Youth Suicide Attempts

The risk of suicide increases dramatically during the teen years. During 2004, 920 nonfatal suicide attempts by Oregon youths ages 17 or younger were reported by Oregon hospitals, or about five every two days.

The Oregon reporting system identifies only attempts by youth with injuries severe enough to require emergency care at a hospital; consequently, the number of attempts reported must be considered a minimum. The proportion of youth described with a specific characteristic is based on only those cases with known values; that is, attempts in the "not stated" categories are excluded before the percentages are calculated. The Technical Notes section in Appendix B describes the methodology and limitations of the data.

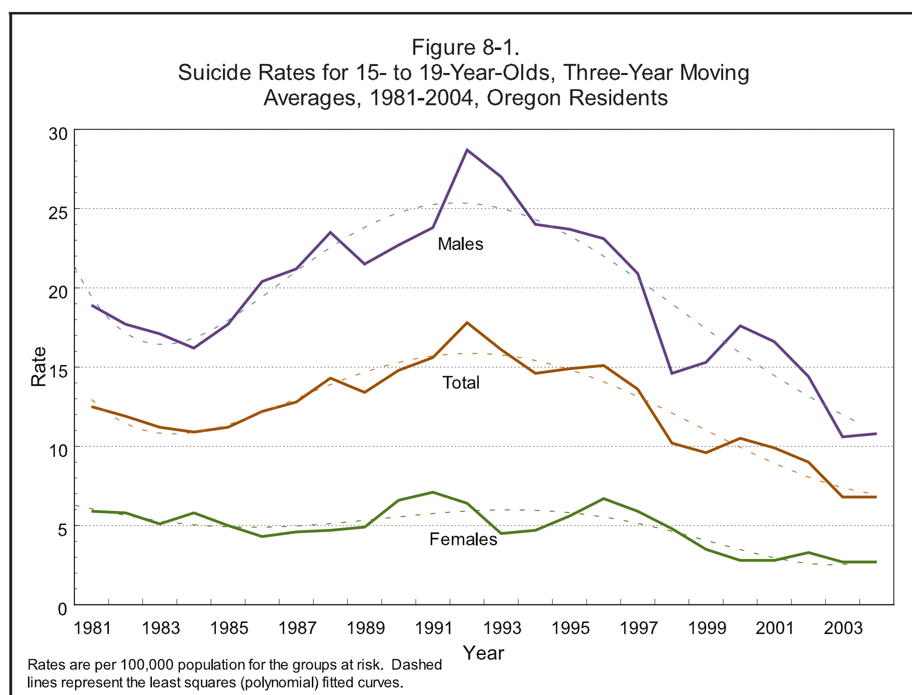
During the past decade, the suicide rate for Oregonians ages 15-19 has fallen to a level not seen since the 1970s.

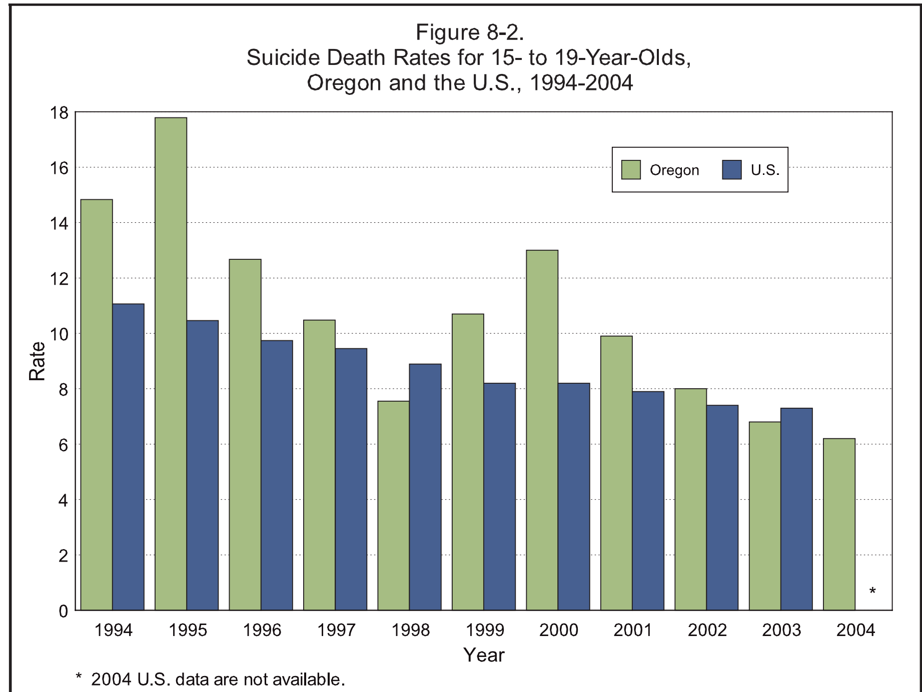
SUICIDE DEATHS

Temporal Trends

During 2004, 18 Oregonians 19 or younger died by suicide, two more than the previous year, but still one of lowest counts during the past quarter century. [Tables 8-1 and 8-2]. A decade earlier, there were 37 attempts that resulted in death. Because the number of events in any one year is small and subject to considerable random statistical variation, a better measure of the risk of suicide among teens are three-year moving rates, commonly expressed as the number of deaths among 15- to 19-year-olds per 100,000 population.[1] At 6.8 per 100,000 population, the 2002-2004 suicide rate was lowest in the last quarter-century.

