

## Safety and Injury

Intentional and unintentional injury ranks among the leading causes of death in the United States. In 2003, unintentional injury is the fifth leading cause of death among all persons.<sup>22</sup> Suicide is the eleventh leading cause of death and homicide is fourteenth. In the first four decades of life, injury is the leading cause of death.<sup>23</sup>

When people die prematurely, years of productive life are lost posing a loss to society. Years of Potential Life Lost (YPLL) due to unintentional injury pose a very large burden on society.<sup>24</sup> The highest proportion of years of potential life is represented by unintentional injury. Nationally in 2002, 19 percent of the total YPLL was a result of unintentional injury. This represents an estimated 1,999,783 years of potential life that were lost.<sup>25</sup> Most unintentional injuries are preventable.

Rates of nonfatal injury, both intentional and accidental, are typically much higher than fatal injury. In 2003, the age-adjusted rate of intentional and unintentional injury in the US was 37 per 100,000.<sup>26</sup> The cost in terms of pain, suffering, and long-term disability associated with nonfatal injury are often tremendous.

Injuries are the leading cause of death and disability among people under age 35, and these injuries result in more than 150,000 deaths, 2.6 million hospitalizations, and 36 million visits to the emergency room each year.<sup>27</sup> In all, injuries consume an estimated \$260 billion annually; the US government pays \$12.6 billion of this expense each year.<sup>28,29</sup>

This reality highlights the need to focus on safety and injury prevention in the realm of public health. There have been numerous public health campaigns targeting a reduction in both accidental and intentional injury. Injury prevention is difficult and needs continuous targeted interventions to specific age, sex, and race/ethnic-group populations to ensure that messages are designed to help each population better understand prevention strategies. Many injury prevention strategies are simple, if carried out, “use seatbelts when riding in a automobile,” “don’t drink and drive,” “have a working smoke detector in your home,” “if you have a gun in your home be sure it is unloaded and locked in a secure place.”

---

<sup>22</sup> CDC, National Center for Health Statistics, NCHS Data on Injuries, 2004. Available at <http://www.cdc.gov/nchs/data/factsheets/injury.pdf>, accessed October 20, 2006

<sup>23</sup> Centers for Disease Control and Prevention (2003). Web-based Injury Statistics Query and Reporting System. Available at <http://webappa.cdc.gov/cgi-bin/broker.exe>

<sup>24</sup> Years of potential life lost are calculated for this report on number of years of life lost from age 65.

<sup>25</sup> Centers for Disease Control and Prevention (2002). Web-based Injury Statistics Query and Reporting System. Available at <http://www.cdc.gov/ncipc/wisqars/>

<sup>26</sup> Hoyert, D; Heron, M ;Kung, H. National Vital Statistics Reports: Deaths: Final Data for 2003. National Center for Health Statistics, Available at [http://www.cdc.gov/nchs/data/nvsr/nvsr54/nvsr54\\_13.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr54/nvsr54_13.pdf) , accessed October 20, 2006

<sup>27</sup> Overview of Injury in Texas and the Role of EMS/Trauma Registry, November 2004, Texas Department of State Health Services, Environmental Epidemiology and Injury Surveillance Group.

<sup>28</sup> Centers for Disease Control and Prevention (2001). Injury Factbook 2001–2002. National Center of Injury Prevention and Control. U.S. Department of Health and Human Services: Atlanta, GA. Available on the internet at [http://www.cdc.gov/ncipc/fact\\_book/factbook.htm#PDF](http://www.cdc.gov/ncipc/fact_book/factbook.htm#PDF)

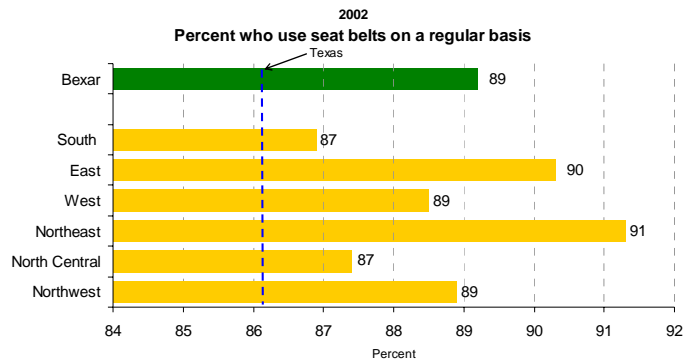
<sup>29</sup> Minino, A. M., & Smith, B. L. (2001). Deaths: Preliminary Data for 2000. National Vital Statistics Report, 49(12).

