates cost-effectively, is needle exchange. Cambridge is fortunate that its Needle Exchange Program is well run, is well accepted by its clientele, has effective referral mechanisms with other treatment services, and can be credited for maintaining the HIV-negative status of many of its users. Approximately 230 individuals were served by the Needle Exchange Program in 1998.

Cambridge has several programs that help educate the community, respectfully help people learn their HIV status, and link newly infected individuals to care. New advances in treatment make this early identification and treatment more important than ever.



Services available to people and families with HIV in Cambridge include high quality primary medical and mental health services, and social services designed to support the specific needs of each individual. Local, state, and federal resources have insured access to health care, to the new expensive medications, and to programs that support individuals in their complicated medication regimens. Providers are committed and skilled at providing appropriate care to the changing population we serve. People and families with HIV continuously report great satisfaction with services received in Cambridge.

### **Community Engagement**

A majority of the HIV-infected people currently receiving services in Cambridge have struggled with addiction and a large number are homeless as well. These individuals, and those in other disenfranchised populations that are increasingly feeling the disproportionate impact of HIV, are very complex, often requiring numerous service providers to be able to appropriately meet their needs. Many agencies in Cambridge provide prevention programs and services to people and families with HIV, and work together to provide high quality services and minimize duplication. The Cambridge Health Alliance works closely with Cambridge Cares About AIDS, Concilio Hispano, Mass. Alliance of Portuguese Speakers, several Visiting Nurses Associations, CASPAR, North Charles Center for the Addictions, Cambridge Economic Opportunity Committee, Somerville Mental Health, Deaf Inc., and many other organizations.

Providers constantly evaluate the ways in which services are provided to improve the network, maintain a seamless system of services for consumers, and work in a cost-effective manner.

### **Emerging Areas**

HIV prevention and services is a rapidly changing field. The shift from an acute illness to a chronic disease is truly in progress. Many infected individuals are suddenly dealing with the implications of a potentially long life after having expected an untimely death. Others are dealing with the disappointment of treatments that are not having the desired impact. Health care providers are struggling to keep up with daily changing medical protocols. Social service providers are facing increasing caseloads. Prevention programs are learning new techniques that are appropriate in the current environment. The entire field is undergoing a change and the challenge is to continually update services and prevention methods to remain relevant to today's needs.



We also face new challenges as the face of AIDS continues to change in Cambridge, as it does in Massachusetts and the entire country. People with HIV/AIDS are increasingly members of the most disenfranchised populations – people who are homeless, people who inject drugs, women, people of color, young people, and new immigrants. The task of providing effective HIV prevention efforts in these communities, targeting those at highest risk, is crucial. The services required to meet the needs of infected individuals and families are continually changing as well.

In 1999, the Massachusetts Department of Public Health will begin non-named HIV surveillance. The AIDS statistics that are currently used in many settings, including this document, refer only to individuals in whom the disease has progressed to include an AIDS-defining illness or a severely compromised immune system. By definition, these data do not include those newly infected with HIV and therefore do not adequately reflect current trends in populations. With the new surveillance system, statistics will include people infected with HIV, not just those diagnosed with AIDS as has been the case since the beginning of the epidemic. Within a few years, these data should give us a snapshot of HIV infection in Cambridge and in the state as a whole. As more accurate data are available, we will be better equipped to plan, project service and prevention needs, and serve our entire community.

*For additional relevant information regarding HIV/AIDS see Volume 2, Chapter 5.*



## 5. Substance Abuse

The 1998 Public Health Assessment proposed using continuous improvement methodology to mobilize work in its six highlighted priority areas. One objective was to involve community members in public health assessment and planning. A pilot effort to address substance abuse in this context has become an ongoing project and is reported here.

The Cambridge Prevention Coalition (CPC) provided a perfect starting point. Its Coordinating Committee consists of substance abuse service providers, consumers, clergy, police, educators, and health professionals committed to the collaborative planning that has been a hallmark of the CPC. People who in another context might be competitors, work as partners in the context of that organization.

Under the joint leadership of CPC and Cambridge Public Health Department staff, the Coordinating Committee began a process to identify an improvement project to reduce substance abuse. The Assessment Model laid out in the 1998 report included specific activities and tasks (underlined below) which serve as guideposts for this project.

1. Identify public health priority areas. Substance abuse was identified as a priority by the Cambridge Health Policy Board in 1993, and reinforced by the Cambridge Public Health Commission in 1997.
2. Develop a cross-agency collaborative infrastructure of providers and stakeholders. The Substance Abuse improvement project began with the Coordinating Committee of the Cambridge Prevention Coalition and representatives of substance abuse treatment and prevention programs. A sub-committee was established to work on this project and the scope was expanded to include Somerville. Representation includes community-based organizations, substance abuse treatment and prevention experts, and public health professionals in both cities.
3. Share information on major changes in the environment. The collaborative nature of this project has provided opportunities for information sharing. In the initial phase during meetings of the Coordinating Committee, there was animated discussion. In the course of the improvement team work, literature reviews and consultation with experts have yielded important information regarding state-of-the-art substance abuse prevention. Model curricula and intervention programs have been examined. Most important have been discussions about the science-based prevention strategies being promoted on the federal level. The science-based movement in the substance abuse field guides local practices to employ methods proven to be effective.



4. Assess Strengths, Weaknesses, Opportunities, and Threats. The SWOT assessment early on in the process set the tone for the work that has continued in the Coordinating Committee and the improvement team, and is a tool that we have employed at numerous points.
5. Select one or two priorities. In March 1998, the Coordinating Committee selected "Health Promotion and Disease Prevention" as the priority area to be addressed within substance abuse. The improvement team formed following this decision and has been working to define an "aim," or goal, within this area.

There are a number of considerations in determining an overall aim for the project. An aim must be engaging and broad enough to be of significance, while focused enough to be achievable. The team selected an age group (middle-school age children) for the focus of the prevention effort. After considering the possibilities of focusing on a particular drug (alcohol or marijuana), the group chose a broader approach, to address *substance use*. The overall aim for this project is "To reduce substance use in a target population of high-risk middle school children in Cambridge and Somerville."

6. Implement action steps and measurement protocols. The improvement team members are reviewing science-based prevention strategies, screening tools, and asset building strategies. A number of possible projects are being explored. Potential intervention points include pediatric settings, after-school programs, peer leadership programs, sports programs, and parents' groups. Projects are expected to begin in early 1999.
7. Re-evaluate priorities, goals, action, and measurement strategies. The improvement team has had the opportunity to continually refine the direction of the project and will continue to do so.
8. Re-evaluate the model for a continuous process for community health improvement. This model has been re-evaluated by the Substance Abuse Improvement Project and by the Public Health Department staff. Methods for engaging with the community in improvement activity have been modified to allow for variation among groups.
9. Summarize and report on the work. The improvement team has reported to the Cambridge Prevention Coalition Coordinating Committee quarterly. The 1999 Cambridge Public Health Assessment is an opportunity to share that with other community stakeholders.

*For relevant data regarding Substance Abuse, see Volume 2, Chapter 6.*



## 6. Health Promotion

### A. HEALTH OF THE CITY

#### Introduction

Health of the City (HOC) is a joint initiative of the City of Cambridge and Harvard University to improve the health of the people of Cambridge and to engage Harvard's Academic Health Center (Schools of Medicine, Public Health, and Dentistry) in this work.

Formed in 1990, HOC brings people together from different sectors of the community to identify priority health needs and develop strategies to address them. Several major themes guide this work: focusing on community-wide health promotion and disease prevention, empowering community, employing an improvement model based upon monitoring community health status, and building coalitions to improve health. Two task forces were formed in 1992 to develop programs and advocate for children (Healthy Children's Task Force) and men of color (Men of Color Task Force). In response to community need for access to timely data about the health status of Cambridge residents, Health of the City, in collaboration with the Department of Health and Hospitals, established a Health Information Unit (HIU) several years ago.

#### 1998 Accomplishments

In 1998, HOC initiated health promotion and disease prevention activities and continued to provide support and technical assistance for on-going children's dental health, domestic violence, elder falls, and men of color programs. HOC coordinates and staffs the Healthy Children's Task Force (HCTF) and the Physical Activity and Healthy Eating Action Group, a subcommittee of the HCTF.

***Physical activity and nutrition:*** The Healthy Children's Task Force (HCTF) and the Physical Activity and Healthy Eating Action group, a subcommittee of the HCTF, focused much of the year on promoting physical activity and healthy eating among children and youth. The work included prioritizing issues and conducting needs assessment on the extent of the problems of obesity, inactivity, and nutrition issues among Cambridge children in comparison to national goals, as well as a literature review on the health benefits of physical activity in the short and long term. HCTF meetings and educational forums sponsored by HOC provided opportunities for scholarship, education



and information for City providers, policy makers, and elected officials on these issues and provided a point for dialog for action steps.

HOC worked extensively with School Department partners during the last year to respond to concerns regarding the school food service. We helped raise awareness of the unmet potential of food service to promote healthy food choices, model appropriate eating behavior and foods, provide nutrition education, and reduce hunger. HOC provided leadership for capacity-building activities, including advocating for a full-time manger and serving on the interview committee; and developing three staff training sessions that included the school superintendent. To address perceptions of low participation in breakfast and lunch programs, an HOC student intern conducted a school breakfast survey in the schools. To address perceptions of low quality and quantity of food in programs, we conducted a nutrient analysis of breakfast menus and conducted a qualitative lunch assessment at several schools. The results of these activities and recommendations are being compiled to present a comprehensive picture of the school food service for school administration policy review.

We supported the on-going work of the School and other City Departments in improving gender and equity opportunities for physical activity through open-space and facility development initiatives as well as assessing opportunities for physical activity during and after the school day. (*See Volume 2, Chapter 7.*)

**Agenda for Children:** HOC contributed to this inter-agency effort to develop City-wide goals by helping to gather community input and data; analyze, interpret, and report on data; and develop a strategic prioritization process. (*See Pages 58-60 of this Volume.*)

**Educational forums:** HOC sponsored three forums this past year for Cambridge providers, policy makers, and educators. One forum featured the work of four HOC student interns. The HCTF identified the impact of welfare reform on children and their families as an issue requiring the attention of Cambridge professionals. Presenters at this forum included the Mayor of Cambridge, representatives of the Welfare Reform Task Force and a professor from the Harvard School of Public Health who shared the results of an interview study. The third forum, on Cambridge Children & Youth: Their Fitness, Weight And Health, was a discussion on obesity and inactivity as areas of increasingly urgent health concern. Presenters were from the Harvard School of Public Health and Cambridge schools. Periodic forums are planned for the coming year.

**Domestic violence:** HOC contributes leadership and technical assistance to both the City-wide and Alliance-wide domestic violence prevention programs. (*See Pages 20-22 of this Volume.*)



**Dental health:** HOC and HIU continue to contribute technical and programmatic assistance to the Children's Dental Health Project, a prevention program developed and funded initially through HOC efforts. (See Pages 48-49 of this Volume.)

**Elder Falls Project:** HOC supports this community quality-improvement project by addressing the causes of falls among elders seen at Cambridge and Somerville Hospitals. (See Pages 70-74 of this Volume.)

**Linkages with universities:** This past year, HOC has worked with Harvard, Tufts, and Cambridge Rindge and Latin students on several projects.