Oregon's suicide rate for 15- to 19-year-olds was the 11th lowest nationally.





Number of Attempts by Year and Sex			
Year	Total	Male	Female
1988	648	110	535
1989	624	120	499
1990	526	118	406
1991	577	124	453
1992	685	141	544
1993	723	113	610
1994	773	187	586
1995	753	150	603
1996	778	163	615
1997	736	151	585
1998	761	190	571
1999	738	180	558
2000	802	178	624
2001	865	202	663
2002	876	221	655
2003	922	207	715
2004	920	209	711

Attempters of unknown sex are included in the total. Ideators are excluded beginning in 1999.

During 1959-1961, the teen suicide rate was 2.8 per 100,000 population, but during the ensuing years it increased inexorably reaching a record high of 17.8 during 1990-1992.[2,3] Since then, the rate has fallen dramatically declining 61.8 percent by 2002-2004. At its peak during 1990-1992, the suicide rate for males was 28.7 while that for females was 6.4, but by 2002-2004, the rates fallen to 10.8 and 2.7, respectively.

While most suicide deaths occurred at home, some youths who were transported to emergency departments died in the hospital. The risk of death is affected by the locality of the attempt, the degree of injury, and the time elapsed between injury and treatment.

Oregon Compared to the Nation

Oregon's youth suicide rate had historically been higher than the nation's, but in recent years has shown considerable improvement. [Figure 8-2]. During the three-year period 2001-2003 (the most recent available data), the national suicide death rate for 15- to 19-year-olds was 7.5 per 100,000 population. By comparison, the state's rate was 6.8 per 100,000 population, or 9.3 percent lower. Oregon's rate vis-a-vis other states (and District of Columbia) has declined in recent years, falling from the 14th highest during 1991-1993 to 41st highest (i.e., 11th lowest) during 2001-2003.

SUICIDE ATTEMPTS

Most attempts are probably not made with death as the goal. Rather, they are cries for help motivated by a desire to resolve interpersonal conflicts — especially in the case of medically non-serious attempts.

Data Caveats

The Adolescent Suicide Attempt Data System (ASADS) identifies only those nonfatal attempts among youth 17 or younger who sought care at a hospital and for whom a report was filed. Because reporting by hospitals can vary from year to year, caution should be used when interpreting youth suicide attempts over time, particularly by county. See the Technical Notes section in Appendix B for additional information on methodology.

Gender

In recent decades, girls have consistently been more likely to attempt suicide than boys; this pattern persisted in 2004 when more than three-fourths (77.3%) of all reported attempts were by girls. [Table 8-3].

Age

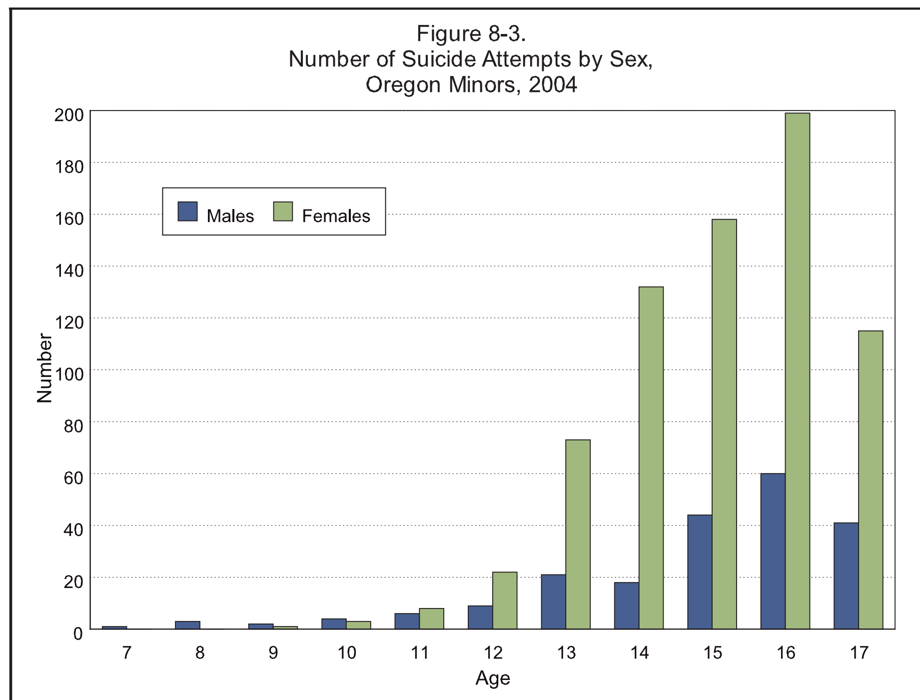
During 2004, seven children under the age of 10 attempted suicide, with the youngest a 7-year-old who attempted to jump to his death in response to family discord. (The youngest child ever reported to have attempted suicide in Oregon was a 5-year-old in 2001.) Fifty-nine attempts by preteens were reported. [Table 8-3]. Attempts by 13- and 14-year-olds numbered 244 and those by 15- to 17-year-olds totaled 617. As in years past, 15- to 17-year-olds accounted for about two-thirds (67.1%) of all reported attempts.

