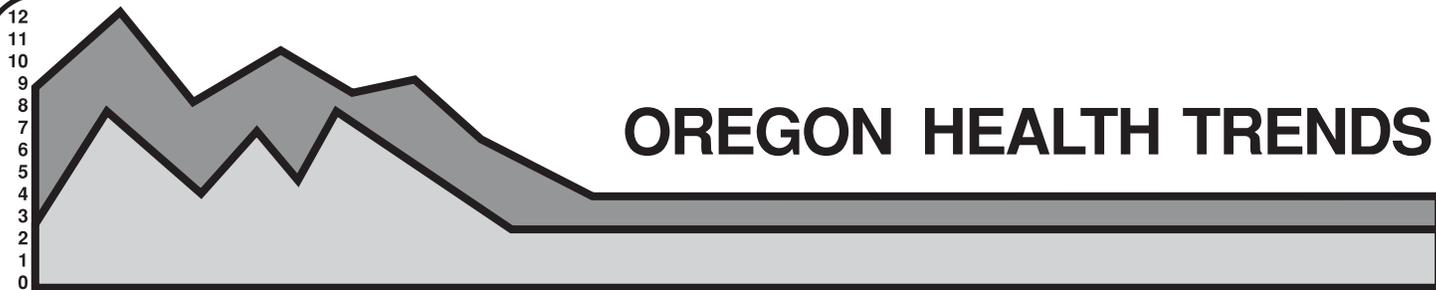


OREGON HEALTH TRENDS



Center for Health Statistics (503) 731-4354
OREGON DEPARTMENT OF HUMAN SERVICES

OREGON TEEN PREGNANCY *County Trends, 1998-2002, an Update*

SERIES NO. 61
APRIL 2004

Citizens throughout Oregon have been working hard to reduce the incidence of teen pregnancy. This issue of Oregon Health Trends provides data on teen pregnancy (ages 15-17) over time for each county.

Oregon has met the 2005 benchmark each year since 2000. From 1998 through 2002, Oregon had an average of 2,530 teen pregnancies per year for a rate of 35.1 pregnancies for every 1,000 females between the ages of 15 and 17. The rate has decreased for the last five years and the five year trend shows a significant trend downward.

Three counties have a five year aggregate rate which was significantly higher than the state rate. These counties were Jefferson, Marion, and Multnomah. Two counties, Benton and Clackamas, have rates that are statistically significantly lower than the state rate (Figure 1, below).

Seventeen counties had significantly decreasing trends for teen pregnancies between 1998 and 2002. (Figure 2, page 5). No county had a significantly increasing trend.

1. Use of the word significant in this article means a statistical test for significant difference was computed and found at the $p \leq .05$ level.

Oregon

Teen pregnancy Age 15-17, 1990-2002

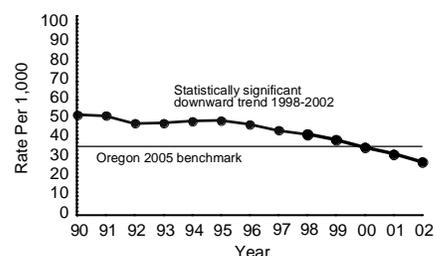
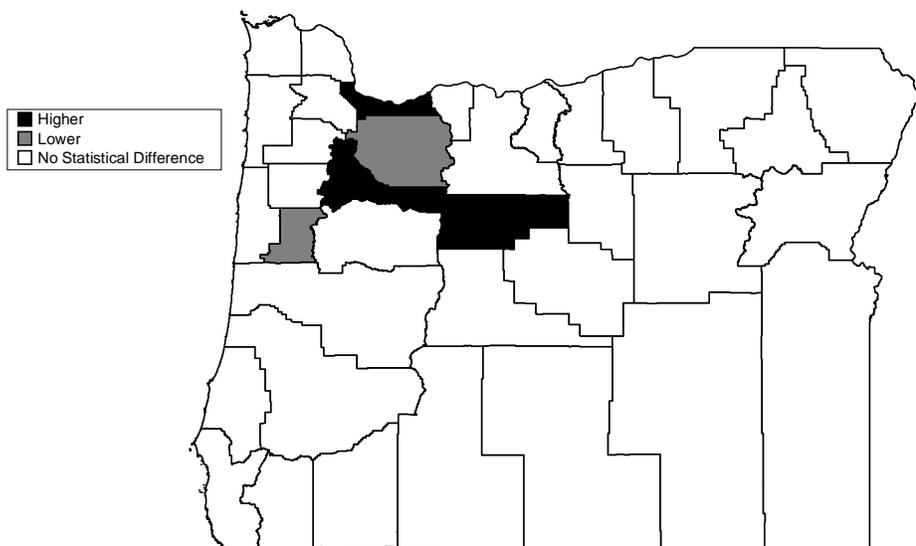


Figure 1

Teen Pregnancy Rates that are Significantly Different than the State Rate, 1998-2002



Source: Center for Health Statistics, DHS - Health Services

Teen Pregnancies averaged 2,530 per year in Oregon during 1998-2002.