- **Harvard School of Public Health (HSPH):** A class surveyed emergency room users with asthma and wrote *An Assessment of Risk Factors Leading to Failure of Outpatient Asthma Therapy in the Alliance*. HSPH MPH students compiled and analyzed existing data on minority health issues and Agenda for Children community data.
- **Harvard Medical School (HMS):** HOC arranged for incoming medical students to interview Cambridge parents about priorities for their children for the Agenda for Children through the First-Year Urban Neighborhood Campaign program. Another HMS student project interviewed over 100 youth in the Harvard Square "Pit" to assess health and social problems, and health care access issues.
- **Tufts University:** A Tufts School of Nutrition Research and Policy doctoral student compiled and analyzed existing data on hunger, nutrition, and physical activity; a MPH student conducted a survey of breakfast-eating practices among elementary school children.

**Building health information capacity:** In addition to working on specific health promotion and disease prevention projects this year, HOC and HIU are continuously engaged in building health information capacity through 1) collaborating with the School Department to better understand the coincidence of health and dental problems, obesity, and fitness and 2) using a geographic information system to map community health information in order to identify clusters of individuals who have been hospitalized for falls and asthma.

**National presence:** Health of the City is part of a national coalition, the Health of the Public Network, whose purpose is to assist model programming and to disseminate lessons nationally. HOC has national presence through representation on the steering committee and paper development.



### **Community Engagement**

The majority of HOC work is accomplished through partnering with other City departments and agencies on issues that have been given voice through the community or through health information data. In addition to Harvard University, partners include the Cambridge Health Alliance, School Department, Human Services, Cambridge Youth Soccer, Prevention Coalition, and Massachusetts Departments of Public Health and Education.

The Healthy Children's Task Force is a coalition of Cambridge-based pediatric providers, children's advocates, and community members.

### **Emerging Areas**

- A new full-time manager of school food services will be starting in 1999 and may be an important link for improving nutrition services for school children. HOC was represented on the hiring committee and will continue to play an active advisory role for school food service.
- In addition to its continued focus on fitness and healthy eating, the HCTF has identified children's mental health as an area requiring collaborative focus and resources.
- HOC continues to have national presence through the Health of the Public Committee.
- Agenda for Children priorities will create opportunities for expanding nutrition and physical activity programming.



## B. TOBACCO CONTROL

### Introduction

The Massachusetts Tobacco Control Program (MTCP) of MDPH provides funding for a number of health promotion initiatives at the Cambridge Health Alliance. The array of programs includes cessation counseling, prevention and education, and tobacco-control policy development and enforcement. The goals of our MTCP-funded programs are to increase awareness of tobacco related complications in all age groups, provide a means for individuals to change their smoking behavior, and to protect the health of the public through appropriate health policies and enforcement.

The Cambridge Health Alliance Tobacco Control programs network with a variety of state-wide and local organizations. Programs and materials developed here have been used as models for other communities in Massachusetts.

### 1998 Accomplishments

The Cambridge Public Health Department has worked closely with the Five City Tobacco Control Collaborative during this past year to strengthen tobacco regulations in Cambridge. The emphasis has been on reducing exposure to environmental tobacco smoke by limiting smoking in public places, workplaces, and restaurants and on reducing youth access to tobacco products.

In an effort to provide education and support to people wrestling with state, federal, and local changes, the Cambridge Tobacco Control Coordinator has distributed educational materials to all tobacco retailers and restaurants in Cambridge. Training sessions geared toward the needs of merchants have focused on regulations that restrict youth access to tobacco products. Nineteen retailers have participated in two city-wide trainings and have found them to be valuable. An additional fourteen retailers participated in five smaller on-site trainings and 371 individual merchant education visits took place in 1998.

Compliance checks have been conducted with all retailers in the City as both enforcement and assessment of adherence to the existing tobacco control ordinance. Results have been somewhat disappointing as they indicate that children and adolescents are generally still able to purchase tobacco in Cambridge. Two hundred and eighty three checks have been conducted with 45 sales to minors occurring. There has been a slightly higher sales rate for cigars and chewing tobacco than for cigarettes.



Cambridge participated in the statewide "Operation Storefront" that examined outdoor tobacco advertising. Consistent with state-wide findings, there was a greater percentage of advertising near schools and parks. Overall, 29% of establishments surveyed had five or more tobacco ads on the storefront. Zip code 02138 had a lower amount of advertisements (17%) than the rest of the City (30-33%).

The Alliance offers individual and group tobacco cessation counseling. Tobacco education is provided in partnership with community agencies and at major events such as Riverfest and Women's Health Day. A bilingual counselor with strong community relationships is able to provide counseling services in Portuguese and in English.

### **Community Engagement**

The Cambridge Health Alliance has partnered with several City and community-based tobacco prevention, education, and cessation programs. These programs have worked together to encourage and support the Public Health Department's initiative to strengthen tobacco control regulations in Cambridge. The Alliance has facilitated programs ranging from examining tobacco advertising (at the Friends School) to Thinking About Quitting (for YWCA residents).

The Public Health Department is committed to engaging all members of the community in public discussion about tobacco control, particularly regarding exposure to second-hand smoke in restaurants. To that end there have been numerous well-publicized forums and hearings. Health Department representatives have worked closely with business and restaurant organizations to ensure that their perspectives are included throughout the process. Efforts have been made to encourage people who live or work in Cambridge to express their opinions regarding eliminating smoking in restaurants. The Health Department has sponsored surveys and public dialogues to solicit feedback from the general population.

### **Emerging Areas**

- To protect the health of workers and patrons, many cities and towns in Massachusetts and around the country are making progress toward abolishing smoking in restaurants. The movement to eliminate tobacco as a workplace and public health hazard is growing, and the challenge before Cambridge is to take a stand in this important public health arena.
- There is growing evidence that tobacco use is increasing among teens and young adults. Data collected from the 1997 and 1998 Student Health Surveys indicate that even in Cambridge, where the level of tobacco use had been considerably lower than



in other cities and towns, more kids are smoking. Combating this trend will require creative and focused efforts in order to be successful.

- New challenges include the increased use of cigars and “beedies” (cigarettes imported from India), especially among adolescents.
- With the trend in primary health care moving toward greater investment in prevention and education, there is an opportunity to bring tobacco cessation services into the clinics. There are plans to offer screening and counseling in the Neighborhood Health Centers. Cessation counseling in Portuguese will also be offered in collaboration with Massachusetts Alliance for Portuguese Speakers.

*For additional relevant data regarding Tobacco, See Volume 2, Chapter 6, Figure 6-7, Figure 6-8, Figure 6-11, Figure 6-14, Figure 6-20, Figure 6-21, and Figure 8-10.)*



## C. PUBLIC HEALTH NURSING SERVICES

Public health nursing serves to protect and promote the health of the Cambridge community by integrating professional nursing skills with public health and social science principles and practices. The public health nurses focus their interdisciplinary activities in the areas of health promotion and prevention, and control of tuberculosis (TB) and other communicable diseases.

### 1998 Accomplishments

#### Health Promotion

Health promotion includes safety awareness; health education; disease prevention; nutrition; stress reduction; and improving access to primary care and community resources. During the last year, this work has included:

- Consulting to Early Intervention for planning and implementation of a new family home visiting program.
- Providing training in communicable diseases and infection control for new outreach staff at CASPAR.
- Presenting workshops on Alzheimer's Disease, Memory Improvement, Osteoporosis, Nutrition, and Winter Illnesses in senior housing facilities.
- Consulting to Cambridgeport Children's Center, C.E.O.C. Day Care Center and the Sacramento Preschool for health-related concerns and infection control.
- Co-facilitating groups on stress and depression for the Haitian Women's Health Group.
- Representing the Public Health Department in a group of clergy, mental health providers, and community members who work with homeless people.
- Planning and conducting health screenings at the St. Paul's African Methodist Episcopal Church Health Fair.
- Participating in a Community Health Fair at the Cambridge Senior Center;
- Providing a universal newborn home visiting program for new parents in North Cambridge.
- Planning and implementing prostate cancer educational and screening programs with the Men of Color Task Force in several area churches.

#### Communicable Disease Control

Public Health regulations require that certain communicable diseases be reported to local health departments that are responsible for communicable disease prevention and control. Public Health nurses review each incident of communicable disease reported to the Public Health Department. The focus of this work is to determine that appropriate treatment has been provided and to reduce the risk that infection will be transmitted to others. Patient



confidentiality is a priority as nurses work to ensure that members of the community who have come in contact with a communicable disease are evaluated for infection and educated about prevention. Nurses provide education, support, and guidance to patients and their families and act as a resource to area health care providers. Referrals to primary care and specialty consultation are facilitated when necessary.

This year over 300 cases of communicable diseases were investigated by the public health nurses. In 1998 there were 20 residents of Cambridge who were reported to have pertussis (whooping cough), a contagious and sometimes dangerous illness. All patients and their physicians were contacted and appropriate treatment was recommended or confirmed. Public health nurses worked closely with staff at schools, colleges, and businesses to identify people exposed to pertussis and to provide education and treatment referrals as needed.

Further efforts in the area of communicable disease control centered around providing flu vaccine. The Public Health Department distributed 7,800 doses of flu vaccine to area providers this year and the public health nurses coordinated 34 flu clinics, providing 1,800 doses of flu vaccine to people in Cambridge. Clinics were held at senior centers, elderly housing facilities, churches, shelters, schools, neighborhood health centers, and at The Cambridge Hospital.

#### Tuberculosis Prevention, Treatment, and Control

The Cambridge Public Health Department provides tuberculosis (TB) prevention, treatment, control services for the City of Cambridge and works collaboratively with the Somerville Public Health Nurse to provide treatment and clinical services for residents of that city. Nursing staff function as the case managers for patients with active TB disease seen through the TB clinic. The clinic operates 3 sessions a week at The Cambridge Hospital – Monday afternoon, Tuesday morning, and Thursday late afternoon to early evening – providing a wide range of accessible times for patients. Several TB clinic staff members, including nurses, physicians, and the clinic coordinator speak Spanish, Portuguese, and Haitian Creole. Interpreter services for other languages are available through the hospital.

Clinic services include TB skin testing, nursing care for initial education about TB and treatment concerns, and physician evaluation for infection and active disease. All services including physician and nursing visits, laboratory tests, X-rays, and medications are provided at no cost to the patient and are funded through a grant from the Massachusetts Department of Public Health. In 1997, TB clinic staff evaluated and treated 420 patients for TB infection and 16 patients for active TB disease. There were 2,188 visits to TB clinic in FY98 and 669 visits in the first four months of FY99.



One of the most successful aspects of TB control is the practice of “Directly Observed Therapy” (DOT) for patients with active TB disease. It is crucial that patients with active TB disease maintain therapeutic levels of medication over a sustained period of time. To support patients in adhering to the treatment regimen, nurses visit patients in their homes to provide them with medication and observe that they are taking the medication regularly and properly. DOT is often started on a daily basis and reduced to 2-3 times a week as the patient progresses. The nurses are supported in this aspect of care by an outreach worker with the state program.

### **Community Engagement**

Public health nurses enjoy ongoing collaborative relationships with area health care providers as well as community-based program staff and constituents. The nurses serve as consultants to day care centers, parochial schools, and shelters. The work of the public health nurses is supported by the Massachusetts Department of Public Health and other local boards of health.

Referrals from public health nurses during newborn home visits in North Cambridge resulted in the formation of two new parent groups at the Center for Families in North Cambridge. Current partners in supporting a Cambridge/Somerville newborn home visiting program are the Department of Education-funded Family Network programs in both cities, the Cambridge-Somerville Early Intervention program, Families of Cambridge and Somerville home visiting program (FOCAS), Somerville Early Headstart, Catholic Charities, and the Cambridge School Department’s home-based early childhood education programs.