*Unintentional injury*  
*Regular use of seatbelts*

Regular use of seatbelts and child safety seats when traveling in automobiles has proven to be an effective method of lowering mortality rates and reducing injury. Texas state law requires that seatbelts be worn when an automobile is in motion. The National Highway Transportation Safety

Agency reports that an occupant of an automobile is more likely to be killed if thrown out of a car in the event of a crash. Furthermore, the proportion of restrained occupants that were ejected during a crash was only 1 percent.<sup>23</sup> The Healthy People 2010 goal for the number of people wearing seatbelts in automobiles is 92 percent. Data were not collected

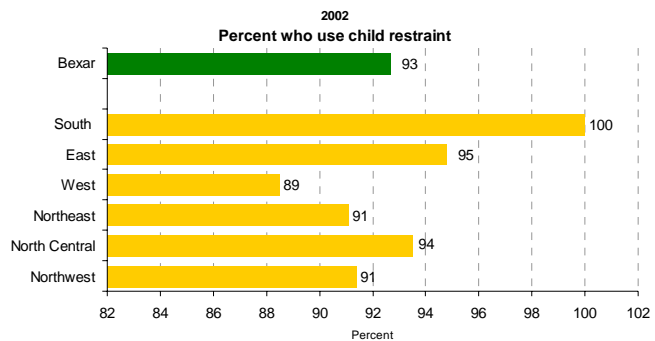
in the 2004 or 2005 Behavioral Risk Factor Surveillance System (BRFSS) regarding seatbelt use but this remains an important safety measure. In Bexar County, 89 percent of those responding to the 2002 survey indicated they do wear seatbelts on a regular basis. This is lower than the Healthy People 2010 goal for seatbelt use yet is a small improvement from 1998 when the proportion of seat belt users was 85 percent. People living in the East and Northeast sectors are somewhat more likely to wear seatbelts than those living in other areas of the county. Over 90 percent of the residents in the East and over 91 percent in the Northeast say they use seatbelts. The Northwest and West sectors follow closely behind with over 88 percent of residents wearing seatbelts. Approximately 87 percent of those living in the South and North Central sectors wear seatbelts.



*Use of child safety seats*

Texas state law requires that children be in a safety seat or restrained using a seatbelt when traveling in an automobile. The Healthy People 2010 goal is that all children age four years and under will travel in an automobile using child restraints. New traffic laws in Texas became effective in September 2005. Texas law now states that all children younger than five years of age or less than 36 inches tall, must be in a child safety seat.<sup>30</sup> Data were not collected in the 2004 or 2005 BRFSS about use of child restraints in automobiles, but this remains an important safety measure. In

2002, 93 percent of Bexar County residents responding to the survey indicated that they

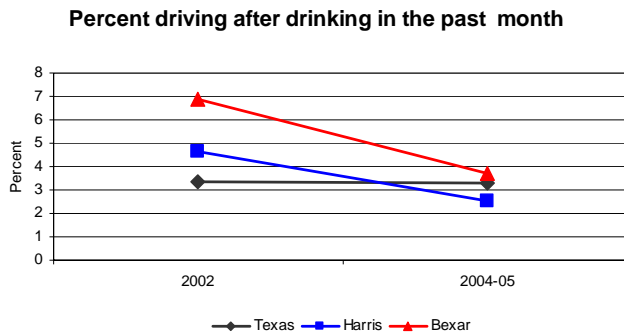


<sup>30</sup> Texas Department of Public Safety. (2004). *Fast facts from the DPS: Safety restraints*. Retrieved September 9, 2006 from [http://www.txdps.state.tx.us/director\\_staff/public\\_information/Fast\\_facts/index.htm](http://www.txdps.state.tx.us/director_staff/public_information/Fast_facts/index.htm)

do routinely use safety seats or seatbelts for their children. Almost 95 percent of those who live in the East sector of the county use child safety restraints. The North Central sector had 94 percent of the residents responding they use child restraints. In the Northeast and the Northwest sectors, 91 percent are using child restraints when driving with their child in the car. Almost 89 percent of the residents in the West said they use child restraints.

### *Drinking and driving*

A large proportion of automobile crashes involve the use of alcohol. Considerable attention has been given to this problem over the past several years. There has been little change in Texas regarding drinking and driving since 2002 with 3.3 percent of the population indicating that they had consumed alcohol and driven in the past month for the period 2004-2005. Conversely, in Bexar County, 3.7 percent reported drinking and driving in the period 2004-2005; a decrease



from the 7 percent rate reported in 2002. Although progress has been made with this dilemma, it is important that efforts continue in discouraging this destructive behavior. The Healthy People 2010 recommends the extension of Administrative License Revocation (ALR) laws or similar programs for persons who drive under the influence of alcohol to all states and the District of Columbia. The law allows administrative license suspension apart from the judicial system. In Texas an ALR program became effective in 1995.<sup>31</sup> Under the Texas program the license of a person will be suspended if arrested for driving while intoxicated (DWI). Additionally drivers who refuse to submit to chemical tests or provide a specimen with a BAC over 0.08 percent will have their license suspended. Intoxicated drivers with blood alcohol concentrations (BAC) over 0.08 percent represent the largest portion of persons involved in fatal automobile crashes.<sup>32</sup> Healthy People 2010 also recommend the extension of legal requirements for maximum BAC levels of 0.08 percent in drivers aged 21 years and older in all states and the District of Columbia. The latter target was achieved in 2004.

