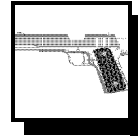
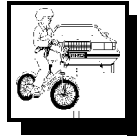


1993-1994

Injury-related Behavioral Risks



of

Pennsylvanians

**Pennsylvania Department of Health
Injury Prevention Program**

in cooperation with

**Center for Injury Research and Control
Department of Emergency Medicine
University of Pittsburgh
Pittsburgh, PA**

1993-1994
INJURY-RELATED
BEHAVIORAL RISKS OF PENNSYLVANIANS

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TABLE OF CONTENTS

<u>Content</u>	<u>Page</u>
Introduction	1
Methods	1
How to Use this Report	1
Behaviors and Injury Prevention	2
Motor Vehicle Injury Risks and Safety Belt Use	5
Drowning Risks and Ability to Swim	7
Fire Injury Risks, Fire Escape Plan and Smoke Detector Use	9
Bicycle Injury Risks and Bicycle Helmet Use	11
Firearm Injury Risks, Firearm Ownership and Storage	12
Assault Risks and Interpersonal Violence	14
Appendix	16
Definition of Terms	17
Summary Tables of Survey Data	18
Year 2000 Objectives	23
Technical Notes	24
BRFSS Injury Related Questionnaire - Pennsylvania	25
References	31

Introduction

Unintentional and intentional injuries are the fourth leading cause of death in Pennsylvania [PA Department of Health, 1995a]. Injuries are also a leading cause of hospitalization and emergency department visits [PA Department of Health, 1995b]. Many of these deaths, hospitalizations, and emergency department visits can be prevented by behavioral changes, such as safety belt use, installation of smoke detectors in the home, and proper storage of firearms. The science of injury prevention has taught us that many injuries are predictable and preventable once the environmental mechanisms and behavioral factors are understood.

The Behavioral Risk Factor Surveillance System (BRFSS) is designed and conducted by the Centers for Disease Control and Prevention (CDC) to collect data on the key behavioral health risks which contribute to leading causes of death. The BRFSS is an ongoing survey consisting of monthly telephone interviews. Randomly-generated telephone numbers are used to determine household selection. Within each contacted household, the *respondent* is selected randomly from among all adults aged 18 years or older who reside in the household.

The Pennsylvania Department of Health began participating in the BRFSS in 1989. During 1993, 49 states and the District of Columbia

participated in the BRFSS, while all 50 states participated during 1994. All states used a CDC-generated core questionnaire, along with questions added by the state. The 1993 state added questions for Pennsylvania included survey questions related to injuries to **motor vehicle occupants**, from **drowning**, and from **fire and flames**. The 1994 state added questions included survey questions related to injuries due to **fire and flames**, **bicycling**, **firearms** and **interpersonal violence**.

A total of 2,433 Pennsylvania adults completed interviews for the 1993 BRFSS; 3,620 Pennsylvania adults completed interviews for the 1994 BRFSS. Interviewing and data processing were conducted by the Wisconsin Survey Research Laboratory under a contract administered by the Pennsylvania Department of Health. The data were weighted to the state's population. The University of Pittsburgh Center for Injury Research and Control (CIRCL) analyzed the injury related data.

METHODS

All percentages in this report were computed using weighted data. Weighted data were used to adjust for each respondent's probability of selection and under-representation of certain subgroups of the population in the sample. However, the numbers in the figures and tables in the text and

the appendix represent actual number of respondents (unweighted).

USING THIS REPORT

This report is intended to serve as a companion to the report **1993 Behavioral Health Risks of Pennsylvania Adults** prepared by the Wisconsin Survey Research Laboratory for the Division of Health Statistics and Research, Pennsylvania Department of Health.

Following a brief description of behaviors in relation to injury prevention, data on safety belt use, ability to swim, smoke detector use, bicycle helmet use, firearm ownership/storage, and interpersonal violence are presented using the BRFSS data supplemented with two sources of mortality and morbidity data [PA Department of Health, 1995a; 1995b]. Several summary tables of the survey data, along with terms used in the tables and figures, are included in the appendix.



Comments and suggestions are welcome in order to improve subsequent reports. These comments should be directed to:

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Behaviors and Injury Prevention

Specific risk factors, including certain behaviors, have been found to increase the chances of people getting injured. Therefore, many injuries can be prevented by engaging in safety practices, while others may require modifying injury prone behaviors.

SAFETY BELT USE



Between 1986-1990, 9,520 Pennsylvania residents died from motor vehicle related crashes. Of these deaths, 83.5% involved motor vehicle occupants alone [PA Department of Health, 1993].

The proper use of safety belts can reduce the chance of serious injuries to motor vehicle occupants in crashes by 50% [National Highway Safety Administration, 1991] and hospitalization by 65% [Mueller et al, 1988]. The protective effects of seat belts lie in their ability to restrain the user from accelerating to the dash board and steering column in a crash and by preventing ejection.

ABILITY TO SWIM



Toddlers ages 1-2 years and adolescents, particularly males in their late adolescence, are two groups with high risk for submer-

sion injuries (drowning and near-drowning). Effective pool fencing and child-proofing of other residential water sources have led to a reduction of submersion deaths in toddlers [Pearn et al, 1979; Wintemute, 1990].

Among adolescents, however, higher rates continue to be observed due to inability of many adolescents to swim, particularly in large waters such as lakes, oceans, canals, and rivers, and due to use of alcohol during activities on or near water.

FIRE ESCAPE PLAN & SMOKE DETECTOR USE



Residential fires cause many deaths. In the U.S., fire and burn injuries are the fourth leading cause of unintentional injury deaths. Fires and burns also cause many hospitalizations, impairments, disabilities and severe emotional problems. Among all industrialized nations, the U.S. has the highest incidence of burn hospitalization [Demling, 1985].

House fires alone are responsible for about three quarters of the death toll from fires and flames. Death rates are highest among persons at the extremes of ages, namely, young children and the elderly, partly due to their inability to escape from burning houses in a timely fashion.

Many of the deaths, disabilities, impairments, and hospitalizations from fires and flames could be averted by use of functioning smoke detectors, along with knowledge and practice of a fire escape plan. Persons living in homes without functioning smoke detectors have a two- to three-fold risk of dying in the event of house fires [Runyan et al, 1992]. Cigarette smoking and high alcohol consumption have also been implicated in deaths from residential fires.