### **Emerging Areas**

#### Newborn Home Visiting

Public health nurses are looking forward to expanding the newborn home visiting program to neighborhoods outside of North Cambridge. These visits utilize a format that focuses on parent strengths and skills. Nurses promote overall family health and provide information about links to other community services. Currently a resource team composed of the community partners in home visiting programs is discussing a different model for newborn home visiting. As nursing resources are limited, this program may start by offering visits to the parents of all children born at The Cambridge Hospital.



Tuberculosis Prevention, Treatment, and Control

The TB program staff is responding to new information about treatment options and evaluating the potential for providing a shorter treatment regimen for patients with TB infection. Patient satisfaction, improved communication with primary care providers, and efforts to design a more user-friendly system for booking appointments at TB clinic will also be addressed.

*For additional relevant data regarding Communicable Disease and TB see Volume 2, Chapter 10.*



## D. SCHOOL HEALTH SERVICES

### Introduction

The School Health program is dedicated to improving the overall health status of the school community and to insuring that each student can reach his or her own potential in a healthy manner in the school setting. School Health personnel provide direct services to students, educate and inform the school community about vital public health issues, monitor immunization status of students, and implement school health mandates from the Massachusetts Department of Public Health.

### 1998 Accomplishments

In addition to providing general nursing care, administering medications, and monitoring children with identified medical concerns, the School Health program staff were responsible for:

- Conducting postural screening for all students in grades 5-8.
- Measuring and graphing heights and weights for all students in grades K, 1, 3, 6 and 11.
- Evaluating vision and hearing for all students in grades K-8.
- Providing Hepatitis B vaccine for 160 grade 6 students.
- Reviewing kindergarten immunization status and assisting families in efforts to assure that all kindergarten students started the school year with complete and appropriate immunizations.
- Creating the first edition of *Beyond Band-aids*, a quarterly publication that was distributed to families of all K-8 students.

On a routine basis, the school nurses are responsible for providing education and information about health issues to the school communities. This past year the nurses conducted 37 educational presentations for more than 450 attendees. Topics included:

- Asthma and diabetes
- Medication administration
- CPR
- Emergency response procedures for children with allergic reactions
- Nutrition and hygiene
- Health information for student teachers and classroom aides
- Headlice and scabies



The School Health staff participate in Student Support Teams at each school and are part of the new Administrative Response Teams organized this year. Some of the nurses work with counseling and teaching staff to facilitate small groups for students in need of specialized support. School nurses participate in the design and analysis of the student health surveys and conduct nursing research with colleagues at a local university.

School Health staff provide consultation to the Boston Boys Choir School in Cambridge. Nurses review health records of the students and assist school staff to contact parents regarding required immunizations. Additionally, the nurse at the Benjamin Bannecker School, the local charter school, has been invited to attend monthly meetings with the School Health Program staff.

### **Community Engagement**

Several of the nurses participate in The Healthy Children's Task Force and the School Health Task Force while others work on committees at the state level to support school health initiatives. School nurses maintain active communication with parents, community health care providers, and community-based programs that serve children and their families, often providing assistance for families who need access to health and social services.

### **Emerging Areas**

This year, after many years of anticipation, the School Health Program will benefit from the installation of computers in each School Health office. A program-wide computer application for School Health will facilitate communication among School Health personnel and Cambridge Health Alliance providers, serve as a vehicle for maintaining school medical records, and will greatly enhance the ability of the program to identify trends in school-based health care concerns.

The School Health Program is committed to working with the School Department to institute procedures to ensure that each child in the school system has received all required immunizations. Nursing staff will be working with the Family Registration and Information Center to provide information to parents about immunization requirements and to assist them in obtaining medical services and documentation of all mandated vaccinations.

*For additional relevant data regarding Cambridge Children see Volume 2, Figure 1-2, Figure 1-3, Figure 2-1, and Figure 2-5.*



## E. 1997-98 CHILDREN'S DENTAL HEALTH PROGRAM

### Introduction

The Children's Dental Project is funded through the City of Cambridge by the Bullock Trust Fund. Specific tenets of the Bullock Fund guided development of the program to improve the oral health of Cambridge students and to insure that no child has untreated dental disease. The dental program is comprehensive, providing dental health education, dental screenings, and referrals for dental treatment.

### Accomplishments

#### Elementary School Screening Program

Fourteen elementary schools participated in the Dental Health Education and Screening Program from the fall of 1997 through 1998. The schools, listed in the order screened, are Peabody, Fletcher, King, Harrington, Fitzgerald, Haggerty, King Open, Kennedy, Maynard, Longfellow, Agassiz, Tobin, Morse, and the Banneker Charter School.

Children in grades 1- 4 were screened in all schools except Morse, where only grades 1 and 2 were screened. We will return to Morse in 1999 to complete grades 3 and 4 at the school's new location.

In the fall of 1998 we revisited Fitzgerald, Harrington, and Fletcher Schools, and conducted dental screenings of this year's first grade students.

1,183 first and fourth graders received classroom instruction in dental health prior to the dental screenings. In grades 1 through 4, and in ungraded classes, 1,415 children were screened. More than fifty percent of the children who participated (740 children) were referred for dental treatment.

#### Pre-school Program

In the summer of 1998, seven pre-schools where students had been screened the previous summer were revisited. These pre-schools included Cambridgeport, Central School, Our Place, CEOC 808 Memorial Drive, Longfellow, M.L. King, Jr., and North Cambridge. Services included dental screenings of the children and dental health in-service staff training. Five of the seven schools agreed to implement tooth brushing programs.

#### Provider Education

A doctoral dental student from Harvard School of Public Health surveyed and assessed the educational needs of the medical and dental professionals in Cambridge. This project created a foundation for the design of educational materials on preventive dental care for pediatric providers. We have addressed the recommendations and have compiled



appropriate educational materials which will be distributed to pediatric providers in Cambridge.

### Evaluation

An evaluation will be conducted by the Health Information Unit to determine if the goals of the program have been accomplished. Baseline and ongoing data will be collected and children who were screened and referred will be reexamined. Our goal is to demonstrate a reduction in untreated dental disease.

### **Community Engagement**

The academic communities of Harvard School of Dental Medicine and Forsyth Dental Center have provided dental students and preceptors to assist with the dental screenings. We have recently formed a collaboration with Harvard Vanguard. This partnership has enabled us to expand our referral system while providing a pediatric dentist for our Preschool and Elementary School projects.

The Cambridge Health Alliance Dental Clinic has provided support and free care for those children in need of treatment. The Dental Clinic is moving to a new location providing a more spacious treatment area and additional staffing. This will enhance dental services and serve the community dental needs by increasing the system capacity to provide timely dental care to more children.

The Colgate-Palmolive Bright Smiles/Bright Futures Program sponsored an Oral Care Van that visited the Agassiz School in October. Professionals from the National Dental Association, the Hispanic Dental Association, other organizations, and local dental schools volunteered to screen children for dental decay. Referrals were made to the Alliance Dental Clinic and area dentists for treatment when needed.

### **Emerging Issues**

After screening the vast majority of first through fourth graders in Cambridge, we have found that as many as 50% of the school-age children of Cambridge may have untreated dental disease. Through our partnerships with the Cambridge Health Alliance Dental Clinic, Harvard School of Dental Medicine, Forsyth Dental Center, Harvard Vanguard, and the Cambridge Schools, we are well positioned to reduce the incidence of dental disease in the children.



The Children's Dental Project is halfway through its three-year funding, with support from the Bullock Trust through fiscal year 2000. We are actively pursuing other resources to sustain this valuable educational, screening, and referral program.

*For additional relevant data regarding Children's Dental Health see Volume 2, Figure 2-4.*



## F. LEAD POISONING PREVENTION

### Introduction

Cambridge continues to be identified as a high-risk community for childhood lead poisoning. Traditionally this risk level has been defined by the incidence rate of lead poisoning in children and the percent of housing built before 1950.

During the past several years, however, the number of children suffering from lead poisoning has decreased in Cambridge and throughout Massachusetts. Children at risk for lead poisoning or exposure have been identified well before their blood lead levels rise to the danger zone. This good news means that prevention efforts appear to be working.

There is an impressive range of childhood lead poisoning prevention services provided collaboratively in Cambridge. The Community Development Department's Lead-Safe Cambridge program has been providing comprehensive services since 1994. Among those services are assistance to tenants and landlords of units requiring de-leading, lead poisoning prevention education, and soil remediation guidance.

This section will report on the activities of the Cambridge Health Alliance lead poisoning prevention programs: Lead-Safe Kids and the Lead Clinic.

### Lead Safe Kids Home Visiting Program

The Lead-Safe Kids Program of the Cambridge Health Alliance is funded by the Massachusetts Department of Public Health to provide counseling and education to families in Cambridge and surrounding communities. The Family Lead Counselor educates parents of children with moderately elevated blood lead levels about hazard reduction through home visiting, telephone counseling, and written materials.

During 1998, 90 children were referred to the program, and 85 of those children had lower blood lead levels in follow-up tests. Of the 90 families referred, 50 participated in home visiting and the remaining 40 received telephone counseling or informational packages. While a causal relationship has not been established, there appears to be evidence that this prevention method has been effective.

In the first year of operation, Lead-Safe Kids services were primarily focused on children with lead levels in the moderate to high range as confirmed by blood tests. The program has been able to expand services to those with lower lead levels.



In addition to services directed to identified families, the Family Lead Counselor has provided education and outreach to parents and providers working with young children through presentations and health fairs. During this past year there have been twelve presentations to nurses, social workers, pre-school teachers, parent groups, and church organizations. The program was represented at four health fairs geared toward young parents, women, and immigrant groups.

The Family Lead Counselor meets regularly with other outreach workers and has joined a coalition of Latino service providers. She works closely with the lead program in the Community Development Department and with the Lead Clinic at The Cambridge Hospital.

### **Lead Clinic**

The Alliance operates a Lead Clinic at The Cambridge Hospital. Children with high lead levels can be seen at the Cambridge Pediatrics primary care practice by pediatric providers with expertise in lead poisoning prevention and treatment. The clinicians at the Lead Clinic primarily provide consultation and education to other pediatric and family practitioners.

Patients seen at the Lead Clinic are from Cambridge, Somerville, and several adjacent communities. Being located at The Cambridge Hospital, interpreters are available to assist patients and providers in communicating about the critical aspects of patient care and poisoning prevention.

Referrals to other programs serving the multiple needs of lead poisoned children include Lead-Safe Cambridge, Early Intervention, WIC, the Cambridge Visiting Nurse Association, Somerville VNA, Whidden Home Care, and the Boston Childhood Lead Poisoning Prevention Program.

### **Emerging Areas**

The state of the art in lead poisoning prevention has been refined as the MDPH Childhood Lead Poisoning Prevention Program has lowered the threshold for identifying children with elevated lead levels. This offers an opportunity to meet with families at earlier intervention points and to develop new, innovative methods for prevention.

The Lead Clinic's services have been utilized primarily for consultation. Plans are being developed to adapt the program by seeing patients at their primary care providers' offices as needed.



The majority of families referred for lead poisoning prevention home visiting are recent immigrants, with many referrals of Central American families. Becoming familiar with and sensitive to the differences among new community members, the Alliance lead poisoning prevention and treatment programs will continue to focus efforts on understanding cultural or other environmental factors that may place these families at risk for increased lead levels. Staff are committed to identifying the best practices to help our newest community members prevent lead poisoning.