The trend downward in the last five years is statistically significant.

Table 1. Oregon Teen Pregnancy Rate 1993-2002 Among Females Age 15-17											5 Year Aggregate rate 98-02	Aggregate Rate is Significantly Different
County of Residence	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002		
State total	47.9	49.0	49.3	47.3	44.2	42.1	39.3	35.2	31.7	27.6	35.1	
Baker	40.2	51.1	25.1	19.1	23.1	34.1	25.2	22.7	20.1	25.3	25.5	
Benton	25.9	28.0	27.1	26.7	20.4	17.6	24.3	11.9	6.8	17.5	14.5	lower
Clackamas	33.2	39.1	35.4	36.7	34.4	31.8	29.9	29.7	22.2	17.9	26.2	lower
Clatsop	44.2	48.8	54.9	62.2	41.1	32.2	32.1	30.9	28.4	27.9	30.3	
Columbia	44.5	38.5	34.6	49.0	44.1	31.0	25.7	30.9	27.1	15.7	26.0	
Coos	53.8	51.7	40.2	38.8	38.7	40.6	36.6	33.8	27.0	25.0	32.6	
Crook	28.8	50.0	47.6	53.1	46.4	38.1	25.8	28.9	11.5	19.6	24.1	
Curry	34.5	42.0	32.8	31.2	47.4	22.7	28.0	29.9	32.1	24.5	27.2	
Deschutes	44.5	43.0	43.2	47.6	36.0	38.2	29.9	29.8	31.9	23.9	30.5	
Douglas	52.5	49.5	52.3	37.6	43.3	41.1	43.8	35.6	33.9	28.6	36.7	
Gilliam	*	*	*	*	*	*	*	*	*	*	\$16.3	
Grant	53.3	33.7	33.1	§15.0	37.6	23.7	34.9	§16.8	§5.7	§5.1	17.6	
Harney	47.1	41.7	54.5	28.7	§16.4	33.2	51.7	47.0	§13.5	§11.8	32.1	
Hood River	39.4	42.9	35.0	39.5	38.6	46.3	30.9	36.7	27.5	17.5	31.7	
Jackson	49.8	39.3	40.5	43.8	36.2	33.2	28.6	28.6	32.7	28.5	30.3	
Jefferson	95.1	92.1	98.8	94.4	59.9	82.4	72.3	72.3	64.5	41.3	66.2	higher
Josephine	44.1	35.6	41.3	41.4	29.9	36.5	39.9	33.0	29.2	18.5	31.3	
Klamath	53.0	62.4	55.7	62.8	36.5	53.0	42.0	41.9	47.1	29.4	42.7	
Lake	37.2	47.9	41.7	§18.2	64.5	35.2	28.0	§20.0	§6.6	26.6	24.2	
Lane	38.1	45.1	45.5	44.1	43.4	44.3	36.5	29.5	23.0	23.8	31.1	
Lincoln	47.7	50.9	45.8	46.2	53.3	42.4	43.0	33.8	46.7	27.2	38.4	
Linn	38.5	40.8	46.6	47.6	48.9	32.1	39.9	40.4	34.1	30.7	35.4	
Malheur	57.4	68.0	73.4	51.8	37.7	42.6	23.8	43.6	35.3	31.9	35.2	
Marion	60.7	59.3	63.1	59.4	63.5	51.5	51.7	42.8	39.2	39.2	44.7	higher
Morrow	63.5	64.0	68.4	45.9	77.6	27.6	57.4	41.8	44.6	22.3	38.7	higher
Multnomah	73.7	75.7	68.1	60.0	55.0	52.0	50.3	46.8	41.4	35.7	45.3	higher
Polk	40.2	37.3	38.2	35.7	35.6	39.4	29.3	18.4	27.6	22.0	26.9	
Sherman	*	*	*	*	*	*	*	*	*	*	§13.2	
Tillamook	33.5	16.5	38.0	38.2	36.1	42.6	56.2	18.7	20.6	35.0	34.4	
Umatilla	41.7	53.2	62.9	52.3	53.9	48.6	50.6	51.4	35.8	36.3	44.5	
Union	31.7	33.3	25.2	37.4	26.6	24.1	31.4	19.0	19.0	14.9	21.8	
Wallowa	§19.7	35.5	27.9	§11.0	27.9	32.8	§24.2	§13.3	§6.8	§11.1	18.2	
Wasco	39.5	29.4	42.2	47.0	50.0	33.4	39.0	54.9	41.9	16.4	36.7	
Washington	36.7	35.9	42.2	43.3	39.2	43.1	36.9	34.1	32.1	26.9	34.5	
Wheeler	*	*	*	*	*	*	*	*	*	*	§17.5	
Yamhill	35.3	37.7	53.2	47.1	42.2	52.0	39.5	27.6	35.7	25.4	35.7	

* Detailed reporting of small numbers may breach confidentiality.