BICYCLE HELMET USE



Each year in the U.S. more than 900 bicyclists are killed while 20,000 others are admitted to hospitals and 580,000 receive

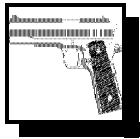
emergency department treatment [Baker et al, 1993]. While most non-fatal injuries to bicyclists result from falls, about 90% of bicyclist deaths in the U.S. result from collisions with motor vehicles [Baker et al, 1992]. Young persons are most at risk, particularly persons between the ages of 4 and 14 years.

Head or neck injuries are responsible for the majority of bicyclist deaths [Fife et al, 1983]. In many cases of bicyclist deaths, no other life-threatening injuries are present, implying that if the head had been protected, a death could have been prevented. Bicycle helmets have been proven effective in reducing head injuries in many settings [Bishop and Briard, 1984;

Thompson et al, 1989; Williams, 1991].

Since the first bicycle helmet law in the U.S. was passed in Howard County, MD in response to the deaths of two students and the activism of their classmates and teachers [Scheidt et al, 1992], several jurisdictions have passed similar laws. The Howard County bicycle helmet law increased helmet use from 4% to 47% [Cote et al, 1992]. There is some evidence of increased bicycle helmet use among adolescents nationally in recent years [Moore et al, 1992]. In Pennsylvania, a law took effect in February 1995 requiring that persons under the age of 12 years wear an approved helmet when riding a bicycle.

FIREARM OWNERSHIP & STORAGE



Firearm related injuries are a leading cause of mortality and morbidity in the U.S. accounting for more than 38,000 deaths in 1991 alone [CDC, 1994]. Injury fatalities from firearms in the U.S. are surpassed only by those from motor vehicles. Firearms are the leading mechanism of suicides and homicides in this country. The number of nonfatal firearm injuries is estimated at two to five times the number of fatalities. [Jagger & Dietz, 1986; Annett et al, 1995]

It is also estimated that there are more than 200 million guns in U.S. homes [Ordog et al, 1995]. Firearm owners and their family members are more likely to be killed by their own weapons than by weapons belonging to criminal assailants [Kellerman et al,

1986]. An important contribution to the toll of deaths and morbidities from

firearms is their improper and unsafe storage. Since about half of all homes in the U.S. have at least one firearm, often children do not have to look far to find a weapon [National Adolescent Student Health Survey, 1989].

INTERPERSONAL VIOLENCE



Injury, disability, and mortality from interpersonal violence continue to be a major public health problem in the U.S.

Interpersonal violence often occurs between persons who know each other. It comes in the forms of simple assault, sexual assault, domestic violence, child abuse, and elderly abuse.

Physical abuse may be perpetrated by the hand through hitting, shoving, pushing, pulling, or by use of a weapon. Women, children, and the elderly are most at risk for physical abuse.

Motor Vehicle Injury Risks and Safety Belt Use



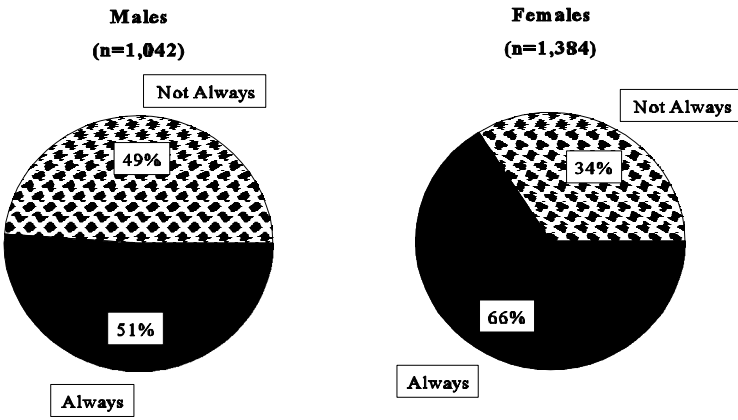
Problem:

- ◆ During 1993, nearly 1,600 Pennsylvania residents died as a result of motor vehicle crashes.
- ◆ Between April and December of 1993, at least 8,494 Pennsylvania residents were hospitalized due to injuries resulting from motor vehicle occupant crashes. The estimated hospital charges associated with these hospitalizations amounted to at least \$140,000,000 for this nine month period.

Pennsylvania residents at risk:

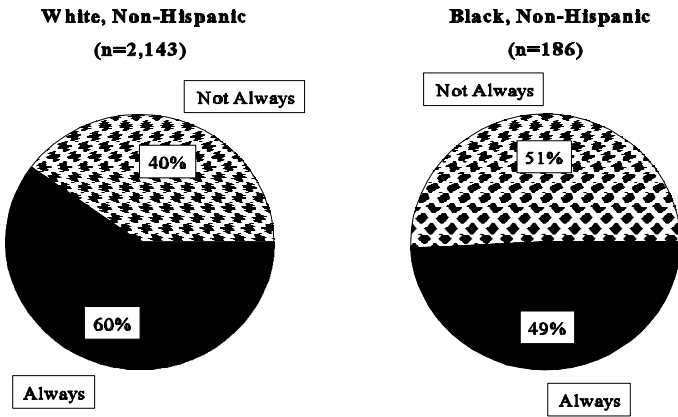
- ◆ In 1993, 41% of Pennsylvania adults did not always wear safety belts when driving or riding in a car.
- ◆ In 1993, men were less likely to use seat belts regularly than women.
- ◆ In 1993, young persons were less likely to use seat belts regularly than older persons.
- ◆ In 1993, Black non-Hispanic persons were less likely to use seat belts regularly than White non-Hispanic persons.
- ◆ In 1993, persons with less education were less likely to use seat belts regularly than those with higher education.

Figure 1. Adult Seat Belt Use by Gender, PA, 1993



Men were less likely to use seat belts regularly than women.

Figure 2. Adult Seat Belt Use by Race, PA, 1993



Black, non-Hispanic persons were less likely to use seat belts regularly than White, non-Hispanic persons.