Trend data for FY94-97 indicate that screening rates for child blood lead levels in Cambridge have declined since FY94 (see Figure 4-11, Screening Rates for Blood Lead Levels). This trend correlates with a state-wide decrease in screening rates for blood lead levels over the same period but poses important questions nonetheless. The Cambridge Public Health Department will work with the Massachusetts Department of Public Health Childhood Lead Poisoning Prevention Program and the Lead-Safe Cambridge program on an assessment of factors which may be contributing to the observed decline in reported screening rates. Demographic shifts could affect the number of children perceived to be at risk and, consequently, the percentage of children screened. Changing trends in socioeconomic status may also increase the number of children being treated by private practice pediatricians and result in greater variation in screening practices. Though the data were not available in time for this assessment, Cambridge screening rates for FY98 have remained stable from FY97 (59%).

*For additional relevant data regarding Lead Exposure and Poisoning see Volume 2, Chapter 4.*



## **G. BREAST AND CERVICAL CANCER SCREENING**

### **Introduction**

The Breast and Cervical Cancer Initiative (BCCI), funded in part by MDPH, provides free annual physical exams with Pap smear and mammogram to women between the ages of 40 and 64. Women are eligible to participate if they are uninsured or if their insurance does not cover these services that are essential to identify cancers in their early, treatable, and curable stages. Outreach workers fluent in patients' primary languages recruit, educate, and support patients guided by the BCCI protocols. The program pays for all testing up to the time of diagnosis and facilitates optional coverage if further treatment is needed.

### **1998 Accomplishments**

In the past year BCCI has made dramatic programmatic changes on a state and local level. These changes reflect the shifting trend in public health to provide better, more holistic, and more comprehensive care.

Changes in the BCCI program have led to improved case management for underinsured women. The Cambridge BCCI program will have served over 700 women by the end of 1998. The program has been aggressive in outreach and as a result 55% of patients are racial or ethnic minorities.

In early 1998, the BCCI program began internet billing and communication between the Cambridge Health Alliance and MDPH programs. The potential for more efficient use of staff time and resources is enormous.

### **Community Engagement**

During the past year, the Cambridge BCCI program has developed ongoing community engagement both internal and external to the Cambridge Health Alliance. Outreach workers have involved people from the community and institutional peers in identifying potential improvements, new target populations, and in developing innovative outreach strategies.

Partnerships have been established with community-based groups focusing on the needs of Haitian and Latino communities. Through these partnerships outreach workers were able to inform key community members about BCCI and to learn ways to reach the identified community. Street outreach has been essential to the program and involves door to door visiting, talking about the program, and eliciting feedback.



Partners within the system have included Community Affairs staff and management, Health Center leadership teams, and Radiology staff members, who have assisted in programmatic improvements and community health events.

### **Emerging Areas**

Recent changes in the insurance industry have improved coverage for breast and cervical cancer screening for women served by BCCI who have Medicare or Medicaid. While this may affect state funding for BCCI services, the program will continue to work toward increasing public awareness of breast and cervical cancer screening. Many women who participate in screening find it to be a difficult experience and will continue to benefit from the support provided by BCCI.

As Cambridge demographics change, the BCCI program in Cambridge will continue to adapt, particularly as new linguistic groups are represented in this community. Outreach efforts, education, and support will need continuous assessment in order to remain culturally appropriate as we create new alliances with community organizations.

*For additional relevant data regarding Breast Health, see Volume 2, Table 9-1 and Figure 9-8.*



## Introduction to Populations at Risk

As stated in the 1998 Public Health Assessment, health risk is not uniform. While the entire population is affected by many health issues, including those highlighted in Section 1, certain sub-populations are at increased risk for poor health. Many Cambridge Health Alliance services are geared toward groups and individuals with the highest need and those who may possess the fewest personal or economic resources to address their needs.

The six priority areas identified in the 1998 Assessment are issue-specific areas for public health improvement. In addition to work in these specific areas, another strategy is to address these priorities within a population. This section, *Populations at Risk*, reports on those Cambridge Health Alliance programs that are designed to meet the needs of vulnerable populations that carry a disproportionate burden of morbidity or mortality.

**Children:** The Cambridge Agenda for Children is a vivid example of a population-based approach to public health. It is also an example of inclusive planning in which the Alliance is engaged with Cambridge City Departments and private enterprise. Extensive community input has guided the Agenda process and the decisions made this year will guide work in the area of children's health and development for the next several years.

**Men of Color:** Because national statistics indicate that men of color are more vulnerable to heart disease, hypertension, stroke, certain cancers, and HIV/AIDS, the Men of Color Task Force was formed to lead efforts to improve the health status of minority men. This year the Task Force developed plans to strengthen the existing health programs and to create innovative strategies for health promotion and disease prevention for minority men.

**Elders:** High quality services for elders enables them to reap the benefits of increasing life expectancy by ensuring good health that is essential to maintaining quality of life. The Geriatric Service Line of the Cambridge Health Alliance manages an impressive array of services for people over 60. This year an important focus was building collaboration between the existing Alliance programs and the community to improve preventive, rehabilitative, and curative services. Another important initiative was a proposal to update Neville Manor, creating a new 100-bed nursing home complemented with 71 units of affordable assisted living. At years end, the home rule legislation to permit this was being revised for submission to the City Council.



## **1. Agenda for Children**

The Agenda for Children is a city-wide effort to improve the health and welfare of the children of Cambridge through the development of common goals and action plans. It is a vehicle to develop inter-agency and inter-departmental collaboration with a high level of community support and engagement around priorities identified as important and feasible. The efforts of this collaboration in the past year have yielded a structure for planning, advising, and decision-making, a process for community input and engagement, and a process for goal-setting and prioritizing. This coming year will see strategic planning and action on specific goals.

### **Planning and leadership**

The Agenda for Children began during discussions among the leadership of the Public Health Department, the Department of Human Service Programs, the Cambridge Public Schools and the Cambridge Community Foundation. The project began in the spring of 1997 as a relatively modest plan to assemble existing task forces for the purpose of reducing duplication of planning efforts.

Since that time the list of key collaborators has expanded and now, under the auspices of the Kids' Council, includes the Cambridge Health Alliance, Department of Human Service Programs, School Department, Police Department, the Cambridge Community Foundation, elected officials, and community leaders, many of whom represent communities of color. It has grown into a call of action for citizens, service providers, and public officials. The charge is to work together on strategic goals that will improve the lives of children in Cambridge.

The Kid's Council, under the leadership of the Mayor, has been charged with choosing the priority areas for initial focus, and serves in an advisory and accountability capacity. The Planning Leadership team does strategic planning for the Agenda for Children. An implementation team consists of representatives of City departments and community groups.

### **Community input and engagement**

Community input has been critical to establishing common goals and action plans. Cambridge residents were approached to discuss their concerns about and goals for children in Cambridge. Initially, groups were asked to respond to six priority areas that



had been identified by the Kid's Council and Healthy Children's Task Force, as well as identifying other areas of concern not covered. Later outreach efforts used a more open format, soliciting information on how best to support or build "Healthy Children - Success in School - Strong Community."

Over several months, more than twenty people have been involved in organizing and conducting community meetings in every neighborhood in the City. Some 643 community members participated in 50 meetings that reached as diverse an array of citizens as possible. Demographically, the participants "looked like Cambridge" (White, 57%; Black, 21%; Asian, 11%; Hispanic, 10%).

The process reached existing groups such as School Improvement Councils and church vestries in the effort to go out to the community, rather than ask people to come to special events. To reach residents who were less likely to be found in established groups, we partnered with community organizations with strong neighborhood roots and conducted individual interviews with parents.

Community leaders, on the whole, were very eager to use their time and credibility in the community to assist in the process. Further, community people's eagerness to talk at meetings, to share what they know and feel, and to stay involved is very encouraging for the future of the Agenda for Children project.

Community input and information also came through other sources. The work of the Welfare Reform Task Force and the interview study (Parents' and Children's Voices: Children's Health, Children's Development, and Parents' Work) of 100 Cambridge families were reported at a Kid's Council meeting. A large-scale meeting of providers was held to get input from the experts in community-based agencies and front-line staff, with a particular emphasis on the feasibility of action planning in each of the identified goal areas.

Besides direct community input, other sources of information were tapped as well, including local, state, and national reports, data from needs assessments, published journal sources, and academic partners.

### **Goal setting and prioritizing**

The information from the community and the other sources was rich and varied. While analyzing the information, several very powerful themes emerged, particularly from the community meetings. These themes are more akin to value statements that are broadly



held and strongly felt. They cut across all goals to be selected and should be incorporated into any implementation plan. They are:

- Continuous community engagement is essential throughout the process.
- City institutions need to be supportive of cultural and linguistic diversity.
- City institutions need to be supportive and responsive to families.
- Available resources need to be coordinated and publicized in such ways that families can access them easily.

Nine priority areas emerged from the community and taskforce input process. They are:

1. Children and youth need access to supervised activities in a nurturing and safe environment at all times.
2. Children need comprehensive health care that addresses physical and emotional well being.
3. Families need to be informed and supported to advocate for their children.
4. Children and youth need adequate housing and an economically secure environment.
5. Young children need supports to be physically, mentally, and socially ready when they first enter school.
6. Children and their families need to be able to read.
7. Children need to be physically fit, physically active, and eating well.
8. Children and youth need to be free from alcohol, tobacco, and drug use.
9. Children need to be safe from violence in their homes, schools, and community.

The Kid's Council has used the following principles to winnow the nine priorities identified above to the goals that will become our Agenda for Children and the focus of our collaborative efforts over the next few years. 1) The priority will meet a significant need within the community; 2) The priority will have been identified by members of the community as one that is important to them; 3) The priority will engender on-going and enthusiastic engagement by all the diverse members of the community; 4) The priority will be collaboratively addressed through comprehensive action plans implemented by departments and community agencies throughout Cambridge; 5) The priority will have outcomes that are measurable by data that is available or collected as part of the Agenda for Children in order to measure the effectiveness of the strategies and to assess the success of the initiative; 6) The priority will be consistent with national and state goals for youth.

Using these principals as a guide, the Kid's Council selected 1) *Children and youth need access to supervised activities in a nurturing environment at all times*, and 6) *Children and their families need to be able to read*. The Agenda for Children action plans will emerge from further discussions that will include reviewing successful models from other communities as well as looking at our City-wide resource base.



## 2. Men Of Color

National statistics indicate that men of color are disproportionately vulnerable to heart disease, lung and prostate cancer, HIV/AIDS, homicide, stroke, and hypertension. Health statistics regarding men of color in the City of Cambridge indicate an extensive number of gaps in health service delivery. The gaps are primarily due to financial, institutional and cultural barriers. Demographically, Black and Hispanic men make up approximately eleven percent (11%) of the total Cambridge population.

- Between 1992 and 1996, among males in Cambridge, Blacks had a higher mortality rate for heart disease (221.3/100,000) than Whites (172.2/100,000) and Hispanics (75.4/100,000).
- Between 1992 and 1996, Black males had a higher mortality rate for cancer (207/100,000) than White males in Cambridge (177.9/100,000).
- In 1996, the HIV/AIDS death rate in Cambridge for Black men (ages 25-44) was 168.5/100,000, Hispanic men (ages 25-44) 100.5/100,000 and other persons (ages 25-44) 43.9/100,000.

Violent death and violence-related injuries are a significant public health issue, especially for minority populations. The national homicide rate for Black males (ages 15-34) is 133.8/100,000. While the Cambridge homicide rate is much lower than the state and national rates, Blacks in Cambridge have a homicide rate of 11.4/100,000 versus 2.7/100,000 for Whites.