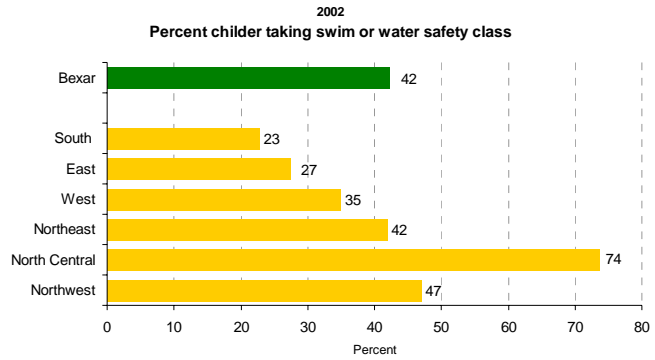
<sup>31</sup> Texas Department of Public Safety. (2000). *Texas department of public safety courtesy service protection drivers license administrative license revocation (ALR) program*. Retrieved September/6, 2006 from [http://www.txdps.state.tx.us/administration/driver\\_licensing\\_control/alr.htm](http://www.txdps.state.tx.us/administration/driver_licensing_control/alr.htm)

<sup>32</sup> Texas Department of Public Safety. (2005). *New Texas driving laws: New traffic laws effective September 1, 2005*. Retrieved September 7, 2006 from [http://www.txdps.state.tx.us/administration/driver\\_licensing\\_control/newtrafficlaws.htm](http://www.txdps.state.tx.us/administration/driver_licensing_control/newtrafficlaws.htm)

### Swimming and water safety classes

Every year children and adults drown in area swimming pools and lakes. It is important that children learn how to safely enjoy swimming, water sports, and play. Data were not collected in the 2004 or 2005 BRFSS regarding whether children had received swimming lessons, but this is an important safety measure. In 2002 more than 42 percent of parents living in

Bexar County reported that their child had participated in swimming or water safety classes.<sup>33</sup> The North Central sector far surpassed the county reporting the largest percentage of children having had water swim and water safety classes. Seventy-four percent of children living in the North Central sector have had child swim classes. The Northwest followed far behind with 47 percent. The Northeast and West sectors responded 42 and 35 percent respectively. Children in the East and South sectors were the least likely to have attended child swim and safety instruction.

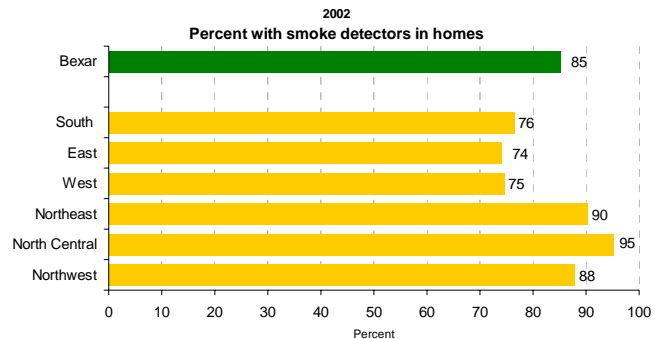


### Smoke detectors in homes

Smoke detectors are an inexpensive safeguard against fire and the possibility of getting caught in a burning building. The Healthy People 2010 goal is that 100 percent of homes will have smoke detectors. The 2004 or 2005 BRFSS did not collect

information about the percent of homes with smoke detectors, but this remains an important safety concern. In 2002, 85 percent of homes in Bexar County reported having smoke detectors. This indicator has not improved since 1998. Residents of the Northern part of the county were more likely than the rest of the county to

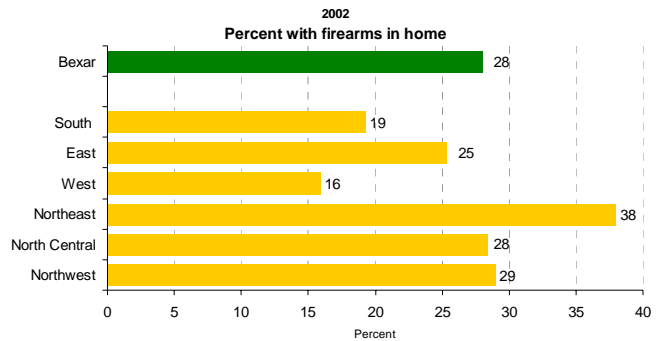
have smoke detectors in their homes. The North Central, Northeast and Northwest responded with 95, 90, and 88 percent respectively, saying they have smoke detectors in their homes. The South, East, and West sectors trailed behind with 76, 74, and 75 percent respectively. Homes in the southern sectors are generally older and can be more venerable to fire hazards. In addition, the per capita income is lower in these areas, which would make it difficult to recover from fire damage.



<sup>33</sup> In 1998 only 42 percent had reported that their child had not had instruction in swimming, but respondents were not specifically asked if they had taken a swimming class. This may account for the higher percentage of those responding negatively in 2002.

*Firearms in the home*

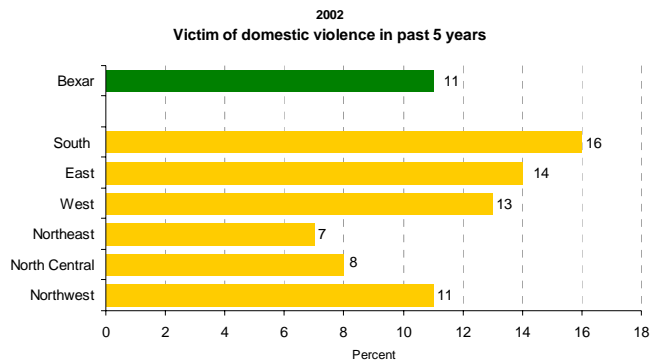
The 2004 or 2005 BRFSS did not collect information about the percent of homes with firearms, but this remains an import safety concern. In 2002 firearms were present in 28 percent of Bexar County homes. This was a reduction from 37 percent in 1998. The highest ownership of firearms is in the northern sectors. Thirty-eight percent of homes in the Northeast sector, and 28 percent in the North Central and Northwest have firearms. In the South sector, 19 percent and in the Southeast sector, 25 percent of residents report having firearms in the home. The West sector has the lowest reported rate, with 16 percent indicating they have firearms.