Race

Reflecting the racial/ethnic composition of the state, most attempts were made by white youth. Beginning in 2002, more detailed race information was collected permitting more than one race to be listed on the attempt report form for each youth who

Number of Attempts by Age and Sex, 2004

Age	Total	Male	Female
7	1	1	0
8	3	3	0
9	3	2	1
10	7	4	3
11	14	6	8
12	31	9	22
13	94	21	73
14	150	18	132
15	202	44	158
16	259	60	199
17	156	41	115



Number of Attempts by Race/Ethnicity		
Race	2004	2003
Total	920	922
White	770	740
African American	28	23
Indian	13	15
Chinese	1	0
Japanese	0	0
Asian Indian	2	1
Korean	1	0
Vietnamese	0	1
Other Asian	8	13
Hawaiian	0	0
Samoan	0	1
Other Pacific Islander	2	0
Other Races	2	3
Multiple Races	5	7
Hispanic	55	59
Not Stated	33	59

attempted suicide. Hispanics may be of any race; in the sidebar to the right, Hispanic ethnicity takes precedence over any race. Attempt rates by race during 2002-2004 were: White, 238.4 per 100,000 population; African American, 180.1; American Indian, 146.0; Hispanic, 111.7; and Asian and Pacific Islander, 85.9. (All specified races are non-Hispanic.)

Household Situation

Among youth reported to have attempted suicide, the largest group (27.9%) lived with their mother only, followed closely by youth who lived with both parents (26.5%).[4] A smaller proportion lived with a parent and stepparent (15.4%). About one in 25 (4.3%) of the attempts were made by adolescents living in a juvenile facility. [Table 8-4].

Geographic Distribution

While the suicide attempt rate for the state was 223.1 per 100,000 (10- to 17-year-olds) during 2004, the rates for individual counties varied widely. [Figure 8-4]. Among the counties with 10 or more attempts, the three with the highest rates were: Hood River, 413.1; Wasco; 344.1; and, Lane, 336.6. [Table 8-5]. No attempts were reported for adolescents in five counties, all but one of which were east of the Cascades: Grant, Lake, Sherman, Tillamook, and Wallowa. (Every year since 1988, when reporting first began, at least one and as many as 11 attempts were reported annually by Tillamook County Hospital.) Table 8-19 lists the number of attempts reported by individual Oregon hospitals for the past 11 years. Because of incomplete reporting by some hospitals, attempt rates by county should be interpreted with caution. Data from death certificates are less susceptible to reporting bias. See the sidebar on the next page for the number of suicides (and rate) by county.

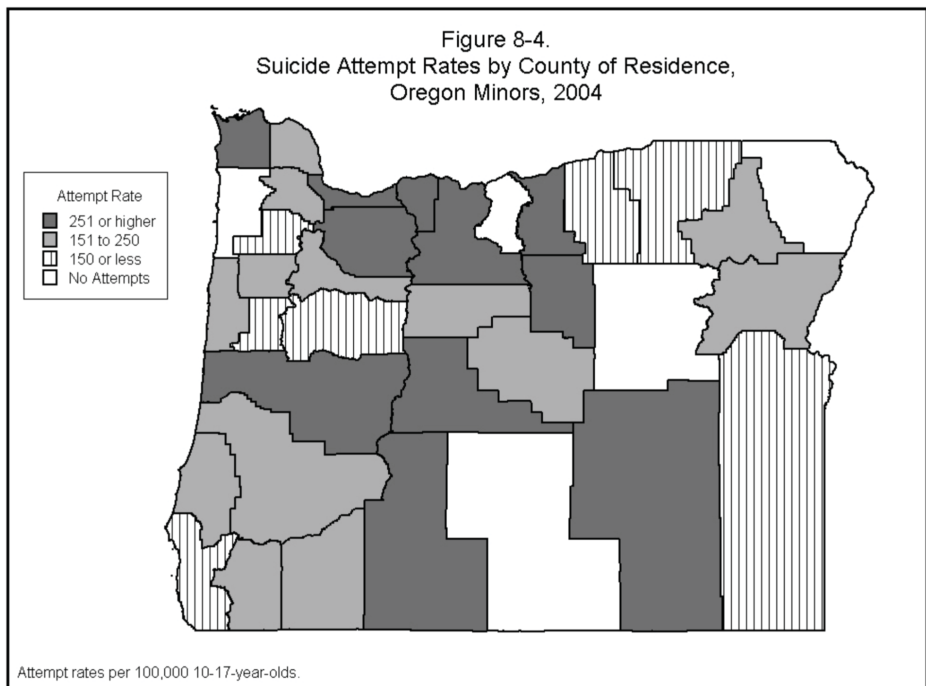


Figure 8-4.
Suicide Attempt Rates by County of Residence,
Oregon Minors, 2004

Attempt rates per 100,000 10-17-year-olds.