Drowning Risks and Ability to Swim



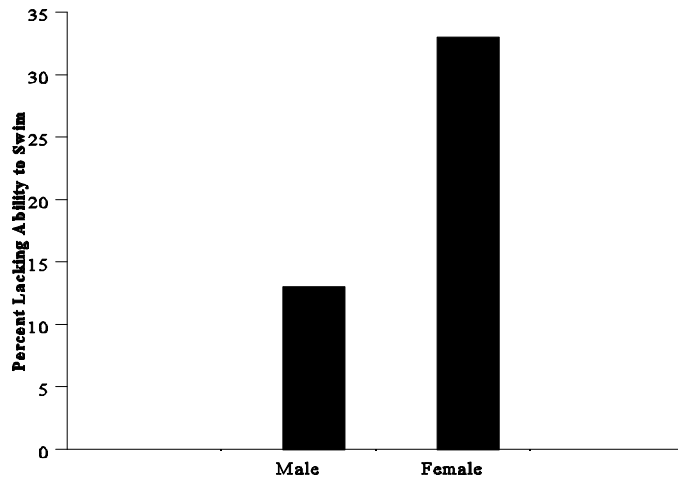
Problem:

- ◆ During 1993, 109 Pennsylvania residents died as a result of drowning and submersion.
- ◆ Between April and December of 1993, at least 93 Pennsylvania residents were hospitalized due to injuries resulting from drowning. The estimated hospital charges associated with these hospitalizations amounted to at least \$985,000 for this nine month period.

Pennsylvania residents at risk:

- ◆ In 1993, 24% of Pennsylvania adults could not swim or tread water for 5 minutes in water that is over their heads.
- ◆ In 1993, female Pennsylvania adults were more likely to be unable to swim or tread water for 5 minutes in water that is over their heads than males.
- ◆ In 1993, older Pennsylvania adults were more likely to be unable to swim or tread water for 5 minutes in water that is over their heads than younger adults.

**Figure 3. Adults Lacking Ability to Swim
By Gender, PA, 1993**



Females were more likely to be unable to swim or tread water for 5 minutes in water that is over their heads than males.

Fire Injury Risks

Fire Escape Plan and Smoke Detector Use



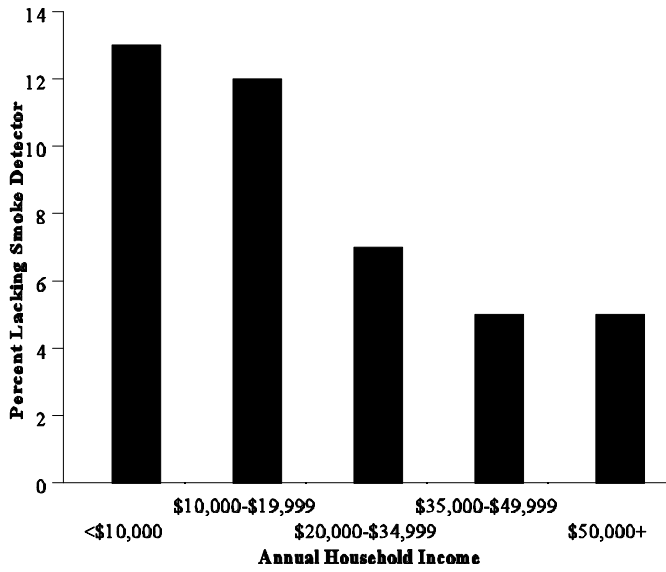
Problem:

- ◆ During 1993, 210 Pennsylvania residents died as a result of fire and flames.
- ◆ Between April and December of 1993, at least 1,102 Pennsylvania residents were hospitalized due to injuries resulting from fire, burns and related asphyxia. The estimated hospital charges associated with these hospitalizations amounted to at least \$26,000,000 for this nine month period.

Pennsylvania residents at risk:

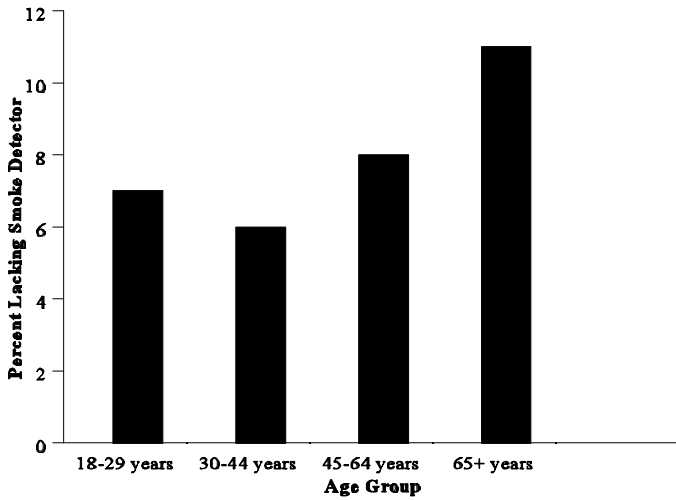
- ◆ In 1993, 30% of Pennsylvania adults did not have a specific plan for how to escape from their homes in case of fire.
- ◆ In 1994, 8% of Pennsylvania adults did not have any smoke detectors installed in the home.
- ◆ In 1994, 14% of Pennsylvania adults did not have any smoke detectors installed in the home or did not install smoke detectors on the same floor as the room where they sleep.
- ◆ In 1994, 28% of Pennsylvania adults did not have any smoke detectors installed in the home or did not install smoke detectors on the same floor as the room where they sleep or did not put new batteries in *all* of their battery-operated smoke detectors in the previous year.

**Figure 4. Persons Whose Homes Lacked Smoke Detectors
By Annual Household Income, PA, 1994**



Low-income persons are more likely to live in homes which lack smoke detectors.

**Figure 5. Persons Whose Homes Lacked Smoke Detectors
By Age Group, PA, 1994**



Older persons were more likely to live in homes which lack smoke detectors.

Bicycle Injury Risks and Bicycle Helmet Use



Problem:

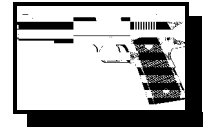
- ◆ During 1993, 28 Pennsylvania residents died as a result of bicycle related injuries.
- ◆ Between April and December of 1993, at least 1,010 Pennsylvania residents were hospitalized due to injuries resulting from riding bicycles. The estimated hospital charges associated with these hospitalizations amounted to at least \$10,000,000 for this nine month period.