If firearms are kept in the home they should be kept in a locked place. Of the homes with firearms, only 63 percent have them in a locked place. There has been no change in the number of homes with firearms that have them in a locked place since 1998. The Healthy People 2010 goal is that 84 percent of homes with firearms would keep them in a locked secure place.

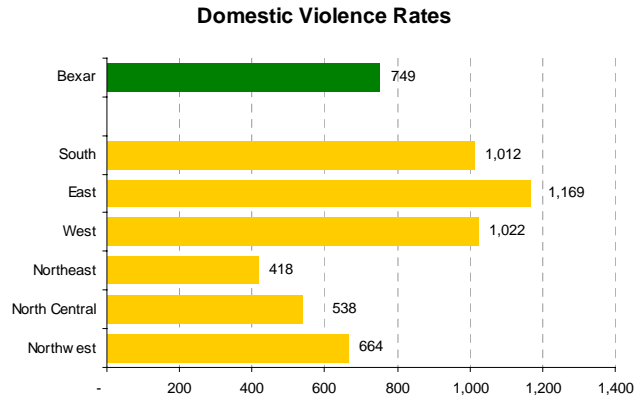
*Domestic and intimate partner violence*

Domestic violence includes all acts of violence, whether actual or threatened, that include physical, sexual, and/or psychological/emotional abuse perpetrated by a family member or intimate partner. The Healthy People 2010 goal is that no more than 3.3 percent of the population will be victims of domestic violence in a five-year period. The 2004 or 2005 BRFSS did not collect information about whether the respondent had been a victim of domestic violence in the past 5 years. Eleven percent of the respondents to the 2002 survey indicated that they had been the victim of this type abuse in the past five years.

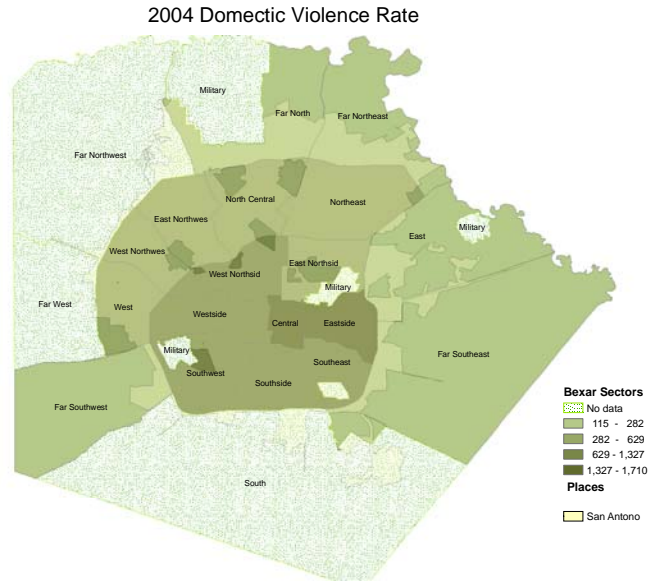


*Domestic violence assault*

The rate for domestic violence assault is based on the number of calls to the San Antonio Police Department that resulted in a charge being filed against the perpetrator<sup>∞</sup>. The 2004 San Antonio rate is 749 domestic violence assault charges per 100,000 population. This is an increase from 591 calls per 100,000 in 2000. It is interesting to note that the domestic violence assault rates follow the same pattern as the 2002 survey reports of domestic violence in the past 5 years. The highest rates are in the south Bexar County. The East sector had 1,169 domestic violence assault charges per 100,000 population, followed by 1,022 per 100,000 in the West, and 1,012 per 100,000 in the South. In the north, the Northwest sector had 664 domestic violence calls per 100,000 population. The North Central sector had 538 per 100,000 and the Northeast had 418 per 100,000. Recent increases may be due to increased reporting of domestic violence and due to improved community awareness efforts by the Bexar County Family Justice Center, the P.E.A.C.E. Initiative, Family Violence Prevention Services and others in the community concerned about this issue.



The domestic violence rate map shows the available data from the San Antonio Police Department and the rates are for the area within the jurisdiction of the city. The “far” areas of the county lack data on domestic violence because they are outside the jurisdiction of SAPD. Areas like the East and far Southeast are partly covered by SAPD, the rate is low because domestic violence calls outside San Antonio are recorded by another jurisdictions and not available for this report.