Place of Attempt

Attempts were most commonly made in a home, either the adolescent's own home (77.1%), another's home (5.0%), or a foster home (2.5%). [Table 8-6]. Fewer than one in 25 were made at school (4.6%) or juvenile facilities (4.2%).

Month and Date of Attempt

The summer school vacation months are consistently the season of lowest risk and spring the season of greatest risk; 18.0 percent of all attempts occurred from June through August compared to 33.0 percent during March through May. About one in four attempts occurred during the winter (26.5%) and fall (22.4%).

More attempts occurred on Monday than any other day of the week. Just 9.3 percent of the attempts occurred on Saturday compared to 18.0 percent on Monday, a nearly two-fold difference. Sunday accounted for 12.4 percent of all attempts, a lower proportion than that for any school day.

Past Attempts

About one-half (48.2%) of all attempts were made by youth who had made previous attempts, but females were more likely than males to do so (50.7% vs. 39.6%). [Table 8-7]. The youngest child to make repeat attempts was just eight years old. Adolescents living with both natural parents were least apt to have made prior attempts (37.1%) while those living with their father were most likely (58.6%). Those living with their mother or a parent and step-parent were similar in their likelihood of having made previous attempts (48.3% and 46.2%, respectively). Youth living east of the Cascade Range more often made repeated attempts than did their counterparts to the west (57.0% vs. 44.1% for Tri-County youth and 50.8% for youth living elsewhere in western Oregon).

Because a single adolescent may make multiple attempts during any one year, it should be remembered that references to the number or proportion of attempts with a given characteristic may be influenced by the repeated attempts of a single individual.

Stated Intent

About one in three youth (35.4%) told another person of their plan to attempt suicide prior to the act, warnings that could, and should, have led to intervention. There was little difference by gender or age in the likelihood of a youth telling another person of his or her plan. [Table 8-8]. In about one of every six occurrences (16.3%), youths told their parents of their plan for self-harm prior to doing so. One in 10 (9.6%) had told their friends ahead of time. Siblings, counselors, and teachers were also told, but much less frequently. The category "other persons" in Table 8-8 most commonly included grandparents and residential staff at institutions.

Suicide Rates by County, Oregon Residents Ages 10-24, 1990-2004

County	Rate	Number
State Total	10.5	1063
Baker	18.8	9
Benton	6.6	23
Clackamas	8.9	90
Clatsop	16.7	18
Columbia	5.9	8
Coos	12.2	22
Crook	13.1	7
Curry	14.0	7
Deschutes	8.8	27
Douglas	17.1	52
Gilliam	18.4	1
Grant	12.6	3
Harney	35.6	8
Hood River	16.8	10
Jackson	9.8	51
Jefferson	25.6	14
Josephine	7.5	15
Klamath	14.6	29
Lake	17.9	4
Lane	9.9	104
Lincoln	12.5	14
Linn	11.8	37
Malheur	8.8	9
Marion	10.8	93
Morrow	3.0	1
Multnomah	11.5	210
Polk	6.0	12
Sherman	17.4	1
Tillamook	9.3	6
Umatilla	12.8	28
Union	6.9	6
Wallowa	18.9	4
Wasco	20.1	14
Washington	8.1	98
Wheeler	24.4	1
Yamhill	10.6	29

Rates per 100,000 population.

Italics denote counties with statistically significant high rates. None were statistically significantly lower.