Pennsylvania residents at risk:

- ◆ In 1994, 30% of Pennsylvania adults had a child 12 years of age or below in their homes. Of these adults, 69% had a child who rode a bicycle.
 - ▶ Of the children who were youngest among their siblings ages 12 years and below and rode bicycles, 62% had a helmet. Of these children, 49% did not always wear their helmet when they rode a bicycle.
 - ▶ Of the children ages 12 years and below who were the sole child in the home and rode bicycles, 62% had a helmet. Of these children, 43% did not always wear their helmet when they rode a bicycle.

Firearm Injury Risks

Firearm Ownership and Storage



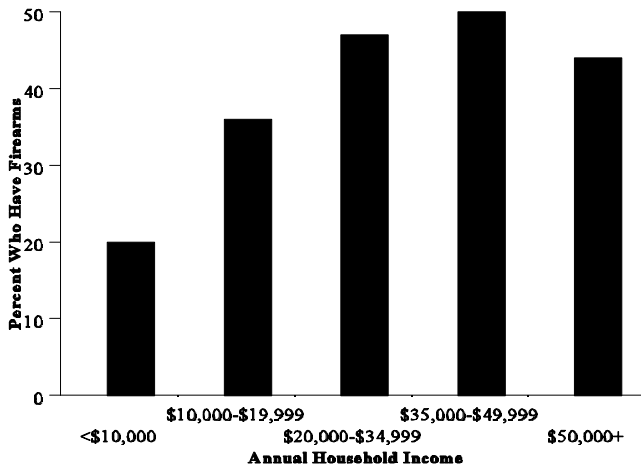
Problem:

- ◆ During 1993, 1,452 Pennsylvania residents died as a result of firearms.
- ◆ Between April and December of 1993, at least 1,744 Pennsylvania residents were hospitalized due to injuries resulting from firearms. The estimated hospital charges associated with these hospitalizations amounted to at least \$41,000,000 for this nine month period.

Pennsylvania residents at risk:

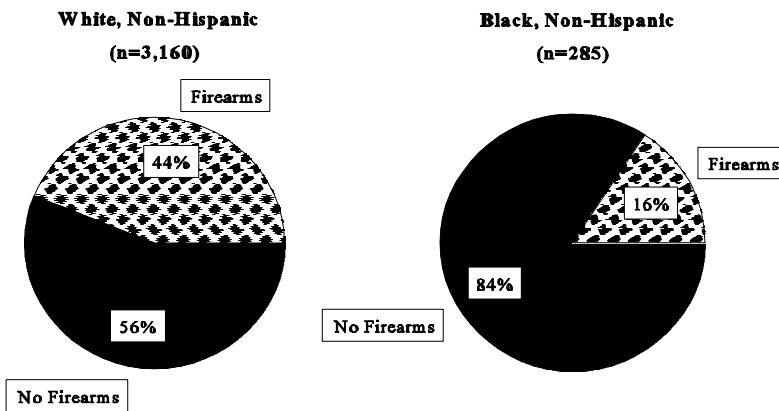
- ◆ In 1994, 41% of Pennsylvania adults had at least one firearm in their homes.
 - ▶ Of Pennsylvania adults with firearms in their homes, 23% had one firearm while 76% had more than one firearm in their home.
- ◆ In 1994, of Pennsylvania adults with only one firearm in their home, 38% had handguns, 20% had shotguns, 39% had rifles, 1% had other firearms, and 2% did not know the type of firearm.
 - ▶ Of those persons with only one firearm in their homes, 58% kept the firearm in an unlocked place.
 - ▶ Of those persons with only one firearm in their homes, 30% kept the firearm assembled without a locking mechanism.
 - Of those persons with only one firearm kept assembled without a locking mechanism in their homes, 11% kept the firearm loaded.

**Figure 6. Persons Who Have Firearms in Their Homes
By Annual Household Income, PA, 1994**



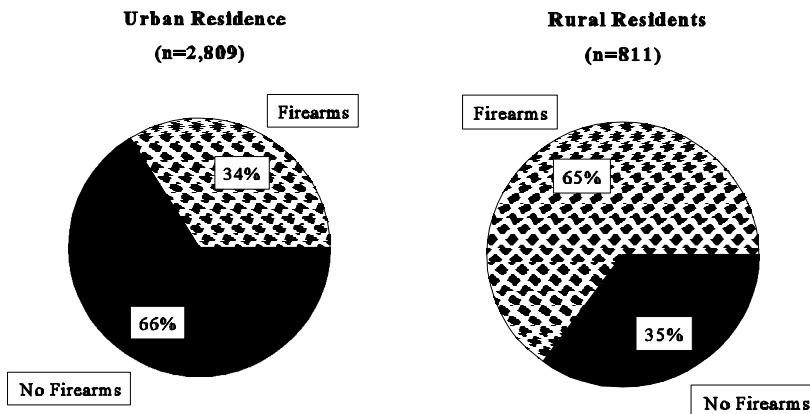
Low-income persons were less likely to have firearms in their homes than persons with higher incomes.

**Figure 7. Persons Who Have Firearms in Their Homes
By Race, PA, 1994**



White, non-Hispanic persons were more likely to have firearms in their homes than Black, non-Hispanic persons.

**Figure 8. Persons Who Have Firearms in Their Homes
By Urban/Rural Residence, PA, 1994**



Persons living in rural counties were more likely to have firearms in their homes than persons in urban counties.