Between 1992 and 1996 there were eight recorded male homicides in Cambridge, half of which were Black males. Three-quarters of these homicides in the Black male population, occurred in men between the ages of 25-34.

Another key public health issue for the population of men of color is in the area of sexually transmitted disease. In 1997 there were 33 cases of sexually transmitted diseases in men. These cases included chlamydia, gonorrhea, and syphilis. Black and Latino men made up 7 out of 10 cases of chlamydia, 9 out of 12 cases of gonorrhea, and 10 out of 11 cases of syphilis.

Approximately 40 of the AIDS patients in Cambridge are Black and Hispanic. It is unclear what proportions of these cases are due to intravenous drug use, unprotected sexual activity, or other means of infection.



In response to these health challenges, the Men of Color (MOC) Task Force was established as an initiative through the Health of the City program. Its purpose is to understand and reduce the systemic barriers to health care and to provide preventive health services for the Black and Hispanic male populations.

To improve the health of minority men in Cambridge, the Men of Color Health Task Force aims to:

- Improve access and increase utilization of available primary care services at Riverside Health Center where specialized services for the minority male population are being developed.
- Develop and disseminate culturally appropriate health information aimed at both adult and adolescent minority males.
- Provide culturally appropriate educational materials and forums regarding health risks, preventive health care, and behaviors that promote good health.

In December 1998, the Men of Color Task Force held a landmark meeting at the Cambridge Public Health Department to galvanize expertise, support, and key community resources in its efforts to improve the health status of minority men in the city. The meeting was well attended by community leaders, clergy, health care practitioners, City Councilors, and academics.

The objectives of this meeting were to provide attendees with vital information about the health characteristics of communities of color in Cambridge and to provide an update regarding ongoing outreach and community-based health promotion efforts of the Men of Color Task Force. The meeting included discussion about weaknesses and strengths in the Men of Color Program, identifying opportunities for outreach and collaboration with other agencies, and the initiation of innovative strategies for health promotion and disease prevention.

The Men of Color Task Force meeting produced valuable information regarding the health needs of minority men in Cambridge. Ideas to meet these needs included forums through which minority men may express their concerns regarding health care, community activities, and economic opportunities. In addition, the attendees identified an immediate need for outreach to minority adolescent males. Outreach for this group would include health education, preventive services, enrichment programs, and youth forums.

Overall, the meeting participants expressed the need for active targeting of information and services to minority males in order to reduce the excessive incidence and prevalence of heart disease, cancer, STDs, HIV/AIDS, and violence.



There are several ways in which the Men of Color Task Force is currently addressing many of these concerns.

**The Men's Evening Clinic** is scheduled to be launched in early 1999. The Clinic aims to increase the number of males using the Riverside Health Center for primary health care and to increase awareness about the health care services provided by the Cambridge Health Alliance. Currently scheduled to operate Thursday evenings from 5-8 P.M., the Men's Evening Clinic will provide workshops and forums that will address physical, economic, and mental health. The Clinic will also provide preventive health services and workshops for adolescents males.

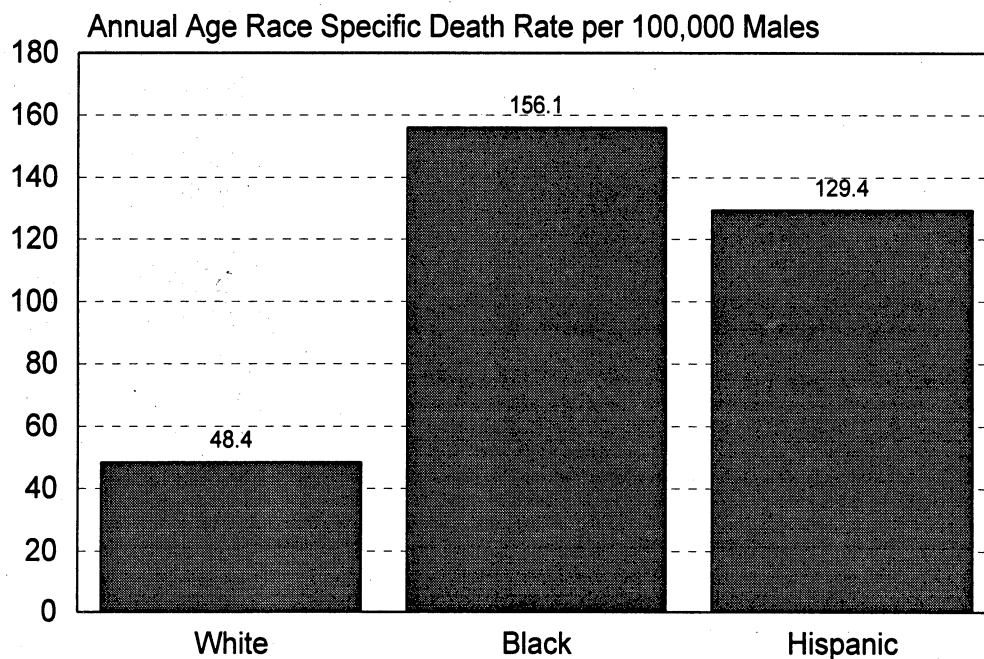
**Prostate Screening Initiative** is a pilot program in collaboration with local churches and religious groups throughout Cambridge. To date, there have been prostate cancer workshops at five local churches in Cambridge and approximately 20 men who took advantage of cancer screenings. This program seeks to educate minority males about prostate cancer screening, treatment, and outcome expectations.

**Annual Hoops 'N' Health Basketball Tournament** is an event designed to increase awareness among adolescent and adult males regarding various risk factors for poor health outcomes. The most recent event, attended by some 140 men and adolescent males from around Cambridge, focused on overall health improvement, STD and violence prevention, and automobile safety. In addition to participation in focus groups and health forums, 92 participants completed health assessment surveys that will provide the MOC with a significant tool for future programming.

*For additional relevant data regarding Race and Ethnicity, see Volume 2, Figure 1-4, Figure 1-5, Figure 1-12, Figure 3-11, Figure 6-6, Figure 6-14, Figure 6-16, and Table 9-3.*

**Figure 2-1****AIDS Mortality by Race/Ethnicity**

Cambridge Men 25-44: 1992-96



Source: Mortality, MassCHIP, Mass DPH, V2.0 r168.0, Nov. 15, 1998

***Example of how to read this figure:***

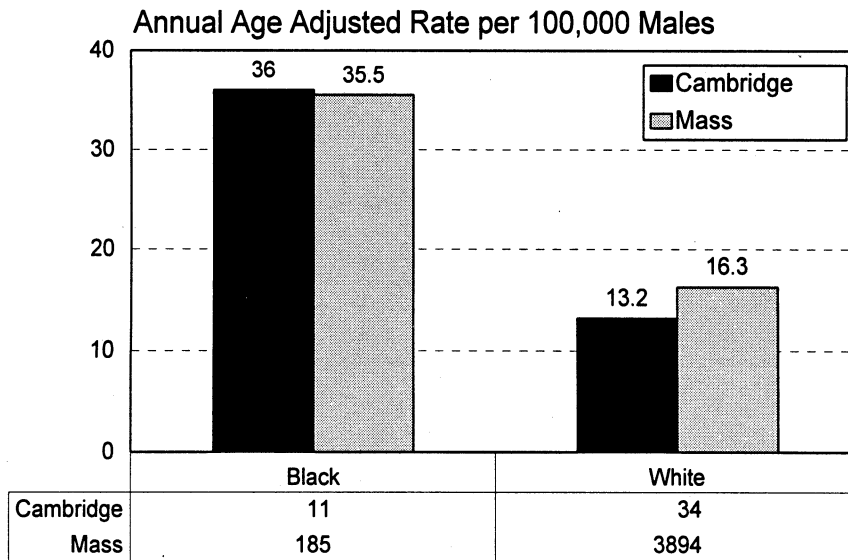
The AIDS mortality rate for black men 25-44 years of age is more than three times the rate among white males in that age range; the rate among men in the Hispanic community is more than 2.5 times the rate among white males.



**Figure 2-2**

## Prostate Cancer Deaths by Race/Ethnicity

Cambridge and Massachusetts Residents: 1992-96



Rates are age-adjusted per 100,000 residents using the 1940 US census standard population and resident population data are from 1990 US census.

Source: Mortality, MassCHIP, Mass DPH, V2.0 r168.0, Nov. 15, 1998

*Example of how to read this figure:*

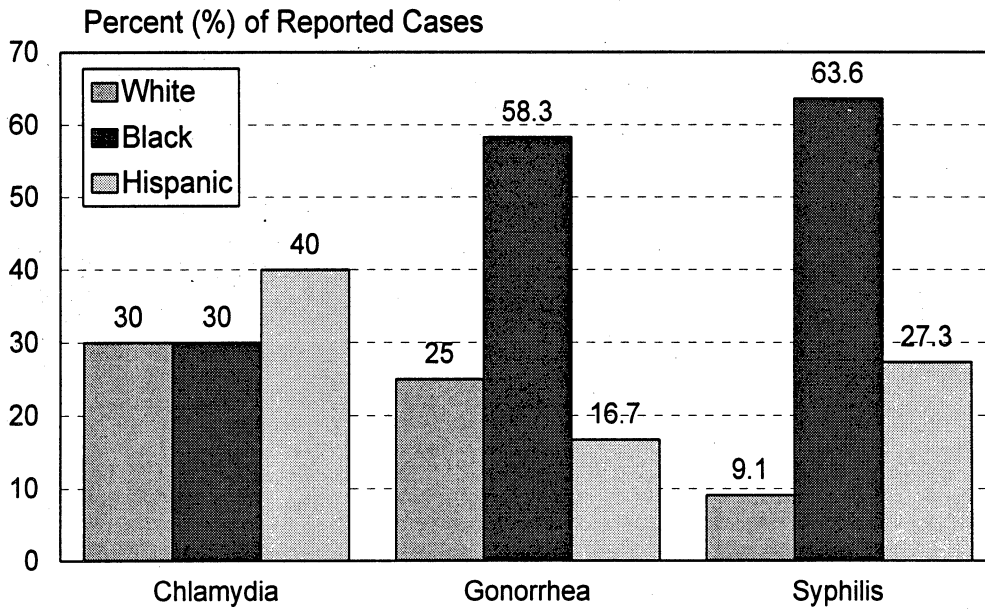
The death rate due to prostate cancer among Black men was more than 2.5 times the rate among White men in Cambridge between 1992 and 1996. Similarly, Black men were also at higher risk for death due to prostate cancer in state-wide data.



**Figure 2-3**

**Sexually Transmitted Disease by Race/Ethnicity**

Cambridge Male Residents: 1997



Number of cases for: Chlamydia (10), Gonorrhea (12) and Syphilis (11)

Data Source: Division of STD Control, Bureau of Communicable Disease Control, Mass. DPH. January 1, 1998.