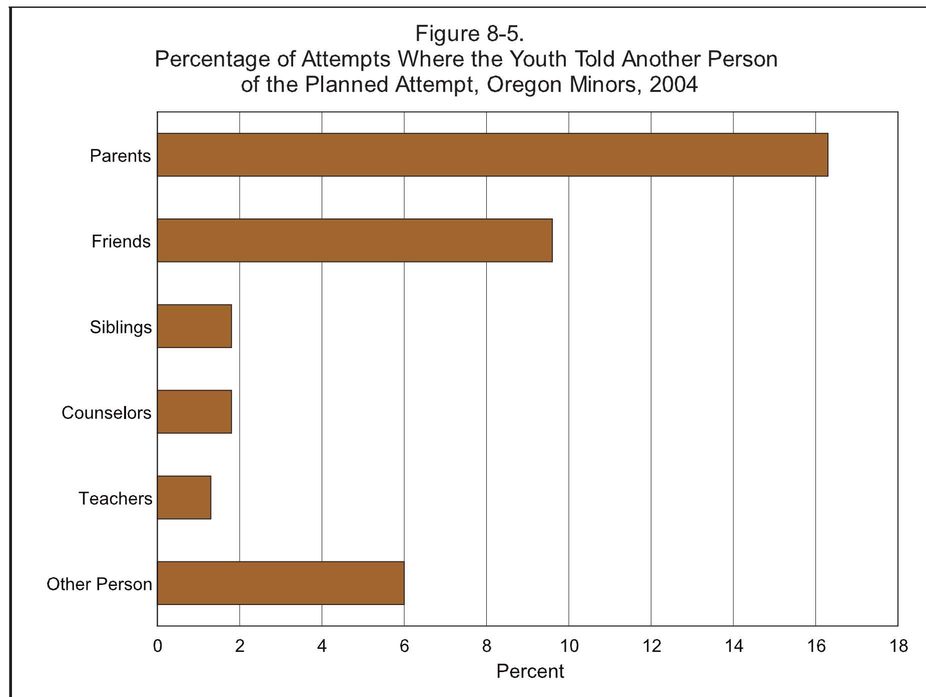


Figure 8-5.
Percentage of Attempts Where the Youth Told Another Person of the Planned Attempt, Oregon Minors, 2004

Method

Drugs were used in two of every three attempts.

Up to three different attempt methods can be recorded for each attempt, although nearly all (90.3%) involved a single method. Oregon adolescents used a variety of methods in their attempts, but ingestion of drugs alone accounted for the majority (59.3%). Overall, 18.6 percent of all attempts involved acetaminophen, a substance of particular concern because of its potential lethality and long-term toxic effects, consequences not commonly known by adolescents. Other recurring drugs included aspirin, Benadryl, ibuprofen, Naprosyn, Seroquel, trazodone, Vicodin, Wellbutrin, and Zoloft. Females were more likely than boys to ingest drugs, 62.9 percent vs. 47.4 percent, while preteens were less likely than teens. [Table 8-9]. Youths living east of the Cascade Range more often used drugs in their attempts than those living in the Tri-County area or elsewhere in western Oregon: 67.7 percent, 55.6 percent, and 60.5 percent, respectively.

Cutting and piercing injuries alone ranked second, accounting for 23.0 percent of the cases, with lacerations of the wrists and arms accounting for nearly all of the injuries. Knives and razor blades were most commonly used. There was little difference by gender or age in the proportion of attempts involving cutting/piercing.

All attempts with guns ended in death.

Hanging and suffocation alone ranked third and was used by 3.8 percent of the youth who attempted suicide; males were far more likely to use this method, 12.0 percent vs. 1.4 percent of females. Attempts involving hanging and/or suffocation are second only to gunshots in the risk of death.

Ranking fourth, at 1.7 percent, was ingestion of substances other than drugs. Among those used were: bleach, ethanol, hy-

drogen peroxide, Pine-Sol, and a sugar overdose (by a diabetic). There was little difference by gender or age in the likelihood of using non-drug substances.

About one in 10 (9.7%) of the attempts involved multiple methods, most commonly drugs and/or other substances combined with cutting (5.5%). Drugs combined with other substances accounted for 2.4 percent of the attempts.

The categories "other single method" and "other multiple methods" in Table 8-9 include actions such as ingestion of sharp objects, running into traffic, and striking the head with a blunt object. No attempts with firearms are shown in the table because all such attempts resulted in death.

Table 8-10 shows that youth making repeated attempts were more likely to use more violent methods (although not necessarily more lethal methods). Those who had made prior attempts were more likely to use cutting/piercing and multiple methods.

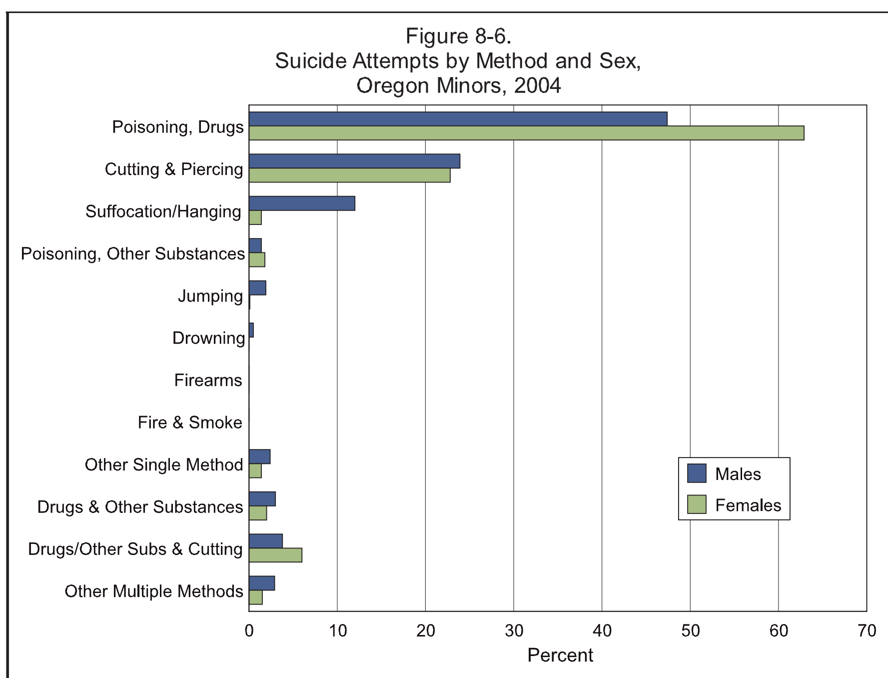
Hospital Admission Status

One-half (50.1%) of all youth who attempted suicide were admitted by hospitals as inpatients. Reflecting their propensity to use more violent/lethal methods, males were somewhat more likely to be admitted as inpatients, 53.1 percent vs. 49.2 percent of females. There was no clear trend in admission status by age.