§ Rates based on less than 5 events are unreliable. See Table 2 for number of events.

Table 2. Total Pregnancies for Oregon females ages 15-17: 1993-2002											5 Year Aggregate 98-02
County of Residence	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
State total	2,858	3,031	3,093	3,108	3,013	2,985	2,810	2,522	2,300	2,031	12,648
Baker	13	17	9	7	9	12	9	8	7	10	46
Benton	34	38	36	36	28	26	36	28	16	29	135
Clackamas	220	271	239	255	250	240	228	209	160	139	976
Clatsop	31	36	38	46	31	26	26	26	24	24	126
Columbia	42	38	34	49	46	37	28	29	26	17	137
Coos	71	68	52	52	52	53	48	44	35	33	213
Crook	9	17	16	18	16	14	10	12	5	10	51
Curry	13	17	13	12	18	10	11	10	11	9	51
Deschutes	79	82	84	95	81	84	66	69	78	65	362
Douglas	112	107	112	83	98	93	101	75	72	64	405
Gilliam	*	*	*	*	*	*	*	*	*	*	3
Grant	9	6	6	3	7	5	7	3	1	1	17
Harney	8	7	9	5	3	7	10	7	2	2	28
Hood River	16	18	14	17	16	21	13	16	12	8	70
Jackson	156	132	138	152	130	136	112	109	127	118	602
Jefferson	29	29	33	32	22	36	30	29	26	19	140
Josephine	59	49	59	60	46	56	62	48	43	30	239
Klamath	68	80	69	81	49	75	60	56	63	41	295
Lake	7	9	8	3	10	7	5	3	1	5	21
Lane	217	264	267	275	277	283	245	213	167	163	1,071
Lincoln	36	41	39	41	49	38	36	29	40	26	169
Linn	77	82	94	102	107	77	96	89	75	71	408
Malheur	37	44	48	38	28	34	20	32	26	23	135
Marion	303	307	327	328	366	310	318	277	255	256	1,416
Morrow	12	13	13	10	18	8	16	11	12	6	53
Multnomah	731	772	744	697	663	633	619	573	507	427	2,759
Polk	46	43	46	45	47	50	40	28	43	33	194
Sherman	*	*	*	*	*	*	*	*	*	*	3
Tillamook	16	8	19	19	18	20	26	9	10	18	83
Umatilla	55	74	88	79	78	80	83	83	58	60	364
Union	18	19	14	22	15	15	20	12	12	9	68
Wallowa	3	6	5	2	5	6	4	2	1	2	15
Wasco	19	15	21	25	26	18	21	27	21	9	96
Washington	252	254	305	329	320	372	326	297	284	251	1,530
Wheeler	*	*	*	*	*	*	*	*	*	*	3
Yamhill	55	63	93	87	81	100	78	58	76	52	364

*Detailed reporting of small numbers may breach confidentiality.

Methodology

The number of pregnancies was estimated by combining the sum of live births and induced abortions among Oregon residents aged fifteen through seventeen whether occurring in Oregon or another state. Some states, including California, don't collect resident data for abortions, so any data relevant to Oregon residents would be lost. Denominators for rates were based on the population estimates produced by the Center for Population Research and Census, Portland State University. Rates were calculated as the number of pregnancies per 1,000 females aged 15-17. Oregon uses the 15-17 year-old category for its teen pregnancy Benchmark. This age group of females is usually still in high school and is targeted for intervention and education programs along with their male peers. Nationally, teen pregnancy numbers are usually presented for females age 15-19. When comparing Oregon rates to U.S. rates be careful that identical age groups are used.