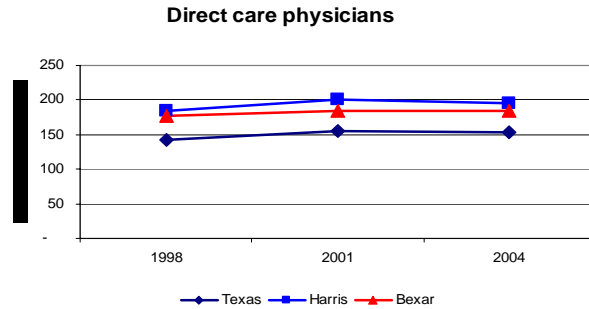


<sup>∞</sup> Counts of domestic violence presented in the BCCHA are somewhat different than the counts provided by the San Antonio Police Department. The data used by BCCHA is from the “police call database” that reports the initial charge. Counts provided by SAPD report those prosecuted for domestic violence in the criminal justice system.

*Direct care physician to population ratio*

Easy and fast access to physician services is required for residents to utilize services needed at the time of injury. Injury care is not always an emergency, but prompt care helps promote a timely recovery. In 2004, there were 2,748 direct care physicians in Bexar County and the ratio of direct care physician to the population per 100,000 is 184.

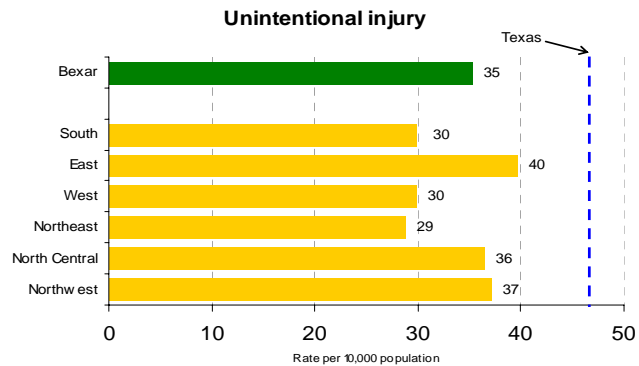
The trend data shows that this rate is constant over the last 12 years for the state and for the Harris and Bexar Counties. The distribution of physicians within Bexar County is skewed to the sectors in the north of the county, 72 percent of physicians in Bexar County practice in the north, one half of these are located near the South



Texas Medical Center in the East Northwest area. An additional 16 percent have offices in the central (downtown) area. The remaining 12 percent of physicians practice in the southern part of the county. Health insurance coverage helps provide access to health care services. An estimated 24.6 percent of the Texas population, or 5.4 million persons, were uninsured in 2004. In San Antonio it is estimated that 24.3 percent or 363,033 residents of the county are uninsured<sup>34</sup>. The disparity in the distribution of physicians may result in the inability of many residents in the southern areas of the county to have access to urgent care providers in a timely fashion when needed.

*Hospitalization rate for unintentional injury*

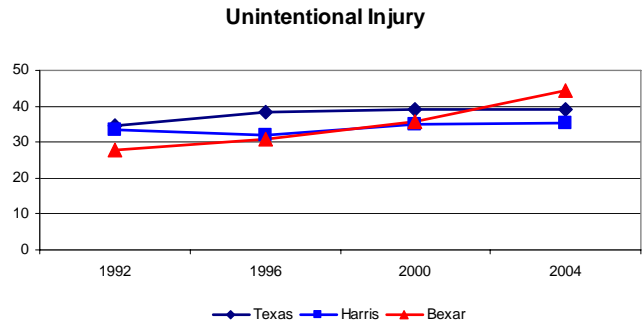
In 2004, in Bexar County there were 5,530 hospitalizations for unintentional injuries. This is 35 hospitalizations per 10,000 population. Rates across the sectors of the county are all lower than the state and Harris County rates. The rates vary from 29 to 30 hospitalizations per 10,000 people in the Northeast sector, West, and South sectors to 36 to 40 in the East, Northwest and North Central sectors.



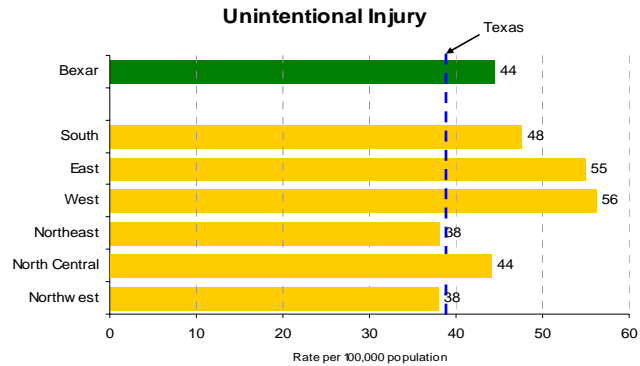
<sup>34</sup> Texas Hospital Association, FAST FACTS: The Uninsured in Texas, 2006 <http://www.thaonline.org/Issues1/Uninsured/UninsuredFastFacts.pdf>, accessed May 15 2006.

*Age-adjusted mortality for unintentional injury*

The number of deaths due to unintentional injury per 100,000 people is has been gradually rising in Bexar County. The increase has occurred across the state. In 1992, the death rate due to injuries was 28 deaths per 100,000 population, this has increased to 44 deaths per 100,000 in 2004. The 2004 age-adjusted injury mortality rates mark for the first time, since prior to 1992, the Bexar County age-adjusted injury death rate exceeding the statewide rate.