Assault Risks and Interpersonal Violence



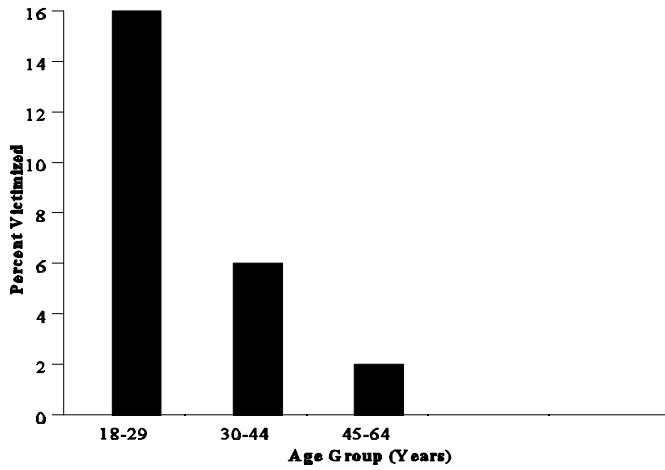
Problem:

- ◆ During 1993, there were 847 homicides among Pennsylvania residents.
- ◆ Between April and December of 1993, at least 4,436 Pennsylvania resident assault victims were hospitalized. The estimated hospital charges associated with these hospitalizations amounted to at least \$66,000,000 for this nine month period.

Pennsylvania residents at risk:

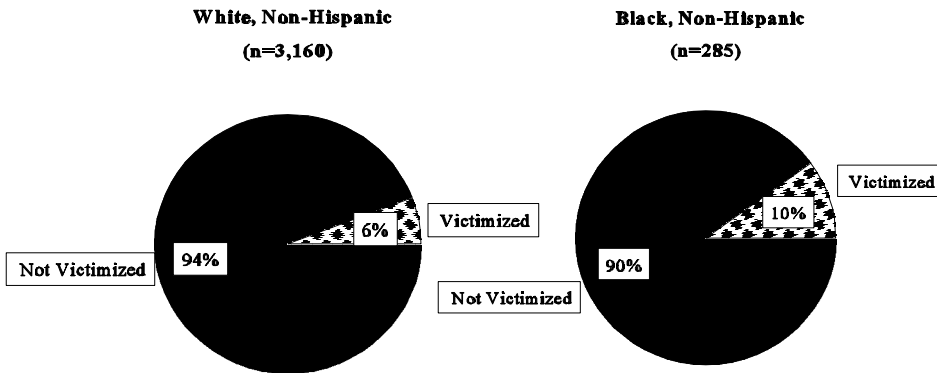
- ◆ In 1994, 6% of Pennsylvania adults reported that they had been hit, slapped, pushed, or kicked by another person or hit by them with an object or weapon within a year.
 - ▶ Of Pennsylvania adults who had been hit, slapped, pushed, or kicked by another person or hit by them with an object or weapon within a year, 12% reported going to an emergency room, hospital, doctor, or other medical care facility to get treatment for injuries resulting from the physical violence.

**Figure 9. Victims of Interpersonal Violence
By Age Group, PA, 1994**



Young persons were more likely to be hit, slapped, pushed, or kicked by another person or hit by them with an object or weapon than older persons.

**Figure 10. Victims of Interpersonal Violence
By Race, PA, 1994**



Black, non-Hispanic persons were more likely to be hit, slapped, pushed, or kicked by another person or hit by them with an object or weapon than White, non-Hispanic persons.

Appendix

Definition of Terms

Current smoker - Includes respondents who reported that they were smoking at the time of the interview.

ED visit - Visit to an emergency room, hospital, doctor, or other medical care facility to get treatment for any injuries as a result of physical violence.

Employment Status - The employment status of the respondent.

Having a bike helmet - Children ages 12 years and below who were reported to ride a bicycle and also have a bike helmet.

Annual Household income - The annual household income reported by the respondent.

HS - High school education.

Lacks smoke detectors - Includes respondents who reported that they did not have smoke detectors installed in their home.

Lacks smoke detectors on the same floor where they sleep - Includes respondents who reported that they did not have smoke detectors installed in their home or lacked a smoke detector installed on the floor as the room where they sleep.

Not always wearing a bike helmet - Children ages 12 years and below who were reported to ride a bicycle and also have a bike helmet but did not wear these helmets *all the time* when riding a bicycle.

Owns firearms - Includes respondents who reported that a firearm was

kept in or around their home, including those kept in the garage, outdoor storage area, truck or car.

Prevalence - The percentage of respondents or respondents' homes which had a characteristic.

Race and Ethnicity - Race and ethnicity of respondent which is also assumed to be the race and ethnicity of the respondent's home categorized as White, non-Hispanic or Black, non-Hispanic.

Rides bicycle without helmet - Includes children ages 12 years and below who were reported to ride a bicycle without using their helmets.

Rural residents - Includes respondents residing in counties with one half or more of the population living in municipalities with a population less than 2,500 and not contiguous to a built-up urbanized area.

Sole child - Includes a child age 12 years old and below who was reported as the only child living in the home.

Tech/Some College - Includes respondents who had completed some technical school or were technical school graduates and those who had completed some college.

Unsafe smoke detector practices - Includes respondents who reported that they did not have smoke detectors installed in their home or did not have smoke detectors on the same floor as the room where they sleep or did not put new batteries in *all* of their battery-operated smoke detectors in the previous year.

Urban residents - Includes respondents residing in counties not defined as rural (see "rural").

Victimized for IPV - Includes respondents who reported that they had been hit, slapped, pushed, or kicked by another person or hit by them with an object or weapon during the previous 12 months of the interview.

Youngest child - A child age 12 years and below who was reported as the youngest in the home among his or her siblings.

Summary Tables
of
Survey Data

Table 1. Persons who reported lack of seat belt protection, lack of ability to swim, and lack of a fire escape plan by selected personal characteristics, Pennsylvania, 1993

Personal Characteristic	Total N	Lack Seat Belt Protection		Lack Ability to Swim		Lack a Fire Escape Plan	
		n	%	n	%	n	%
All Persons	2,426	600	26	613	24	680	30
Gender							
Male	1,042	313	31	144	13	285	29
Female	1,384	287	21	469	33	395	30
Age Group							
18-29 years	425	128	32	37	7	155	37
30-44 years	792	201	25	132	17	239	31
45-64 years	655	159	25	203	30	155	25
65 years and over	544	109	20	236	43	130	24

Notes:

1. Percentages (%) were computed using weighted data.
2. Numbers (n) are the actual number of respondents (unweighted).
3. Numbers within demographic groups may not add to the total number of respondents because unknowns were excluded.
4. "Lack seat belt protection" includes respondents who reported that they never wore a seat belt or wore a seat belt sometimes or seldom when driving or riding in a car.
5. "Lack ability to swim" includes respondents who reported that they cannot swim or tread water for 5 minutes in water over their heads.
6. "Lack a fire escape plan" includes respondents who reported that they did not have a specific plan for how to escape from their house or apartment in case of fire.