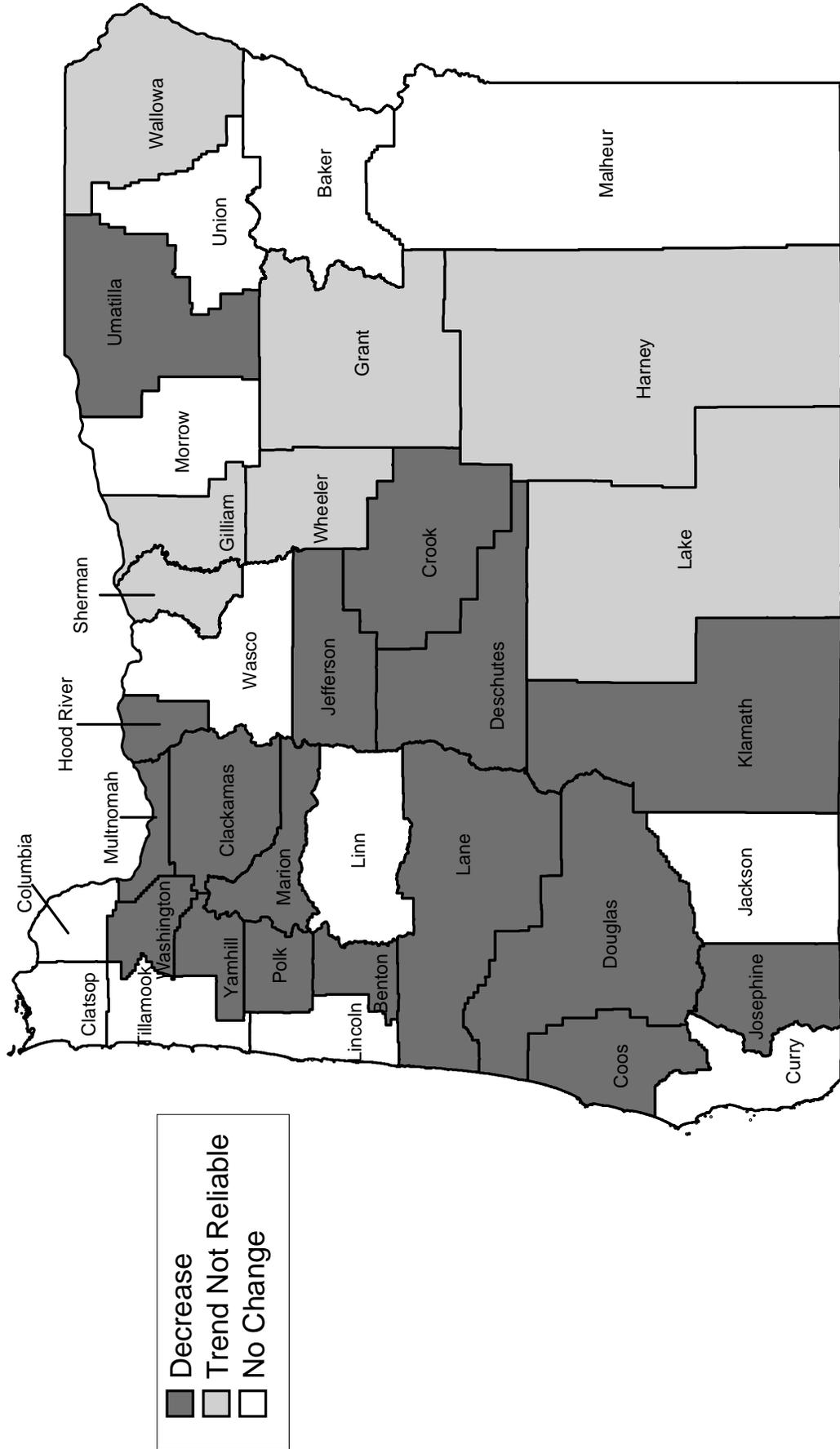
Since the numbers for pregnancies and population are small in many counties in Oregon, an aggregate rate was calculated for the 5 year period from 1998 to 2002. Five years of pregnancies were divided by 5 years of population data. This allowed for stabilization of rates in smaller counties. Each county's 5 year aggregate rate was compared to the 5 year state rate with a t-test on the difference between the means. Directions for calculations of these statistical tests can be found in NCHS National Vital Statistics Report, Vol. 49, No. 1, April 17, 2001, pp. 93-97. at http://www.cdc.gov/nchs/data/nvsr/nvsr49/nvsr49_01.pdf. Aggregation allowed analysis of the smaller population areas of the state using rates and average number of pregnancies.

Since rates in many counties vary dramatically from any one year to the next, single year comparisons can be misleading. This newsletter uses a Mantel-Haenszel chi-square for trend across five years (1998-2002). Although the graphs in each county narrative display rates from 1990 to 2002, the statistical test method focuses on the 1998-2002 trend to account for year-to-year variation. If a county has widely fluctuating rates due to small numbers, trends will typically not be significant. The data years used in the chi-trend analysis are highlighted with bold lines in each of the county graphs. Trend analysis was not done on counties with fewer than 5 pregnancies in any of the five years.

Oregon Benchmark

Twenty-four counties have five year rates that meet the state benchmark (at or below 36.0 per 1,000 females). This excludes three counties with populations too small for rates to be reliable. Six counties that have rates above the benchmark have decreasing trends.