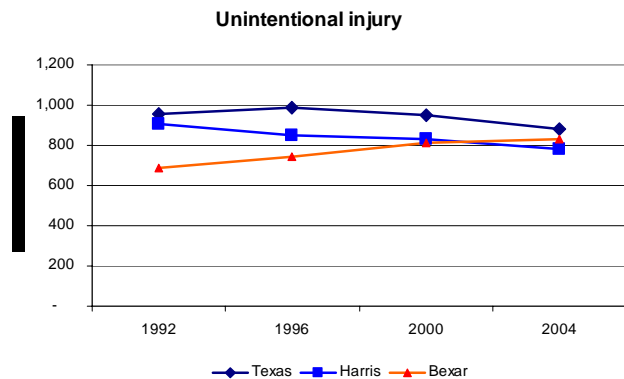
In contrast to hospitalization rates, the 2004 age-adjusted mortality rates for unintentional injuries within Bexar County do suggest a geographic pattern. Rates are highest in the southern part of the county. The West and East sectors have the highest rates at 56 and 55 per 100,000. The South sector has the third highest injury mortality rate (48 per 100,000) followed by the North Central sector. The Northwest and Northeast sector each have rates of 38 injury deaths per 100,000 residents living in the area.



Both social and environmental factors contribute to injury deaths. It is likely that the conditions that contribute to injury may be different depending on the social conditions in which one lives. People doing manual labor are more often exposed to hazards than those working in offices. Poor quality roadways are likely to result in more automobile crashes. Variations in the quality of the streets and highways occur according to the tax and voter base in different areas of the county.

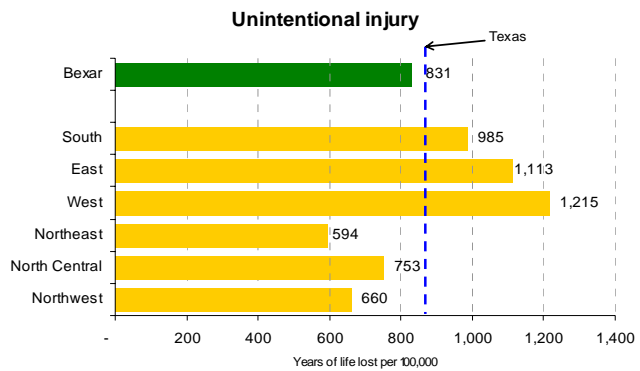
*Years of potential life lost (YPLL) due to unintentional injury*

In 2004, there were 379 premature deaths in Bexar County caused by unintentional injuries. This resulted in the loss of 11,444 years of life to those less than 65 years of age who died. On average, people who died from unintentional injury lost 29 years of life. This is 2 to 2.5 times as many years of life lost for chronic conditions such as heart disease, diabetes, and cancer. The YPLL was 831 per 100,000 people in 2004 for Bexar County. In the last 12 years, Bexar County experienced an increase of twenty percent in



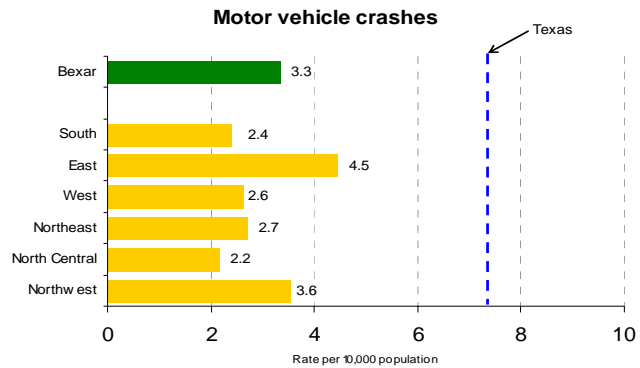
the YPLL rate. Texas and Harris, on the other hand, have experienced a slow decline in premature mortality due to unintentional injury.

Years of potential life lost rates for the unintentional injury are approximately 65 percent higher the southern sectors when compared to the sectors in the north. East and West sectors have rates that are considerably higher than in the north sectors at 1,113 and 1,215 per 100,000 people respectively. In the north sectors, YPLL rates range from 594 to 753. The higher proportion of years of life lost suggests that people living in the southern sectors are at greater risk of injury than people living in the north.



*Hospitalization rate for motor vehicle crashes*

The rate of hospitalizations in 2004 due to motor vehicle crashes in Bexar County is 3.3 per 10,000 population, which is below the state average of 7.5 hospitalizations per 10,000 population. The East sector reported the highest rate with 4.5 hospitalizations per 10,000 people. Many motor vehicle crashes are known to involve the use of alcohol and other drugs. Often drug use is associated with social and economic disadvantage.