Striking differences exist by region where 61.5 percent of Tri-County youth who attempted suicide were admitted for treatment as inpatients compared to 25.2 percent of youth living east of the Cascade Range. Elsewhere west of the Cascades, 46.4 percent of youth who attempted suicide were admitted.

Youth admitted as inpatients

Tri-county - 61.5%
Other Western - 46.4%
Eastern - 25.2%



Among the categories with at least 10 attempts reported, youth who attempted to hang or suffocate themselves were most likely to be admitted as inpatients; more than three-fourths (77.1%) were admitted compared to about one-third (36.8%) of those who cut themselves, the group least likely to be admitted. [Table 8-12].

As the number of risk factors increased, so did the likelihood of admission as an inpatient.

The likelihood of inpatient admission increased with the number of risk factors reported by the youth (see Recent Personal Events, below). While 34.5 percent of those reporting one risk factor were admitted as inpatients, 49.3 percent of those reporting two factors, 76.7 percent of those reporting three factors, and 85.2 percent of those reporting four or more factors were admitted as inpatients.

Children living with a parent and stepparent were markedly more likely to be admitted as inpatients than were those living with both natural parents (64.6% vs. 47.8%).

Psychological Conditions

Nearly all (84.6%) youth who intentionally injured themselves were reported by their caregivers to be suffering one or more psychological conditions. By far, the most commonly reported condition was major depression (52.3%). It was diagnosed somewhat more often among females than males (53.5% vs. 48.2%) and more often among 15- to 17-year-olds than younger youth (54.4% vs. 47.9%). Depression was reported more often for youth living east of the Cascades than those living west of the mountains (58.3% vs. 47.3%). Youth who had made prior attempts were half-again as likely to be diagnosed with depression as were those who had not been (59.3% vs. 38.9%).

Ranking second and third were attention deficit (hyperactivity) disorder (13.7%) and conduct disorder (10.5%). Among the conditions reported in at least one of every 20 cases were adjustment disorder (9.3%) and bipolar disorder (6.8%). Besides the disorders shown in Table 8-13, other recurring diagnoses included: anxiety disorder, mood disorder, and oppositional defiant disorder. Other notable conditions included Asperger's syndrome, autism, fetal alcohol syndrome, fire-setting syndrome, mental retardation, and sleeping disorder.

Mental disorders were least often reported for youth living with both parents (78.9 percent) and most often for those living with a father (90.6%) or grandparents (94.7%). Previous suicide attempts were far more common among patients diagnosed with mental disorders (54.7%) than those who were not (13.3%).

Recent Personal Events

Suicidal behavior is a consequence of a complex interaction of factors, not a single event, although a single event may act as a trigger. [Figure 8-7]. The report form allows one or more events/factors leading to the attempt to be recorded.

Lack of social support is a common thread among adolescents who attempt suicide, especially among those who cite multiple reasons. For example, an 11-year-old boy who had a mother who worked the graveyard shift and a father who was in prison reported family discord, problems at school, peer pressure and physical abuse.

Family discord was the most common factor reported.

Youth admitted as inpatients were over five times as likely to be identified with four or more of the following risk factors than were those who were discharged from the emergency room (21.1% vs. 3.9%). As the number of risk factors increased, so did the likelihood of an individual being diagnosed with a psychological disorder. For example, 5.1 percent of adolescents with one risk factor were diagnosed with a conduct disorder compared to 12.4 percent of those with two factors, 15.8 percent of those with three factors and 19.4 percent of those with four or more factors.

Family discord was, by far, the most common factor associated with suicide attempts.[5] More than half (57.2%) of Oregon minors reported discord as a precipitating event. [Table 8-14]. It was reported a little more often among females than males (58.3% vs. 53.1%). Two-thirds of preteens (69.6%) reported discord compared to about half (53.8%) of 15- to 17-year-olds, the age groups most likely and least likely to report this situation. The likelihood of family discord was related to the parental makeup of a household; while 50.0 percent of youth living with both parents reported this problem, 72.7 percent of those living with a parent and stepparent did so.