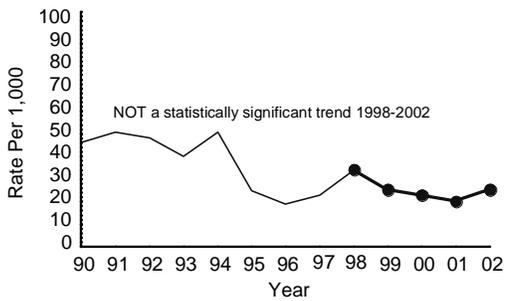
Figure 2 Oregon Teen Pregnancy Rates Trend Analysis: Significant Changes Over Time: 1998 through 2002



Source: Center for Health Statistics, DHS - Health Services

Baker County

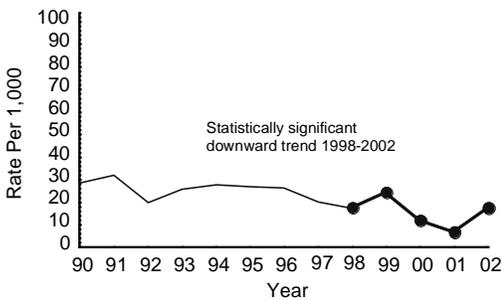
Teen pregnancy Age 15-17, 1990-2002



- Five-year average of 9 teen pregnancies per year with a rate of 25.5. Met benchmark goal.
- Rate is not statistically significantly different than the state.
- Trend is not statistically significant.

Benton County

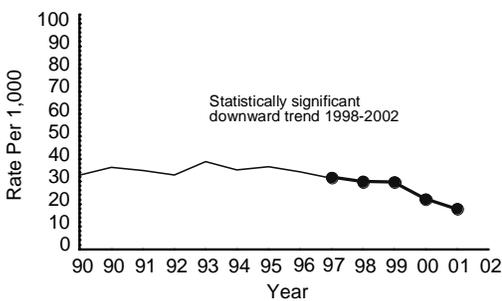
Teen pregnancy Age 15-17, 1990-2002



- Benton has the lowest five year aggregate rate in the state.
- Five-year average of 27 teen pregnancies per year with a rate of 14.5. Met benchmark goal.
- Rate is statistically significantly **lower** than the state.
- The trend downward is statistically significant.

Clackamas County

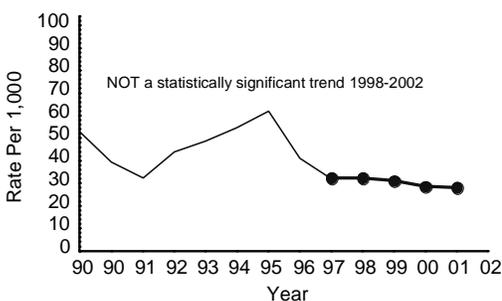
Teen pregnancy Age 15-17, 1990-2002



- Five-year average of 195 teen pregnancies per year with a rate of 26.2. Met benchmark goal.
- Rate is statistically significantly **lower** than the state.
- The trend downward is statistically significant.

Clatsop County

Teen pregnancy Age 15-17, 1990-2002

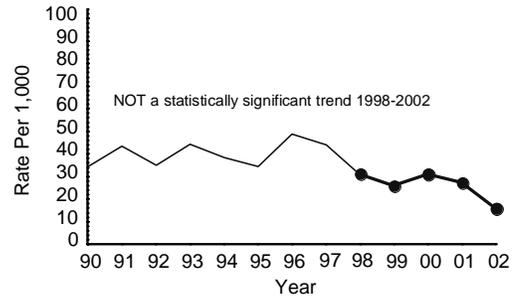


- Five-year average of 25 teen pregnancies per year with a rate of 30.3. Met benchmark goal.
- Rate is not statistically significantly different than the state.
- Trend is not statistically significant.

- Five-year average of 27 teen pregnancies per year with a rate of 26.0. Met benchmark goal.
- Rate is not statistically significantly different than the state.
- Trend is not statistically significant.

Columbia County

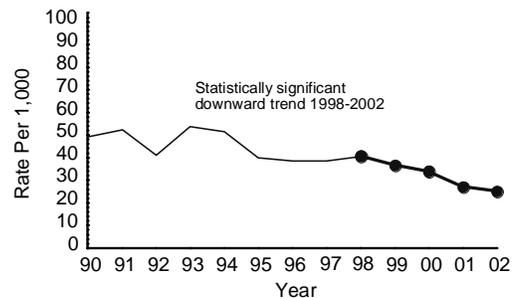
Teen pregnancy Age 15-17, 1990-2002



- Five-year average of 43 teen pregnancies per year with a rate of 32.6. Met benchmark goal.
- Rate is not statistically significantly different than the state.
- The trend downward is statistically significant.