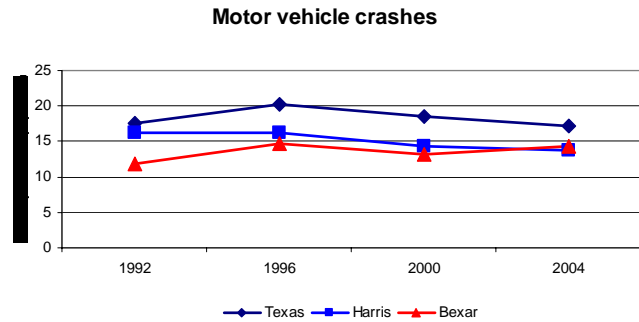
People turn to drugs to dull the pain of harsh social and economic conditions<sup>35</sup>. In addition, the number of miles driven per day may contribute to higher hospitalizations rates for motor vehicle crashes in Texas and Harris County

<sup>35</sup> Social determinants of health: the solid facts. 2nd edition / edited by Richard Wilkinson and Michael Marmot. The World Health Organization, 2003

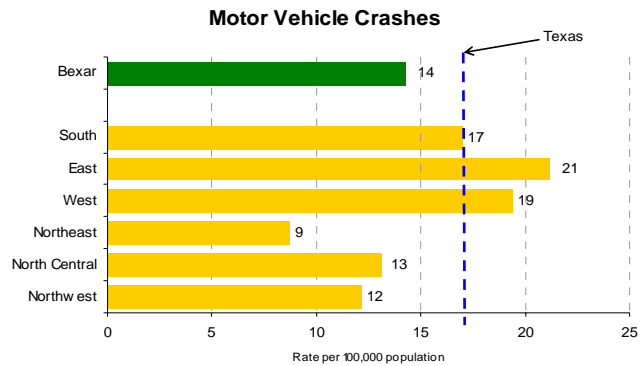
*Age-adjusted mortality for motor vehicle crashes*

In 2004, 204 people died in motor vehicle crashes. This number accounts for one-third of the deaths due to unintentional injury.

Deaths due to motor vehicle crashes generate a rate of 14 deaths per 100,000 people, which is somewhat lower than the statewide average of 17 deaths per 100,000 people. Trend data show that rates, both in Texas and Bexar County, have remained fairly stable since 1992. It is likely that the higher rate for motor vehicle deaths in Texas is the result of more miles driven on average throughout the State than in Bexar County.



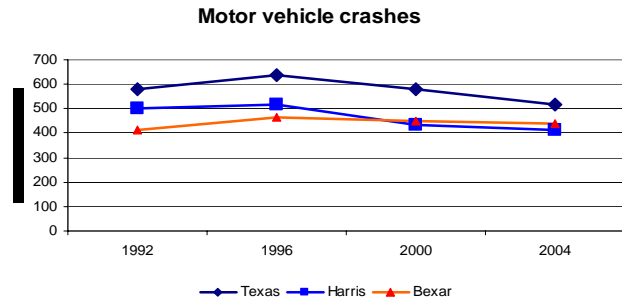
Within Bexar County, the East, South and West sectors report rates that exceed the statewide rates motor vehicle crash deaths. In the East sector, 21 deaths per 100,000 population were attributed to motor vehicle crashes, this is followed by the West with 19 deaths per and the South at 17 deaths per 100,000. The county's lowest rate of 9 motor vehicle crash deaths per 100,000, reported in the Northeast sector. Determinants of health concerns, among others, that influence motor vehicle deaths include



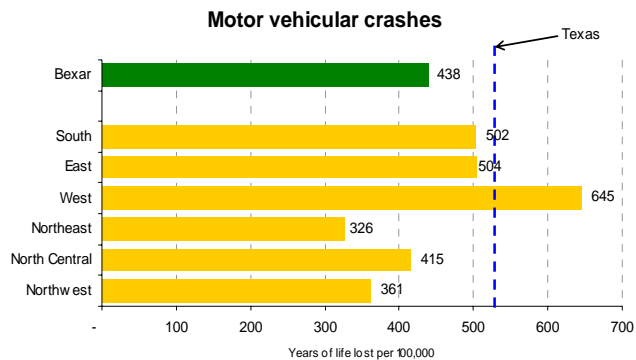
determinants of health concerns, among others, that influence motor vehicle deaths include race-ethnicity, age, income, education, and quality of roads. Young males are high-risk groups; Hispanic and African American males have higher mortality rates than non-Hispanic Whites.

### Years of potential life lost (YPLL) due to motor vehicle crashes

Of the 201 deaths due to motor vehicle crashes in Bexar County in 2004, 175 were to a person under age 65. This results in a motor vehicle crashes rate of 438 years of potential life lost per 100,000 population. The people who died lost on average of 33 years of life. The Bexar County YPLL rate trend is similar to that of the state of Texas and Harris County in that there was a slow increase in the YPLL rate from 1992 to 1996 followed by a slow decline in rates.



The West sector with an YPLL rate of 645 per 100,000 for motor vehicle crashes exceeds the Texas rate of 515 YPLL per 100,000 by 25 percent. The YPLL rates of the other southern sectors, while lower than the state rate, exceed the sectors in the north by approximately 40 percent. Efforts to reduce motor vehicle deaths such as requiring the use of seat belts and passing laws prohibiting street racing



have been effective but the lost of young lives, as a result of careless behaviors, is still much higher than acceptable. Perhaps community based projects that involve those at risk can design new ways to think about reducing risks.