***Example of how to read this figure:***

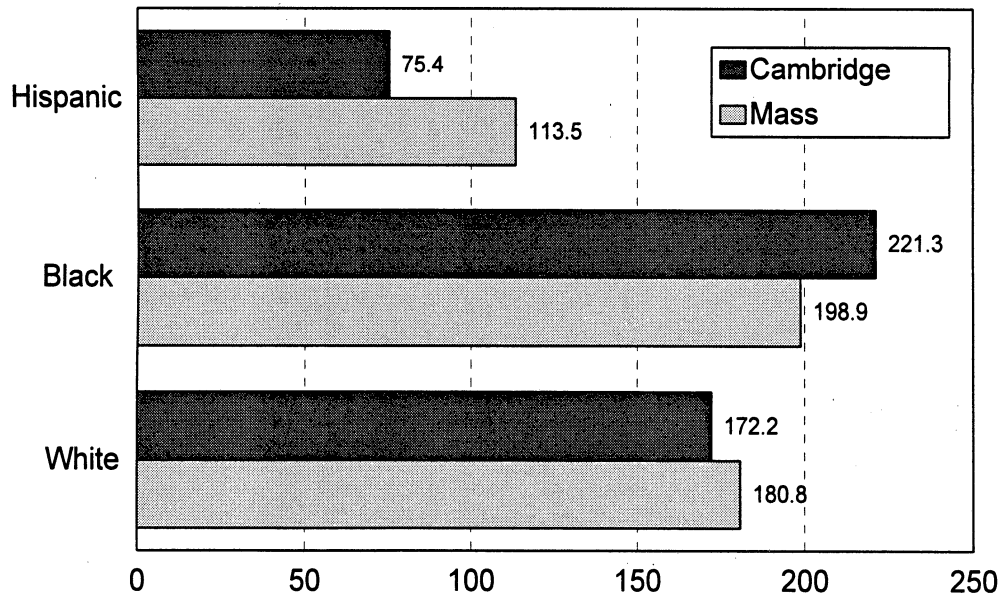
While Black men in Cambridge represented about 16% of the male population, they accounted for 30% of reported Chlamydia cases, 58.3% of Gonorrhea and 63.6% of Syphilis in 1997.



**Figure 2-4**

## Heart Disease Deaths by Race/Ethnicity

Cambridge and Massachusetts Male Residents: 1992-96



Rates are age-adjusted per 100,000 residents using the 1940 US census standard population. Massachusetts population data are from 1990 US census and Cambridge population estimates from 1996 Miser Projections  
 Source: Mortality, MassCHIP, Mass DPH, V2.0 r168.0, Nov. 15, 1998

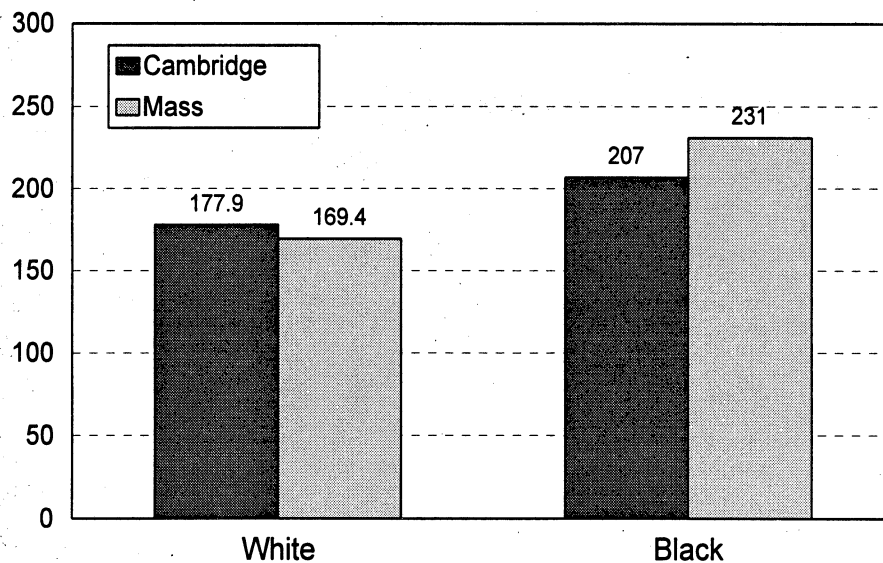
*Example of how to read this figure:*

Rates of heart disease in both Hispanic and white men in Cambridge were lower than the rate found state-wide between 1992 and 1996. Black men in Cambridge had a slightly higher rate of heart disease than their counterparts across the state.

**Figure 2-5**

## Cancer Deaths by Race/Ethnicity

Cambridge and Massachusetts Male Residents: 1992-96



Rates are age-adjusted per 100,000 residents using the 1940 US census standard population. Massachusetts population data are from 1990 US census and Cambridge population estimates from 1996 Miser Projections  
Source: Mortality, MassCHIP, Mass DPH, V2.0 r168.0, Nov. 15, 1998

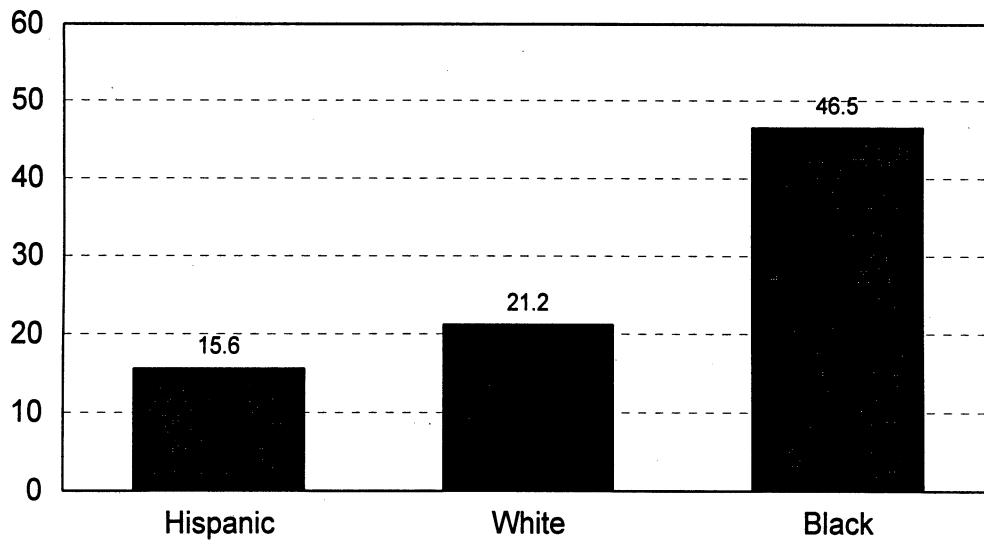
*Example of how to read this figure:*

Rates of cancer death in Cambridge were similar to state rates for both White and Black male residents.

**Figure 2-6**

## Cerebrovascular Deaths by Race/Ethnicity

Cambridge Male Residents: 1992-96



Rates are age-adjusted per 100,000 residents using the 1940 US census standard population.

Cambridge population estimates from 1996 Miser Projections

Source: Mortality, MassCHIP, Mass DPH, V2.0 r168.0, Nov. 15, 1998

*Example of how to read this figure:*

Black males in Cambridge were three times as likely as Hispanic men to die from cerebrovascular disease (i.e., stroke); Black men were twice as likely as White men to die from stroke.



### **3. Geriatric Services**

#### **Introduction**

The Cambridge Health Alliance offers an impressive range of services for people over 60. This comprehensive senior health program is managed and coordinated by the Geriatric Service Line (the Alliance division devoted to the geriatric population). The Geriatric Task Force, a subcommittee of Joint Public Health Board, advises the Alliance in this effort to improve the wellness of elders.

#### **Accomplishments**

Over the past year, the Geriatric Service Line leadership focused on linking the existing Alliance programs within both Cambridge and Somerville communities. At monthly educational meetings, providers showcase their programs and identify strategies to develop ongoing collaboration among programs. A directory of services was developed to guide providers in identifying services to best meet the needs of the particular elder. This "Geriatric Services Directory" was published and widely distributed in June 1998.

#### **Community Engagement**

The Geriatric Service Line provides an array of programs for seniors in home, community, local nursing homes, and hospitals. Following are examples of services.

##### Elder Service Plan (ESP)

Based on a national model, the Elder Service Plan provides a one-stop, full service plan for frail elders and is funded by Medicaid and Medicare. Comprehensive care is provided by a multidisciplinary team that coordinates and manages all health, medical, and social services needed to maintain the elder's independence. Services include preventive, rehabilitative, curative, and support care provided at home and at the Adult Day Health Care Center.

##### House Calls

House Calls provides primary health care in the homes of frail elders. Providers work in conjunction with local home health agencies, Somerville Cambridge Elder Services, and Geriatric Services to coordinate home care. The program is staffed by physicians, nurse practitioners, and social workers.



### Senior Health Center

Housed in the Cambridge Senior Center, the Senior Health Center offers primary care with a special focus on geriatrics. The multidisciplinary services include psychiatry, behavioral medicine, gynecology, urology, podiatry, nutrition, and social work. The Senior Health Center sponsors a variety of health promotion programs for seniors including health education, health screenings, fall risk assessment and prevention, and loss support groups.

### 60+ Health Center

The 60+ Health Center is an outpatient primary care center with services in internal medicine and podiatry. It is affiliated with Somerville Hospital and the City of Somerville Council of Aging. Staff includes MDs, nurse practitioners, and podiatrists. A home-visit program provides primary medical care and podiatry visits in the home.

### Somerville Hospital Home Care

Somerville Hospital Home Care is a 24-hour Medicare certified and Medicaid licensed home care program. The program provides nursing, social work, nutrition, and physical and occupational therapy. Psychiatric nurses provide individual and family counseling on dementia, depression, and nursing home placement.

### Geriatric Services

Geriatric Services is an outreach program providing a full range of mental health services to elders and their families. Services include individual, family and group psychotherapy, psychiatric evaluations, case management, psychiatric rehabilitation services, short or long term treatment, and case consultation to other caregivers. Psychiatrists and clinicians see patients in their homes, nursing homes, and other places where elders congregate.

### Medical Psychiatry Unit

An alarmed, unlocked, acute medical unit provides care to patients with combined medical and psychiatric illness. Each patient is followed by an interdisciplinary team of physicians, psychiatrists, nurses, social workers, psychologists, activities therapists, nutritionists, and nursing assistants. All care is coordinated with community providers.

### Transitional Care Unit (TCU)

The Transitional Care Unit provides hospital-based rehabilitation and skilled nursing services. The program provides service during the transition period between an acute hospitalization and the return home. The goal is to assist each client to reach the highest possible level of strength, movement, coordination, comfort, and wellness.



### Network Rehab

Network Rehab provides rehabilitation services to Alliance geriatric patients. Services include comprehensive assessment and treatment for inpatients, outpatients, TCU, Senior Health Center, ESP, and Home Care patients. Physical, occupational, and speech therapists follow patients throughout the continuum of care.

### Lifeline Program

Lifeline is a 24-hour emergency teleresponse support system. The system uses a two-way communicator (located on the telephone) and a transmitter button worn by the patient. This service is useful for those who are medically at risk, functionally disabled, frail, or elderly.

### Elder Falls Project

A geriatric public health initiative is aimed at reducing the number of hospitalizations for injuries due to falls in seniors over 75 years of age. This collaborative project involves numerous community partners in identifying risk factors, referral systems, and coordination of services.

### **Emerging Areas**

The Geriatric Service Line has identified six major aims for improvement and established teams to work on developing and implementing action plans. They are as follows:

- Establish a central intake and referral phone number for both consumers and providers.
- Develop a consumer-oriented guide to geriatric services.
- Develop a wellness program marketing plan as a community outreach strategy.
- Collaborate with Fiscal Services to improve billing and reimbursement.
- Continue integration of programs to reduce duplication and fragmentation.
- Identify strategies for redefining and improving relationships with our community partners.