Coos County

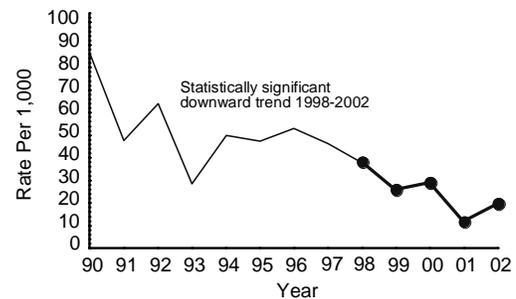
Teen pregnancy Age 15-17, 1990-2002



- Five-year average of 10 teen pregnancies per year with a rate of 24.1. Met benchmark goal.
- Rate is not statistically significantly different than the state.
- The trend downward is statistically significant.

Crook County

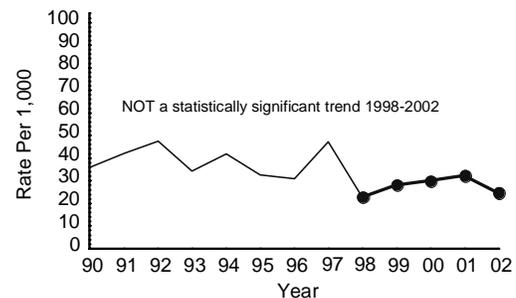
Teen pregnancy Age 15-17, 1990-2002



- Five-year average of 10 teen pregnancies per year with a rate of 27.2. Met benchmark goal.
- Rate is not statistically significantly different than the state.
- Trend is not statistically significant.

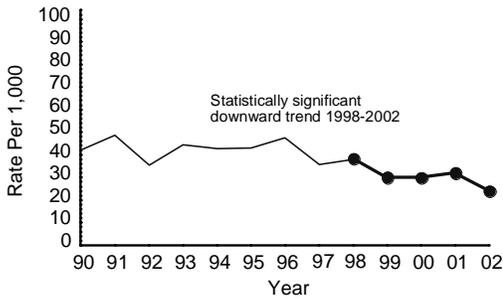
Curry County

Teen pregnancy Age 15-17, 1990-2002



Deschutes County

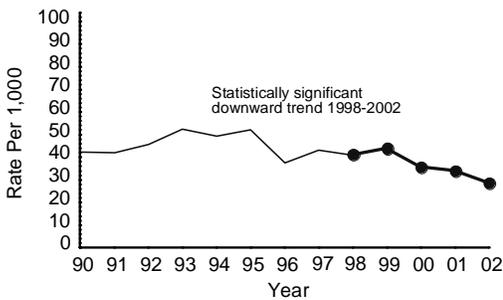
Teen pregnancy Age 15-17, 1990-2002



- Five-year average of 72 teen pregnancies per year with a rate of 30.5. Met benchmark goal.
- Rate is not statistically significantly different than the state.
- The trend downward is statistically significant.

Douglas County

Teen pregnancy Age 15-17, 1990-2002



- Five-year average of 81 teen pregnancies per year with a rate of 36.7.
- Rate is not statistically significantly different from the state.
- The trend downward is statistically significant.

Gilliam County

Teen pregnancy Age 15-17, 1990-2002

Trend not calculated due to small numbers per year.

- Five-year average of 1 teen pregnancy per year with a rate of 16.3. Met benchmark goal.
- Rate is not statistically significantly different than the state.

Grant County

Teen pregnancy Age 15-17, 1990-2002

Trend not calculated due to small numbers per year.

- Five-year average of 3 teen pregnancies per year with a rate of 17.6. Met benchmark goal.
- Rate is not statistically significantly different than the state.

- Five-year average of 6 teen pregnancies per year with a rate of 32.1. Met benchmark goal.
- Rate is not statistically significantly different from the state.

Harney County

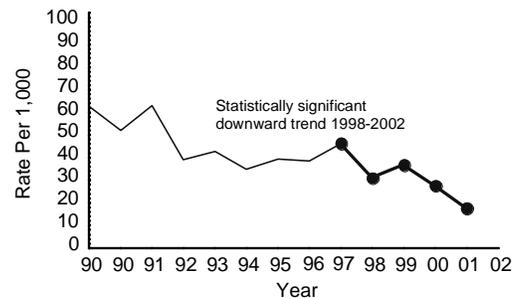
Teen pregnancy Age 15-17, 1990-2002

Trend not calculated due to small numbers per year.

- Five-year average of 14 teen pregnancies per year with a rate of 31.7. Met benchmark goal.
- Rate is not statistically significantly different than the state.
- The trend downward is statistically significant.