School-related problems were cited by more than one in four (28.9%) youth who attempted suicide, but were more common

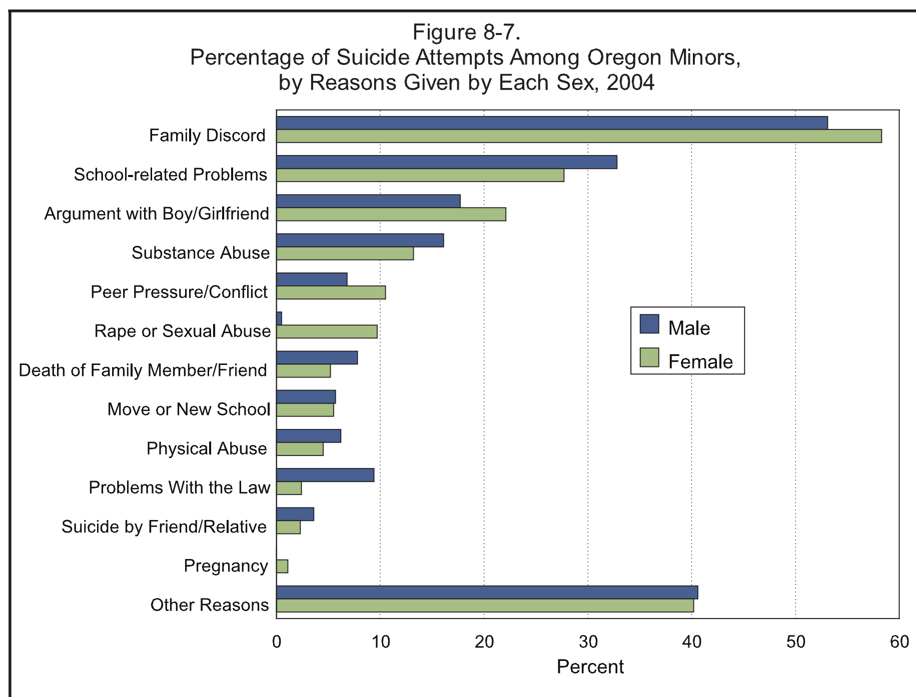
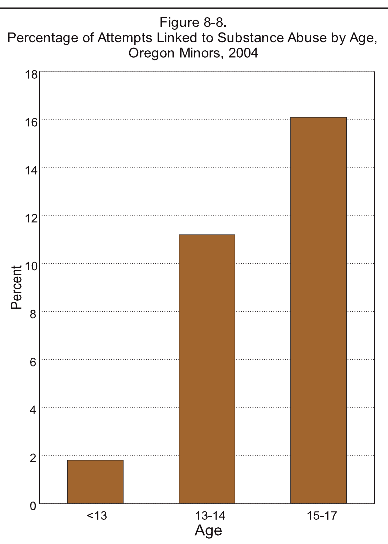


Figure 8-7.
Percentage of Suicide Attempts Among Oregon Minors, by Reasons Given by Each Sex, 2004

"I feel like everyone hates me."
A 17-year-old girl

among males, 32.8 percent vs. 27.7 percent of females. There was an inverse relationship between the prevalence of school-related problems and age with 41.1 percent of preteens reporting them compared to 25.0 percent of 15- to 17-year-olds. These types of problems were about twice as prevalent among Tri-County youth (37.5%) than those living in other areas of western Oregon (19.9%) or east of the Cascades (17.2%).

An **argument with a boyfriend or girlfriend** was reported by one in five youth (21.1%), making it the third most frequently cited factor. It was more common among females than males (22.1% vs. 17.7%). As age increased, so did the likelihood of this type of argument precipitating an attempt; just 5.4 percent of preteens reported arguments with their boyfriend/girlfriend compared to 24.1 percent of 15- to 17-year-olds.



Substance abuse was linked to about one in seven attempts (13.8%), with males slightly more likely to do so than females (16.1% vs. 13.2%). Like arguments with boyfriends and girlfriends, substance abuse was reported more frequently by older youth (16.1% vs. 1.8% of preteens).

Peer Pressure/conflict was cited by about one in 10 adolescents (9.6%). Females were more likely to do so than males (10.5% vs. 6.8%) and younger youth more likely than older youth (16.1% of preteens vs. 8.4% of 15- to 17-year-olds). Peer pressure/conflict was reported twice as often by Tri-County youth (12.8%) than those living in other western counties (6.4%) or east of the Cascades (5.7%).

Rape or sexual abuse was linked to 7.6 percent of youth suicide attempts, but was cited almost exclusively by females (9.7% vs. 0.5% of males). There was no clear pattern by age. Rape/sexual abuse was reported about twice as often among Tri-County youth (9.8%) than those living elsewhere in western Oregon (5.0%) or east of the Cascade Range (5.7%). Youth citing rape or sexual abuse were most likely to have made previous attempts; 55.9 percent had done so. Eight in 10 (83.1%) were admitted for treatment as inpatients, the highest proportion for any of the reasons shown in Table 8-16. Fathers, stepsisters, and stepbrothers were most often identified as the perpetrator.

Youth citing rape/ sexual abuse were most likely to have made prior attempts.