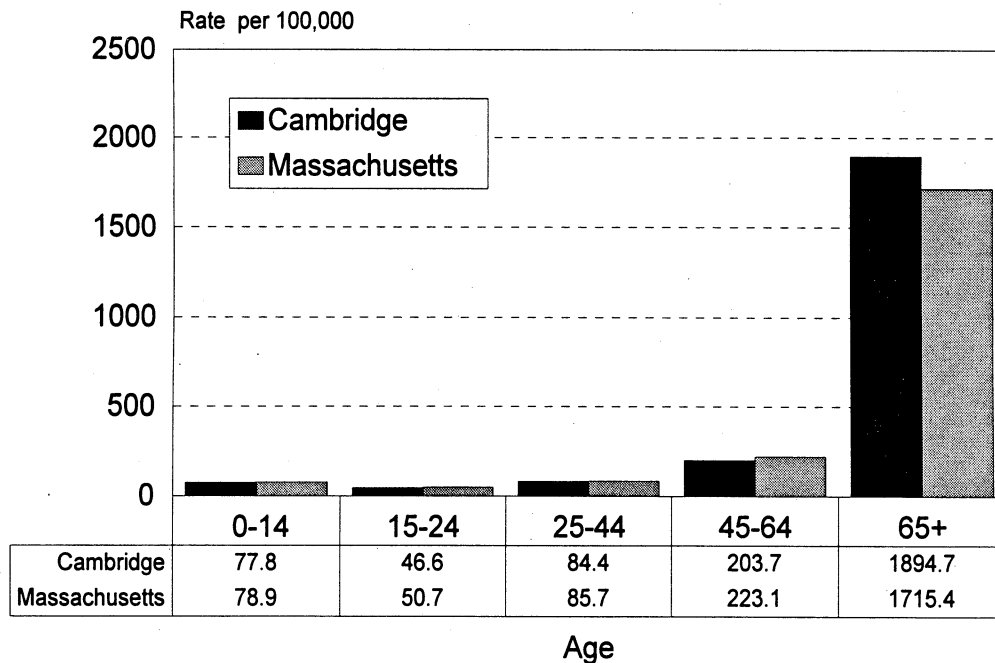
*For additional relevant data, see Volume 2, Table 2-1, Table 2-2, Figure 2-1, Figure 2-2, Figure 2-3, Figure 3-17, Figure 3-19, Figure 3-20, Figure 3-21, and Figure 3-22.*



**Figure 3-1**

## Injury Hospitalization Due to Falls by Age

Cambridge and Massachusetts, 1997



Source: Uniform Hospital Discharge Data Set, 1997

*Example of how to read this figure:*

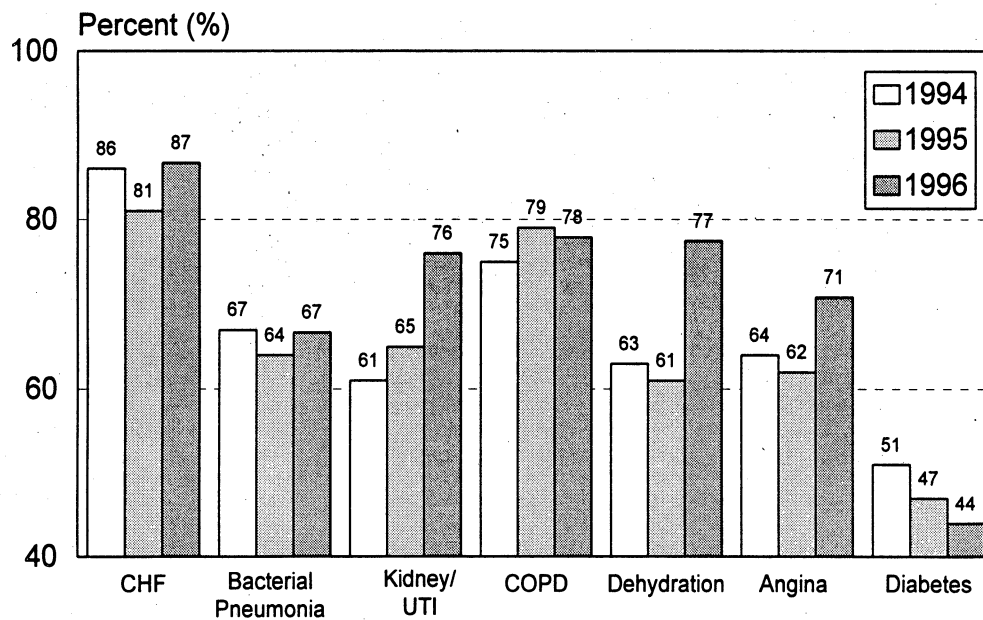
Hospitalization resulting from an injury due to falls was markedly higher after age 65 than at younger ages. Rates of injury hospitalization for falls in Cambridge was similar to state-wide rates.



**Figure 3-2**

## Elders\* Among Individuals Hospitalized For Preventable Conditions

Cambridge Residents: 1994-96



\*Elders = Individuals age 65 and older

Source: Uniform Hospital Discharge Data Set/Division of Health Care Finance and Policy

***Example of how to read this figure:***

Elders experienced more frequent hospitalizations for urinary tract infections, dehydration, and angina in 1996 compared with the previous two years. These hospitalizations should be preventable, in part through effective primary care.



#### **4. Neville Manor**

In December 1996, in response to mounting operating deficits and an aging physical plant at Neville Manor, the Cambridge Health Alliance released a Request for Proposals (RFP). The RFP sought ideas for continuing the mission of Neville Manor while eliminating the deficit and addressing the need for a new or renovated physical plant. Eight proposals were received. A review committee, comprised of Alliance Board members and Alliance and City staff, unanimously recommended the selection of a proposal submitted by Neville Community Partners (NCP). NCP was headed by the Cambridge Housing Authority and included CASCAP, Affirmative Investments, and Prism Health Care. Their proposal called for building a new, 100-bed nursing home to replace the existing 179 bed facility, and for renovating the existing building for 71 units of affordable assisted living.

This unique proposal would provide for a continuum of on-site services for low- and moderate-income elders. While Medicaid funding has traditionally provided access to nursing homes for this population, only those with significant financial resources have had access to assisted living. NCP's proposal reserves 55% of the assisted living units for low income elders and 25% for those of moderate income. Only 20% of the units will be available at market rate.

After the selection of Neville Community Partners' proposal in April 1997, the Cambridge Health Alliance froze admissions at Neville Manor to reduce the number of existing residents. This reduction would guarantee each resident a place in the new, smaller nursing home upon completion. Negotiations between the Alliance and the two unions representing Neville Manor employees created agreements on severance packages for employees laid off as a result of downsizing. When layoffs were necessary, most were voluntary due to the severance package.

Between April and November 1997, the Cambridge Health Alliance and Neville Community Partners negotiated a development agreement that was signed by the parties in November 1997. At this time, the Alliance and NCP began informing the community about the proposed project, holding numerous meetings with community groups with an interest in the project.

During this outreach phase, Neville Manor participated in its annual Massachusetts Department of Public Health survey in January 1998. For the second consecutive year, employees of Neville Manor earned a deficiency-free survey, an extraordinary accomplishment given the change and uncertainty facing the staff.



Community outreach continued in the first few months of 1998. While many citizens and groups supported the proposal, many others spoke strongly against the project, citing concerns about open space and building near the City's water supply. These conflicting views were still not reconciled when home rule legislation supporting the project was submitted to City Council in June. In an effort to reconcile the opposing forces, the City Council directed the City Manager to name a Neville Manor Site Plan Advisory Committee to develop a unified proposal on the siting of the project. The Council then passed the legislation on an 8-0 vote.

The legislation was submitted to the legislature with only a few weeks for it to be considered before the end of the legislative session. There was not enough time for the City, the Alliance, and NCP to satisfactorily answer the questions and concerns of the Local Affairs Committee. As a result, the committee voted to hold the legislation.

The Neville Manor Site Plan Advisory Committee was named by the City Manager in July 1998 and began meeting almost immediately. The committee considered several alternatives, including placing the nursing home near its current location or moving it to an off-site location. After meeting fourteen times over five months, the committee unanimously approved a compromise site proposal and sent their recommendations to the City Manager. The compromise proposal addresses the concerns of all parties. A public meeting was hosted by the City Manager and the Cambridge Health Alliance CEO to inform the community about the Neville Manor transition plans. A second meeting reported to the community on the work of the Neville Manor Site Plan Advisory Committee.

In the meantime, the admissions freeze at Neville Manor had achieved its purpose of reducing the census so that all existing residents would be guaranteed a bed at the new facility. Therefore, in August 1998, Neville Manor resumed admissions of long-term care residents as well as short-term, rehabilitation patients. Neville Manor currently operates three units with a total of 114 beds and admits new residents from all local hospitals, as well as directly from the community.

As the year draws to a close, the home rule legislation is being revised for submission to City Council. If the Council passes the legislation, we are confident that it will receive a more positive reception at the legislature as the past six months have allowed time to reconcile conflicting opinions at the local level, and to provide answers to the concerns of legislators.



## Cambridge Health Alliance Services

### 1. Clinical Services

#### Introduction

The Health Services Agreement between the Cambridge Health Alliance and the City of Cambridge specifies a number of services to be provided by the Cambridge Health Alliance. The services, listed in Attachment A, include most of our inpatient and outpatient activities that make up much of the core business of the health care delivery component of the Alliance. Below is a review of the services provided in FY98, including volumes delivered and any relevant programmatic changes. Also included are service projections for FY99.

This fall, the Cambridge Health Alliance received patient satisfaction results from a comprehensive patient survey project coordinated by the Massachusetts Hospital Association in collaboration with the Picker Institute. The survey was developed by the Picker Institute, based on extensive work they have done in identifying patient needs and desires. The project surveyed inpatients from 58 participating Massachusetts hospitals.

The Cambridge Health Alliance staff and leadership were disappointed with the results that indicated that there were several areas in which we were not consistently meeting our patients' needs. Although we recognize that as an urban hospital serving a diverse population we face special challenges, we are unwavering in our commitment to meet those challenges and provide a level of service that delights all of our patients. We are using the results of the Picker survey to guide and focus our improvement efforts. Using the specific information found in the survey results, we have designed improvement projects addressing the key areas identified.

#### FISCAL YEAR 1998 ACCOMPLISHMENTS

##### Inpatient and outpatient surgery

	FY98 Actual	FY99 Projected
Inpatient	1,071 procedures	1,322 procedures
Outpatient	1,914 procedures	2,213 procedures
TOTAL	2,985 procedures	3,535 procedures



During FY98, a new general surgeon with a particular interest in breast surgery joined the Cambridge Health Alliance staff. As the only female Alliance general surgeon, she is a particularly important addition to our staff.

### **Inpatient and outpatient orthopedics**

	FY98 Actual	FY99 Projected
Outpatient	7,057 visits	6,800 visits
Inpatient	70 discharges	100 discharges

During FY98, a new orthopedic surgeon with a specialty in sports medicine joined the Alliance orthopedic staff.

### **Inpatient and outpatient medicine**

	FY98 Actual	FY99 Projected
Outpatient (primary care)	57,554 visits	64,105 visits
Inpatient	1,944 discharges	1,944 discharges

Outpatient adult primary care medicine is delivered at The Cambridge Hospital in the Primary Care Center, at the East Cambridge, Windsor Street, North Cambridge, and Riverside Health Centers, and at Cambridge Family Health in Inman Square. (Senior Center activity is reported under Geriatric Services.) Our primary care sites are staffed by many providers fluent in Haitian Creole, Spanish, French, and Portuguese.