Hood River County

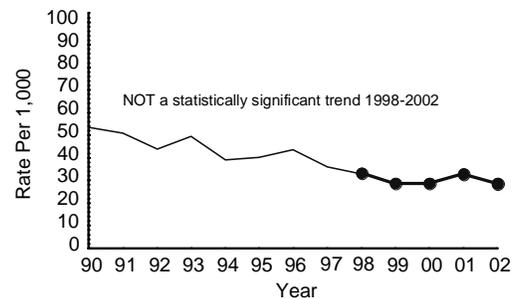
Teen pregnancy Age 15-17, 1990-2002



- Five-year average of 120 teen pregnancies per year with a rate of 30.3. Met benchmark goal.
- Rate is not statistically significantly different than the state.
- Trend is not statistically significant.

Jackson County

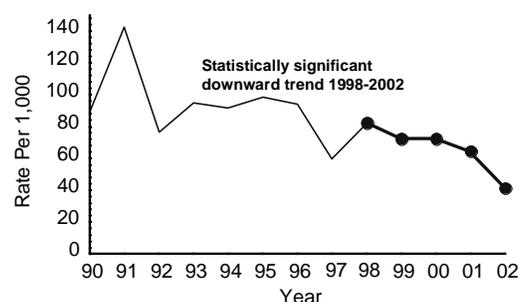
Teen pregnancy Age 15-17, 1990-2002



- Jefferson has the **highest** teen pregnancy rate in the state.
- Five-year average of 28 teen pregnancies per year with a rate of 66.2.
- Rate is statistically significantly **higher** than the state.
- The trend downward is statistically significant.

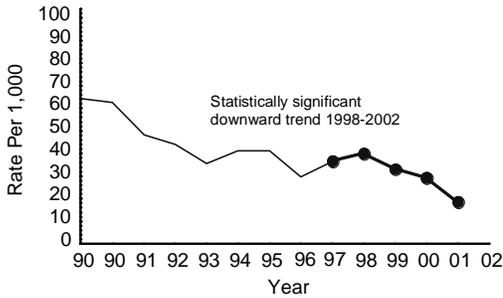
Jefferson County

Teen pregnancy Age 15-17, 1990-2002



Josephine County

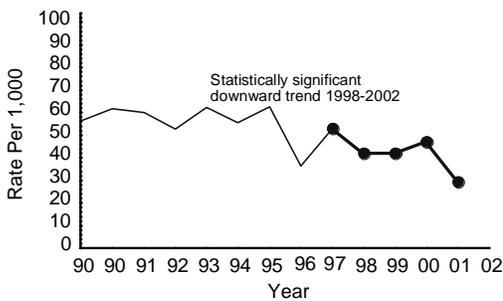
Teen pregnancy Age 15-17, 1990-2002



- Five-year average of 48 teen pregnancies per year with a rate of 31.3. Met benchmark goal.
- Rate is not statistically significantly different than the state.
- The trend downward is statistically significant.

Klamath County

Teen pregnancy Age 15-17, 1990-2002



- Five-year average of 59 teen pregnancies per year with a rate of 42.7.
- Rate is not statistically significantly different than the state.
- The trend downward is statistically significant.

Lake County

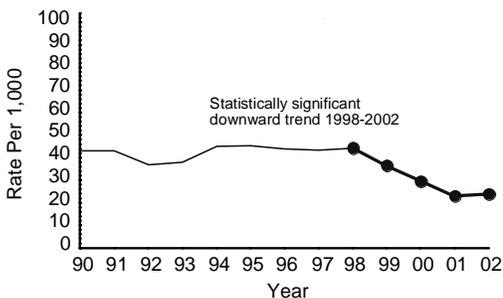
Teen pregnancy Age 15-17, 1990-2002

Trend not calculated due to small numbers per year.

- Five-year average of 4 teen pregnancies per year with a rate of 24.2. Met benchmark goal.
- Rate is not statistically significantly different than the state.

Lane County

Teen pregnancy Age 15-17, 1990-2002

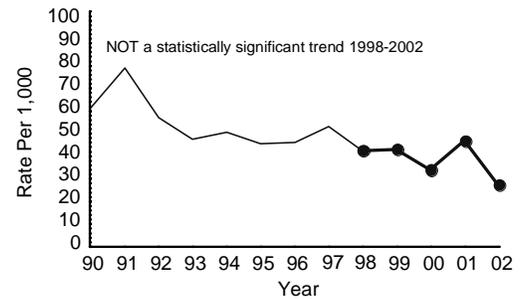


- Five-year average of 214 teen pregnancies per year with a rate of 31.1. Met benchmark goal.
- Rate is not statistically significantly different than the state.
- The trend downward is statistically significant.