### Homicide

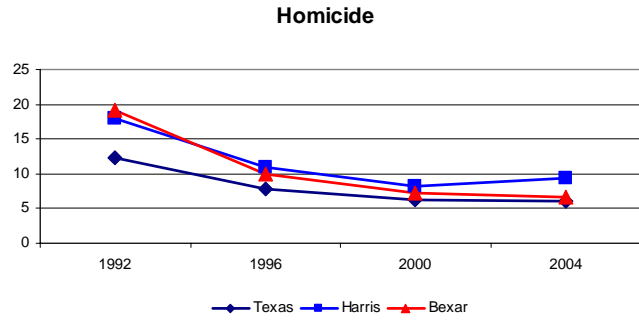
Homicide is an intentional injury. Intentional injuries are avoidable. Homicide is the second leading cause of death for young persons aged 15 to 24 years and the leading cause of death for African Americans in this age group<sup>36</sup>. In Texas, homicide is the 8<sup>th</sup> leading cause of death in the Hispanic and African American populations. Many factors that contribute to injuries also are closely associated with violent and abusive behavior, such as low income, discrimination, lack of education, and lack of employment opportunities. Males are most often the victims and the perpetrators of homicides. African Americans are more than five times as likely as whites to be murdered. There has been a decline in the homicide of intimates, including spouses, partners, boyfriends, and girlfriends, over the past decade, but this problem remains significant<sup>37</sup>. Homicide is a sentinel event, these events should not occur. Their occurrence in the community is a signal that other tensions are smoldering and/or building in the community. Community involvement may be a way to help build social cohesion and trust.

<sup>36</sup> Singh, G.K.; Kochanek, K.D.; and MacDorman, M.F. Advance report of final mortality statistics, 1994. *Monthly Vital Statistics Report* 45(3S), 1996

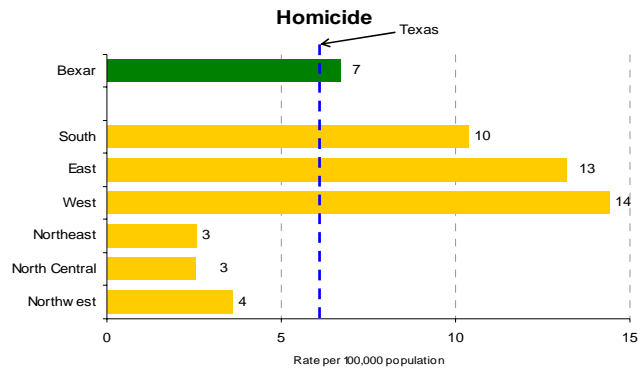
<sup>37</sup> Healthy People 2010 (Group). *Healthy people 2010 : understanding and improving health*. Washington, DC : U.S. Dept. of Health and Human Services

*Age-adjusted mortality for homicide*

Over the past 12 years the age-adjusted death rates due to homicide have declined in Texas, and Bexar and Harris Counties. The homicide mortality rates in Bexar County is 6.7 deaths per 100,000, compared to a statewide average of 6.1 deaths per 100,000 people, Harris County is somewhat higher with a rate of 9.4 per 100,000.



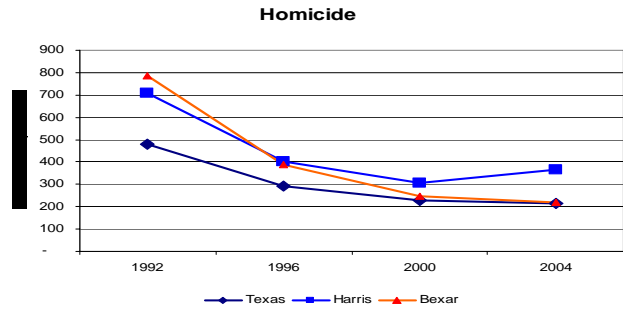
Within Bexar County, the homicide mortality rate is 3 times higher in the southern part of the county than in the north. The highest rate is in the West sector with 14 deaths per 100,000 residents due to homicide. The East sector with 13 per 100,000 deaths, and the South with 10 deaths per 100,000 residents closely follow this pattern. The homicide rates in the three northern sectors are between 3 and 4 deaths per 100,000 population. There is little doubt that social and environmental stressors play a role in the higher rates of violence in the south side of Bexar County.



*Years of potential life lost (YPLL) due to homicide*

Of the 101 homicides in Bexar County in 2004, 95 of them occurred to people younger than 65 years of age. This resulted in the loss of 2,662 years of life or an average of 31 years of life lost for every death. This results in an YPLL rate for homicide of 221 years lost per 100,000 people living in Bexar County.

There has been a very notable decline in years of potential life lost rates across Texas since 1992. In Harris and Bexar County the rates have been cut by 48 percent and 72 percent respectively. This good news should be encouragement to continue efforts that have been successful and find new ways to reduce violence in our communities.



The impact of the chart for years of potential life lost by sector is dramatic. The rates of years of potential life lost within Bexar County are 4.7 times as high in the South, with 375 YPLL per 100,000 as in the North, with 79 YPLL per 100,000. Often economic deprivation leads to stresses that result in violence. Family incomes in the south are less than half those of the northern sectors. The poverty rates are double those of the north, levels of education are much lower. Social and economic barriers create circumstances that increase social stress and result in increased violence. Children who grow up in this environment learn the culture of poverty and violence and have little chance of escaping it. Better ways of dealing with these concerns are needed.