### **Inpatient and outpatient mental health and addictions**

	FY98 Actual	FY99 Projected
Outpatient	87,285 visits	103,567 visits
Inpatient	2,865 discharges	3,057 discharges

The Cambridge Health Alliance meets the needs of the community for mental health services and addictions treatment through a variety of specialized and more general programs. In addition to the well known linguistic mental health teams and the Victims of Violence program, the Alliance serves increasing numbers of clients in such programs as Behavioral Medicine, Family Therapy, and Child Psychiatry. During FY98, the Alliance began its Partial Hospitalization Program offering an intermediate level of care for clients who do not need inpatient care but need more structure and support than can be offered in the traditional outpatient program.



### Inpatient and outpatient OB/GYN

	FY98 Actual	FY99 Projected
Outpatient	14,731 visits	16,691 visits
Inpatient	822 discharges	921 discharges
Deliveries	686 deliveries	750 deliveries

For the OB/GYN department, FY98 was characterized by the excitement of opening our new labor, delivery, and post-partum unit in January 1998. This state-of-the-art unit features private rooms for all patients, using a Labor, Deliver, Recovery, Postpartum (LDRP) model in which women stay in the same room for their entire birthing experience. However, FY98 also saw the resignation of our newly hired chief as well as the departure of one of our OB/GYN physicians. Fortunately, an experienced OB/GYN physician joined our staff late in the fiscal year and, with his recruitment, the department has been able to continue providing comprehensive services to the community.

### Midwifery program

	FY98 Actual	FY99 Projected
Deliveries		
Inpatient	439	439
Birth Center	18	60

The beautiful Cambridge Birth Center opened in January 1998, to the joy and relief of all involved. This project, the vision of our midwifery staff, took many years to complete. The result is a magnificent facility for women desiring a birth center experience. Strengthened by the innovative doula program (community women trained in perinatal support services), the midwifery service is looking forward to a growing number of birth center and other midwife deliveries during FY99.

### Comprehensive pediatric services

	FY98 Actual	FY99 Projected
Outpatient	28,452 visits	32,526 visits
Inpatient	872 discharges	975 discharges

Pediatric primary care is offered at The Cambridge Hospital through the Cambridge Pediatrics office practice, at the Teen Health Center, and all the neighborhood health centers (except the Senior Center). The numbers above reflect primary care visits.



Specialized pediatric nutrition services are also available at all pediatric sites. Mental health care is offered on site at the Teen Health Center and by referral to our Child Psychiatry Department.

### **Comprehensive geriatric services**

The Cambridge Health Alliance offers a number of programs specifically targeting the geriatric community. These include outpatient care through the Senior Center, specialized outpatient and home-based mental health services targeting the elderly and chronically mentally ill through the Geriatric Consultation Service, primary care home visits through the House Calls program, and comprehensive services for the frail elderly through the Elder Service Program (ESP).

	FY98 Actual	FY99 Projected
Senior Center	3,252 visits	4,627 visits
Geriatric Consult Service	9,169 visits	7,500 visits
House Calls	1,289 visits	1,333 visits
ESP	742 member months	1,020 member months

### **Comprehensive women's health services**

Women's health services include a number of components. OB/GYN and midwifery services have been reported in the sections above. Other services include a full range of reproductive health care services for low income, uninsured women. Our rheumatologist has a special interest in osteoporosis. In addition to providing care through the Bone Clinic, she also presented several educational programs for the community on this important issue.

### **Neighborhood Health Centers**

	FY98 Actual	FY99 Projected
Outpatient	76,053 visits	87,796 visits

Neighborhood Health Centers in Cambridge include Windsor Street, Riverside, North Cambridge, East Cambridge, and Cambridge Family Health (visits for Teen Health and Senior Center are reported separately under Pediatric and Geriatric services). In addition to adult and pediatric primary care, all the sites also offer OB/GYN care and nutrition services. Specialized mental health care is available at East Cambridge, Riverside, and Windsor Street.



### Emergency department, including emergency psychiatric services

	FY98 Actual	FY99 Projected
Emergency Services		
Medical	22,100 visits	23,400 visits
Psychiatric	4,390 visits	4,600 visits

During FY98, the Psychiatric Emergency Services moved into newly renovated space on the first floor of the Cahill Building, creating a significantly improved and safer environment for staff and patients. The Medical Emergency Department joined a national collaborative project focused on improving service quality.

### Nutrition services

	FY98 Actual	FY99 Projected
Outpatient	3,276 visits	3,670 visits

Comprehensive nutrition services are offered at all ambulatory sites. This includes adult and pediatric nutrition, prenatal nutrition, and special services directed towards the elderly (through House Calls, ESP, and the Senior Center) and people with HIV/AIDS (through the Zinberg Clinic).

### Medical and surgical subspecialty programs

	FY98 Actual	FY99 Budget
Medical	6,290 visits	8,109 visits
Surgical	8,155 visits	7,242 visits

Medical subspecialties include Dermatology, Endocrinology, Gastroenterology (GI), Oncology, Neurology, and Rheumatology. Surgical subspecialties include Podiatry, Ear/Nose/Throat (ENT), Plastic Surgery, Urology, Vascular Surgery, and Breast Clinic. During FY98, a new provider was added in Endocrinology allowing us to expand our services in that area. She brings a particular expertise and interest in the care of patients with diabetes and has been leading an improvement initiative in that area. At the end of FY98, we also brought in new providers in Podiatry and ENT to replace physicians who left our facility. We projected some decrease in surgical subspecialty volume to allow time for our new providers to build their practices.



### Dental services

	FY98 Actual	FY99 Projected
Outpatient	5,295 visits	10,898 visits

Accessible dental care remains a significant community need. The current space available for dental services on site at The Cambridge Hospital is too small to meet the need. With the opening of the new Windsor Street Health Center during FY99, the capacity of the Alliance to provide dental services will more than double.

### Specialty programs for high risk populations

#### AIDS

	FY98 Actual	FY99 Projected
Zinberg Clinic Medicine	5533	5579
Psychiatry	1599	1600

The Zinberg Clinic has been providing comprehensive services to people with HIV/AIDS since 1989. These services include primary and specialized medical care, mental health and social services for patients and their families, substance abuse counseling, nursing care, and nutritional services. With the development of promising, but very rigorous, drug treatment regimens, Zinberg Clinic staff have devoted much of their energy to working with clients to develop strategies to enable them to stay with their demanding medication schedules.

**Men of Color** (*See Pages 20-22 of this Volume.*)

#### Victims of Violence

	FY98 Actual	FY99 Projected
Outpatient	5,742 visits	5,300 visits

The Victims of Violence (VOV) program remains a critical program, meeting a major community need. VOV provides individual services as well as community interventions through the Community Crisis Response Team. (These numbers were also reported as part of the Mental Health and Addictions section.)



### Linguistic Mental Health Teams

	FY98 Actual	FY99 Projected
Outpatient	12,780 visits	15,321 visits

With the increasing number of immigrants in our community, it is not surprising that we are seeing an increasing demand for the services of our linguistic mental health teams. To respond to the developing needs of the immigrant community, we began a South Asian Mental Health Team during FY98.

### Health Care for the Homeless

	FY98 Actual	FY99 Projected
Outpatient	2232 visits	2,100 visits

The Homeless Team continues its work of providing medical services at local homeless shelters, thereby serving clients in familiar and accessible locations. During FY98, the team worked with a Network Health outreach worker to enroll eligible individuals, increasing client access to health care. This initiative will continue during FY99.

## 2. Public Health Department

The Cambridge Public Health Department provides an extensive array of activities that address the three core elements of public health: assessment, policy development, and assurance.

**Public Health Nursing:** The staff in this department monitor communicable diseases and provide patient and provider education about infectious diseases; operate the Tuberculosis Clinic and oversee medication adherence; conduct the Newborn Home Visiting Program; conduct annual flu clinics; and provide health education resources and trainings.

**Environmental Health:** The program director responds to citizen concerns about exposure to chemical and biological agents; conducts compliance checks in accordance with Massachusetts law; guides site assessment and risk characterization process; and manages records and notices relating to Massachusetts Department of Environmental Protection.



**Community Health:** This group provides an array of community-based programs to address a variety of health concerns. Program initiatives include domestic violence prevention, tobacco control, lead poisoning prevention, dental screenings for children, AIDS, and the Men of Color Health Project.

**Health Information Unit:** The epidemiologists in this program provide data support to Cambridge Health Alliance and City departments, such as the School Department, Human Services, and City Council. The unit also provides evaluation consultation to many community organizations.

**Health of the City:** The Cambridge Hospital Department of Medicine was chosen as one of the seventeen academic programs to participate in a national Health of the Public Program. Our program, Health of the City, in collaboration with Harvard University and the City of Cambridge, has a mission to improve the health of the people of Cambridge. The program serves as a research and development component, and has initiated programs concerning immunizations, hunger and nutrition, dental health, and teen health.

**Laboratory Animals:** The Commissioner of Laboratory Animals oversees the care and use of laboratory animals used in research in the City of Cambridge as directed by Cambridge Ordinance 1086. The ordinance follows federal regulations as set forth by the Animal Welfare Act, the Public Health Service Policy, and The Guide for the Care and Use of Laboratory Animals, but extends that coverage to all vertebrates regardless of source of research funding. (Federal regulations exclude rats, mice, birds, and farm animals unless research is federally funded.) The Commissioner inspects all facilities annually, reviews research protocols and procedures, and meets with the chairperson and community representative of each Institutional Animal Care and Use Committee.



## Cambridge Public Health Department Highlights

- School health nursing developed and implemented a new policy to ensure state law compliance regarding immunization of school children.
- Fifty families have been offered newborn home visiting services in North Cambridge since July. Approximately one third of those families agreed to nurse visits.
- An early intervention program will establish and implement a home visiting program for low income families.
- TB and communicable disease monitoring:
  - 2188 visits to the TB clinic for FY98.
- Vaccine distribution:
  - 7800 doses distributed to area providers.
  - 1800 doses given by Public Health Nurses in flu clinics.
- Permits for recombinant DNA research and manufacturing:
  - 52 permits in Cambridge.
- Massage Therapists Licenses:
  - 157 individual permits were granted for practice in Cambridge.
- Permits to conduct experiments on live animals:
  - 36 permits to practice in Cambridge.
- Licenses for funeral directors:
  - 15 licenses in Cambridge.
- Air and Water quality problems:
  - Significant participation in site investigations regarding Polaroid, Com Energy, W.R. Grace., and Russell Field.
- Oral hygiene education and screening
  - Education - grades one and four:
    - 1,278 students attended
  - Screening - grades one through four:
    - 1,538 students screened.

1999 965



CITY OF CAMBRIDGE  
CAMBRIDGE, MASSACHUSETTS 02139

TEL. 349-4300  
FAX. 349-4307



20

EXECUTIVE DEPARTMENT  
ROBERT W. HEALY  
City Manager

RICHARD C. ROSSI  
Deputy City Manager

February 1, 1999

To The Honorable, The City Council:

Please find attached for your information, the 1999 Cambridge Public Health Assessment: A Report from the Cambridge Health Alliance.

Very truly yours,

Robert W. Healy  
City Manager

RWH/mec

Consent Agenda #20

S-96 ~~8~~

Relative to the 1999 Cambridge  
Public Health Assessment: A Report  
from the Cambridge Health Alliance.

In City Council February 1, 1999

Referred to  
Health & Hosp. Committee