Table 2. Smoke detector ownership and proper placement and installation, Pennsylvania, 1994

Personal Characteristic	Total N	Lack Smoke Detectors		Lack Smoke De- tectors On Same Floor Where They Sleep		Engage in Unsafe Smoke Detector Practices	
		n	%	n	%	n	%
All Persons	3,620	280	8	503	14	1,019	28
Age Group							
18-29 years	624	41	7	76	13	185	29
30-44 years	1,215	70	6	139	11	338	27
45-64 years	1,009	82	8	137	13	264	25
65 years and over	759	86	11	149	20	227	30
Race and Ethnicity							
White, non-Hispanic	3,160	240	7	422	13	885	27
Black, non-Hispanic	285	18	6	43	15	83	28
Annual Household Income							
Less than \$10,000	385	48	13	81	21	125	32
\$10,000 to \$19,999	723	90	12	135	19	228	31
\$20,000 to \$34,999	901	60	7	111	12	243	26
\$35,000 to \$49,999	617	33	5	69	11	159	24
\$50,000 or more	697	29	5	66	11	190	29
Presence of children <5 years							
Yes	585	20	4	46	8	127	22
No	3,032	260	9	457	15	892	29
Current smoker							
Yes	880	84	9	122	14	228	25
No	2,731	195	7	377	14	787	28
Urban/Rural							
Urban	2,809	202	7	381	14	784	27
Rural	811	78	9	122	16	235	28

Notes:

- Percentages (%) were computed using weighted data.
- Numbers (n) are the actual number of respondents (unweighted).
- Numbers may not add to the total number of respondents because unknowns were excluded.
- "Lack smoke detectors" includes respondents who reported that they did not have smoke detectors installed.
- "Lack smoke detectors on same floor where they sleep" includes respondents who reported that they did not have smoke detectors installed or lacked a smoke detector installed on the floor where they sleep.
- "Engage in unsafe smoke detector practices" includes respondents who reported that they lacked smoke detectors or did not have smoke detectors on the same floor where they sleep or did not put new batteries in *all* of their battery-operated smoke detectors in the previous 12 months.

Table 3. Victimization for interpersonal violence and firearm ownership by personal characteristics, Pennsylvania adults, 1994

Personal Characteristic	Total	Victimized for IPV		Firearm Ownership	
	N	n	%	n	%
All Persons	3,620	201	6	1,339	41
Gender					
Male	1,523	101	8	716	49
Female	2,097	100	5	623	34
Age Group					
18-29 years	624	94	16	246	45
30-44 years	1,215	80	6	481	43
45-64 years	1,009	26	2	443	48
65 years and over	759	-	-	169	25
Race and Ethnicity					
White, non-Hispanic	3,160	161	6	1,259	44
Black, non-Hispanic	285	27	10	41	16
Education					
Less than HS	481	27	6	151	35
HS	1,506	74	6	634	46
Tech/Some College	776	58	8	301	43
College Graduate	848	42	5	251	32
Annual Household Income					
Less than \$10,000	385	24	8	65	20
\$10,000 to \$19,999	723	55	7	222	36
\$20,000 to \$34,999	901	60	7	382	47
\$35,000 to \$49,999	617	28	5	288	50
\$50,000 or more	697	32	5	295	44
Employment Status					
Employed/Self-employed	2,146	136	7	897	46
Out of Work	145	15	11	57	43
Homemaker	385	11	2	127	36
Student	140	26	20	41	37
Retired	657	2	1	164	28
Urban/Rural					
Urban	2,809	167	6	853	34
Rural	811	34	5	486	65

Notes:

1. Percentages (%) were computed using weighted data.
2. Numbers (n) are the actual number of respondents (unweighted).
3. Numbers may not add to the the total number of respondents because unknowns were excluded.

Table 4. Firearm ownership by type and personal characteristics, Pennsylvania, 1994

Personal Characteristic	Have One Firearm or More		Have One Handgun or More		Have One Shotgun or More		Have One Rifle or More	
	n	%	n	%	n	%	n	%
All Persons	1,339	41	694	21	781	25	957	30
Age Group								
18-29 years	246	45	127	23	123	25	169	31
30-44 years	481	43	271	23	299	26	357	32
45-64 years	443	48	218	24	276	32	333	37
65 years and over	169	25	78	12	83	13	98	15
Race and Ethnicity								
White, non-Hispanic	1,259	44	632	22	752	27	924	32
Black, non-Hispanic	41	16	33	14	8	2	8	3
Education								
Less than HS	151	35	56	13	94	22	109	26
HS	634	46	325	23	388	29	474	35
Tech/Some College	301	43	177	25	165	25	213	31
College Graduate	251	32	136	17	134	18	160	21
Annual Household Income								
Less than \$10,000	65	20	24	7	39	13	44	13
\$10,000 to \$19,999	222	36	109	18	122	20	159	26
\$20,000 to \$34,999	382	47	200	24	215	27	287	36
\$35,000 to \$49,999	288	50	146	25	178	31	207	35
\$50,000 or more	295	44	177	26	180	27	207	32
Presence of children <5 years								
Yes	240	45	132	24	139	26	181	33
No	1,099	40	562	20	642	24	776	29
Presence of children 5-12 years								
Yes	299	44	153	22	169	25	218	31
No	1,040	40	541	21	612	25	739	29
Presence of children 13-17 years								
Yes	237	47	131	27	160	33	177	35
No	1,102	40	563	20	621	23	780	29
Urban/Rural								
Urban	853	34	462	18	459	19	570	23
Rural	486	65	232	31	322	44	387	52

Notes:

1. Percentages (%) were computed using weighted data.
2. Numbers (n) are the actual number of respondents (unweighted).
3. Numbers may not add to the total number of respondents because unknowns were excluded.

Year 2000 Objectives

“Healthy People 2000: National Health Promotion and Disease Prevention Objectives” establishes specific objectives for improving the health of all Americans. The BRFSS has been one data source for comparing Pennsylvania’s progress in meeting key objectives related to certain behaviors. Comparison of selected Year 2000 Objectives with corresponding BRFSS data is given below. Note that the generality of some of the objectives precludes direct comparison with much of the BRFSS data.