The **death of a family member or friend** was reported by 5.8 percent of youth who attempted suicide, but was cited more often by males than females, 7.8 percent versus 5.2 percent. There was little difference in the frequency by age.

A **move or new school** was a factor in 5.5 percent of the attempts, with little difference by gender. There was no clear pattern by age.

Physical abuse was reported by about one in 20 youth (4.9%), with boys somewhat more likely to do so than girls (6.2% vs. 4.5%). There was no clear trend by age. Physical and sexual abuse may be

much more common than would appear from the hospital report forms. When responding to statewide surveys, only two-thirds of high school students said they had been neither physically nor sexually abused. Children both physically and sexually abused were 10 times more likely to report having attempted suicide than were nonabused children.[6]

Problems with the law were linked to one in 25 attempts (4.0%). Males were far more likely to mention this than were females (9.4% vs. 2.4%) and older youth were more likely to do so than were younger youth.

Although required by law, hospitals failed to refer one in eight youth for follow-up care.

Suicide by a friend or relative was reported by 2.6 percent of youth as a factor in their own attempts, with males more likely to do so than females (3.6% vs. 2.3%). Three percent of 15- to 17-year-olds said a suicide by a friend or relative triggered their own attempt compared to 1.8 percent of younger youth.

Pregnancy was a factor in about one in 100 attempts and was cited exclusively by females.

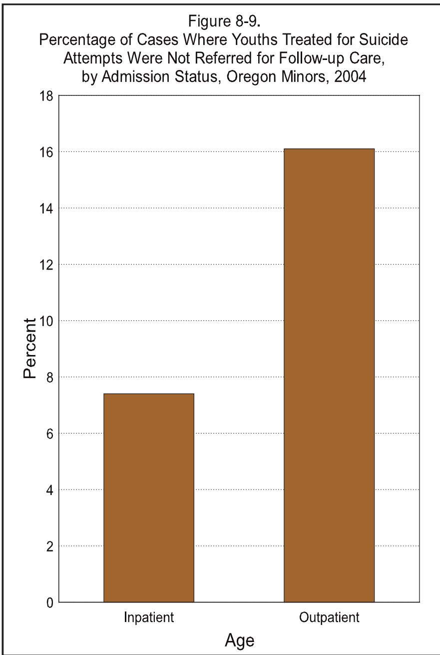
Other reasons not classified above were associated with two-fifths of all attempts (40.3%). The reasons were wide-ranging, including: parental (terminal) illness, caught cheating at school, chronic illness, parental abandonment, parental substance abuse, causing a motor vehicle crash, learning disability, parent being sent to prison, family financial problems, and obesity.

Same-sex sexual orientation is generally accepted as a related underlying cause of teen suicide. The issue is difficult to study under the current reporting system because of lack of comparison data. Moreover, even if information on sexual orientation were requested on the reporting form, its validity would be highly questionable given the environment in which the information is usually collected; a substantial portion of the teens would be unlikely to respond accurately. Nevertheless, the risk is one that health-care providers must consider.

Referral

Oregon law requires hospitals that treat an adolescent for a suicide attempt to also refer that adolescent for follow-up care.[7] Nonetheless, hospitals failed to do so 11.7 percent of the time. Of the 54 hospitals that reported treating youth for suicide attempts, 11 referred youth for follow-up treatment in 80-89 percent of the cases; seven made referrals in 70-79 percent of the cases; and six made referrals in fewer than 70 percent of the cases. The lowest referral rate among hospitals reporting at least 10 attempts was 58.6 percent (at Rogue Valley Medical Center).

There was little difference by gender (12.1% of males vs. 11.6% of females) and no clear trend by age. Adolescents treated on an outpatient basis, however, were especially unlikely to receive a referral (16.1% vs. 7.4% of inpatients).



ENDNOTES

1. Moving (rolling) rates are often used when rates are based on rare events that are tracked over time. This method dampens the random statistical variation that occurs when the number of events is relatively small by averaging the data for a group of years. That is, the sum of the deaths for a given period is divided by the sum of the population for the same period. In Figure 8-1, for example, the data point for 2000 consists of a three-year average, 1998-2000. The next data point, for 2001, consists of data for 1999-2001.

2. The following rates were recorded for earlier years: 1989-1991, 15.6 per 100,000 population; 1979-1981, 11.7 per 100,000; 1969-1971, 7.0; and 1959-1961, 2.8.

3. During 1959-1961, the suicide rates were 4.6 per 100,000 for males and 1.0 for females.

4. Among living situations reported by at least 10 youth.

5. Among reasons cited by at least 10 youth.

6. Oregon Center for Health Statistics. Suicidal Behavior: A Survey of Oregon High School Students. Health Division. Oregon Department of Human Resources. September 1998. 64 pp.

7. ORS 441.750 states that “Any hospital which treats as a patient a person under 18 years of age because the person has attempted to commit suicide: Shall cause that person to be provided with information and referral to inpatient or outpatient community resources, crisis intervention or appropriate intervention by the patient’s attending physician, hospital social work staff or other appropriate staff.”