<p>Objective 7.11: <i>Reduce by 20 per cent the proportion of weapons that are inappropriately stored and therefore dangerously available.</i></p>	<p>In 1994, of Pennsylvania adults with <i>one</i> firearm in their home, 58% kept the firearm in an unlocked place and 30% kept the firearm assembled without a locking mechanism.</p>
<p>Objective 9.12: <i>Increase use of occupant protection systems, such as safety belts, inflatable safety restraints, and child safety seats, to at least 85 per cent of motor vehicle occupants.</i></p>	<p>In 1993, 59% of Pennsylvania adults ages 18 years and older reported using seat belts <i>always</i> when they drove or rode in a car.</p>
<p>Objective 9.13: <i>Increase use of helmets to at least 80 per cent of motorcyclists and at least 50 per cent of bicyclists.</i></p>	<p>In 1994, 53% of all bicyclists ages 12 years and younger <i>who had a helmet</i> used them when riding.</p>
<p>Objective 9.17: <i>Increase the presence of functional smoke detectors to at least one on each habitable floor of all inhabited residential dwellings.</i></p>	<p>In 1994, 28% of Pennsylvania adults did not have smoke detectors installed in their homes or did not have smoke detectors installed on the same floor where they sleep or did not put new batteries in <i>all</i> of their battery-operated smoke detectors within the past 12 months.</p>

Technical Notes

SAMPLING

Respondents were selected through a 2-stage random digit dialing sample design. The first stage consisted of a disproportionate stratified random sample of telephone numbers beginning with the area code and exchange prefixes specific to Pennsylvania. The universe of all possible telephone numbers in the state was divided into three strata based on the estimated probability that the telephone number is attached to a housing unit. A large proportion of the sample was selected from the strata containing telephone numbers most likely to be homes. Selected telephone numbers were first called to determine if they were residential numbers, otherwise they were discarded.

The second stage involved a random selection of a *respondent* from among a list of all persons ages 18 years and older residing in each number answered. This list was generated by the interviewer after asking the person who answered the telephone to mention all persons ages 18 years and older residing in the house.

For further details on the sampling, response rates, sample characteristics, and accuracy of the estimates, please consult the **1993 Behavioral Health Risks of Pennsylvania Adults** published by the Pennsylvania Department of Health, Division of Health Statistics and Research.

DATA ANALYSIS

The data were weighted to adjust for: (1) each respondent's probability of selection - to reflect the number of

different telephone numbers per household and the number of persons ages 18 years and above residing in the household; and (2) under-representation of certain subgroups of the population in the sample - to correspond to the estimated age, sex, and race and ethnicity distribution of the population of Pennsylvania.

Data analysis was performed using SAS software on a main frame computer. Percentages are rounded to the nearest whole numbers. It is pointed out that percentages may not add up to 100 due to rounding and missing data. Data are not reported for cells where the denominator is less than 50 respondents.

LIMITATIONS

Several limitations must be considered in the interpretation of the results presented in this report. They include the following:

1) The data represent self-reports of behaviors rather than direct observations. Social desirability issues, illegal behaviors, and sensitive issues may lead to some under reporting, although adequate reliability has been shown in the measurement of self-reported health risk behaviors among the youth [Brener et al, 1995], and in the validity of self-reported surveys of firearm ownership [Kellerman et al, 1991; Rafferty et al, 1995].

2) There is a possibility of selection bias towards persons with telephones in the home and those who speak English. According to the 1990 Census of the Population and Housing, 2.6% of occupied housing units

in Pennsylvania do not have telephones. Although the proportion of homes without telephones is small, noncoverage of these homes, as well as non-English speaking homes, could lead to biased estimates.

3) Estimates based on small denominators may be unstable and unreliable.

BRFSS Injury Related Questionnaire - Pennsylvania

INTRODUCTION: The Pennsylvania Department of Health is doing a study of the health practices of Pennsylvania residents. This is one of the main health studies which is conducted in the state. I'm not selling anything. We would like to ask some questions about the things people do which may affect their health. Before we begin, I want to assure you that all of the information you give is completely confidential, and that none of it will be released in any way that would permit identification of you or your household. Your participation, of course, is voluntary.

SEAT BELTS (1993 Survey Questions)

17. The next few questions are about using seat belts. How often do you use seatbelts when you drive or ride in a car? Would you say always, nearly always, sometimes, seldom, or never?
- | | |
|--------------|--------------------------------|
| 1=ALWAYS | 2=NEARLY ALWAYS |
| 3=SOMETIMES | 4=SELDOM |
| 5=NEVER | 8=NEVER DRIVE OR RIDE IN A CAR |
| 7=DON'T KNOW | 9=REFUSED |
19. What is the age of oldest child in your household under the age of 15?
- | | |
|-----------------------------|--------------------------|
| 01-14=AGE OF CHILD IN YEARS | 88=NO CHILD UNDER AGE 15 |
| 77=DK/NS | 99=REFUSED |
20. How often does the oldest child (of children under age 15) in your household use a car safety seat [for child under 5] when riding in a car? Would you say always, nearly always, sometimes, seldom, or never?
- | | |
|--------------------------------|-----------------|
| 1=ALWAYS | 2=NEARLY ALWAYS |
| 3=SOMETIMES | 4=SELDOM |
| 5=NEVER | 7=DK/NS |
| 8=NEVER DRIVE OR RIDE IN A CAR | 9=REFUSED |
- 20a. How often does the oldest child (of children under age 15) in your household use a seatbelt [for child 5 or older] when riding in a car? Would you say always, nearly always, sometimes, seldom, or never?
- | | |
|--------------------------------|-----------------|
| 1=ALWAYS | 2=NEARLY ALWAYS |
| 3=SOMETIMES | 4=SELDOM |
| 5=NEVER | 7=DK/NS |
| 8=NEVER DRIVE OR RIDE IN A CAR | 9=REFUSED |

ABILITY TO SWIM (1993 Survey Question)

21. Can you swim or tread water for 5 minutes in water that is over your head?
- | | |
|---------|-----------|
| 1=YES | 2=NO |
| 7=DK/NS | 9=REFUSED |

FIRE ESCAPE PLAN (1993 Survey Question)

22. Has your family practiced or discussed an escape plan in case of a fire at home?
1=YES 2=NO
3=RESPONDENT LIVES ALONE 7=DK/NS
9=REFUSED

SMOKE DETECTORS (1994 Survey Questions)

80. Now I have some questions about smoke detectors. Do you have any smoke detectors installed in your home?
1=YES 2=NO (skip to next section)
7=DON'T KNOW (skip to next section) 9=REFUSED (skip to next section)
81. During the past 12 months, that is since (DATE ONE YEAR AGO), have you or anyone in your household put NEW batteries in ALL of your battery operated smoke detectors?
1=YES (skip to q 82) 2=NO (skip to q 82)
3=ALL HOOKED UP TO ELECTRICAL SYSTEM/ HARDWIRED (skip to q 82)
4=JUST GOT A NEW SMOKE DETECTOR (skip to q 81a)
7=DK/NS (skip to q 82) 9=REFUSED (skip to q 82)
- 81a. *[This question asked persons who responded that they had smoke detectors installed (Q80=1) and they just got a new smoke detector (Q81=4.)*
Are these new smoke detectors installed?
1=YES 2=NO (skip to q 80)
7=DON'T KNOW (skip to q 80) 9=REFUSED (skip to q 80)
- 81b. Do they have NEW batteries?
1=YES 2=NO
7=DON'T KNOW 9=REFUSED
82. Are any of the smoke detectors on the same floor as the room where you sleep?
(NOTE: A smoke detector in a stairwell between two floors does not count as being on the same floor.)
1=YES 2=NO
7=DON'T KNOW/NOT SURE 9=REFUSED

CHILD BICYCLE HELMET USE (1994 Survey Questions)

84. (You said that you have <XX> children who are age 17 and younger living in your household. Do any of these children ride a bicycle? Please do not include tricycles or big wheels.
1=YES (skip to q 84b) 2=NO (skip to next section)
7=DON'T KNOW (skip to next section) 9=REFUSED (skip to next section)
- 84a. You said that you have one child age 17 or younger living in your household. Does this child ride a bicycle? Please do not include tricycles or big wheels.
1=YES (skip to q 85a) 2=NO (skip to next section)
7=DON'T KNOW (skip to next section) 9=REFUSED (skip to next section)

- 84b. What is the age of the youngest child who rides a bicycle? (DO NOT INCLUDE INFANTS AND YOUNG CHILDREN WHO RIDE ON THE BACKS OF AN ADULT'S BICYCLE.)
 02-17=2 TO 17 years old
 77=DON'T KNOW 99=REFUSED
85. Does the {84b} year old have a bicycle helmet?
 1=YES (skip to q 86) 2=NO (skip to next section)
 7=DON'T KNOW (skip to next section) 9=REFUSED (skip to next section)
- 85a. Does this child have a bicycle helmet?
 1=YES (skip to q 86a) 2=NO (skip to next section)
 7=DON'T KNOW (skip to next section) 9=REFUSED (skip to next section)
86. During the past 30 days, how often did the {84b} year old wear a helmet when riding a bicycle -- was it always, more than half the time, about half the time, less than half the time, or never?
 (RIDING CAN BE INDOORS OR OUTDOORS)
 1=ALWAYS 2=MORE THAN HALF THE TIME
 3=ABOUT HALF THE TIME 4=LESS THAN HALF THE TIME
 5=HASN'T RIDDEN A BIKE IN PAST 30 DAYS 8=NEVER
 7=DK/NS 9=REFUSED
- 86a. During the past 30 days, how often did this child wear a helmet when riding a bicycle -- was it always, more than half the time, about half the time, less than half the time, or never? (RIDING CAN BE INDOORS OR OUTDOORS)
 1=ALWAYS 2=MORE THAN HALF THE TIME
 3=ABOUT HALF THE TIME 4=LESS THAN HALF THE TIME
 5=HASN'T RIDDEN A BIKE IN PAST 30 DAYS 8=NEVER
 7=DK/NS 9=REFUSED

FIREARM STORAGE (1994 Survey Questions)

Introduction: (For all respondents) The next questions are about safety and firearms. Firearms include pistols, shotguns, rifles, and other types of guns. This does not include starter pistols, BB guns, or guns that cannot fire. (ANTIQUES AND COLLECTIBLES ARE INCLUDED IF THEY FIRE)

87. Are there any firearms now kept in or around your home, including those kept in a garage, outdoor storage area, truck or car?
 1=YES 2=NO (skip to next section)
 7=DON'T KNOW (skip to next section) 9=REFUSED (skip to next section)
88. Is there one or more than one firearm in or around your home?
 1=ONE 2=MORE THAN ONE (skip to q 96)
 7=DON'T KNOW (skip to q 96) 9=REFUSED (skip to next section)
89. What kind of firearm is it? Is it a handgun, including pistol or revolver, a shotgun, a rifle, or something else?
 1=HANDGUN, including pistol/revolver 2=SHOTGUN
 3=RIFLE 8=OTHER (Specify)
 7=DON'T KNOW 9=REFUSED

104. During the past 12 months (DATE ONE YEAR AGO), have you been hurt by another person with any of the following weapons: a handgun, including pistol or revolver, a shotgun, a rifle, a knife or razor, a baseball bat or other club, or some other weapon?

(ENTER ALL THAT APPLY, SEPARATED BY SLASHES)

- | | |
|--------------------------------------|-------------------------------|
| 1=HANDGUN, including pistol/revolver | 2=SHOTGUN |
| 3=RIFLE | 4=KNIFE OR RAZOR |
| 5=BASEBALL BAT OR OTHER CLUB | 6=OTHER |
| 7=DON'T KNOW | 8=HAVEN'T BEEN HURT BY WEAPON |
| 9=REFUSED | |

105. During the past 12 months, have you gone to an emergency room, hospital, doctor, or other medical care facility to get treatment for any injuries as a result of physical violence?

- | | | |
|---------------|-------|------------|
| 1= YES | 2= NO | |
| 7= DON'T KNOW | | 9= REFUSED |

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NOTES

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