Lincoln County

Teen pregnancy Age 15-17, 1990-2002

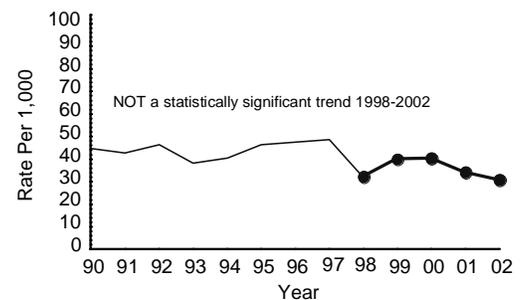
- Five-year average of 34 teen pregnancies per year with a rate of 38.4.
- Rate is not statistically significantly different than the state.
- Trend is not statistically significant.



Linn County

Teen pregnancy Age 15-17, 1990-2002

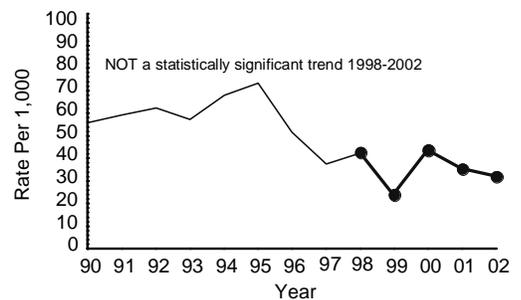
- Five-year average of 82 teen pregnancies per year with a rate of 35.4. Met benchmark goal.
- Rate is not statistically significantly different than the state.
- Trend is not statistically significant.



Malheur County

Teen pregnancy Age 15-17, 1990-2002

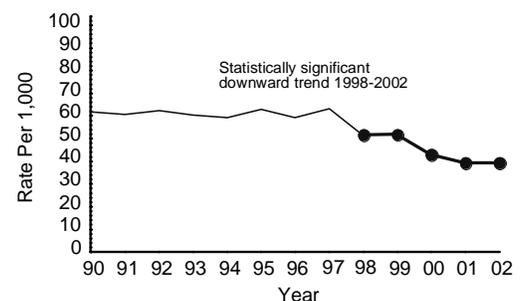
- Five-year average of 27 teen pregnancies per year with a rate of 35.2. Met benchmark goal.
- Rate is not statistically significantly different than the state.
- Trend is not statistically significant.



Marion County

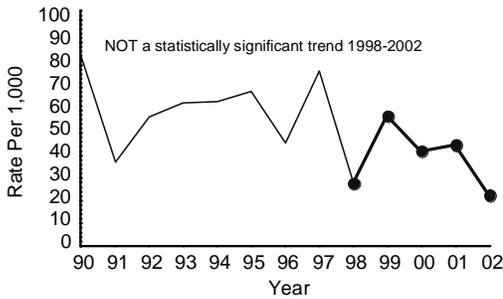
Teen pregnancy Age 15-17, 1990-2002

- Five-year average of 283 teen pregnancies per year with a rate of 44.7.
- Rate is statistically significantly **higher** than the state.
- The trend downward is statistically significant.



Morrow County

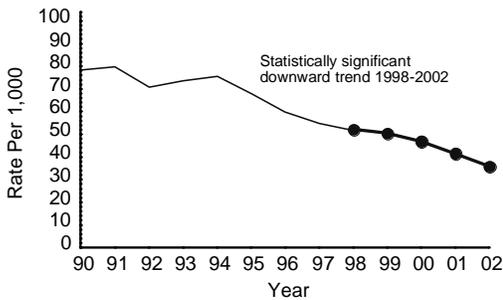
Teen pregnancy Age 15-17, 1990-2002



- Five-year average of 11 teen pregnancies per year with a rate of 38.7.
- Rate is not statistically significantly different than the state.
- Trend is not statistically significant.

Multnomah County

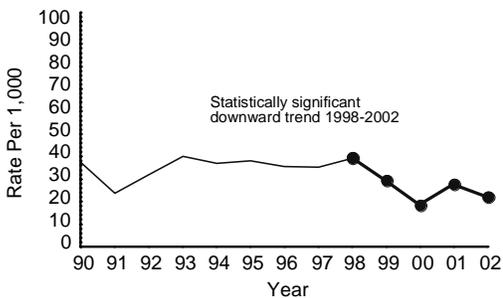
Teen pregnancy Age 15-17, 1990-2002



- Five-year average of 552 teen pregnancies per year with a rate of 45.3.
- Rate is statistically significantly **higher** than the state.
- The trend downward is statistically significant.

Polk County

Teen pregnancy Age 15-17, 1990-2002



- Five-year average of 39 teen pregnancies per year with a rate of 26.9. Met benchmark goal.
- Rate is not statistically significantly different than the state.
- The trend downward is statistically significant.

Sherman County

Teen pregnancy Age 15-17, 1990-2002

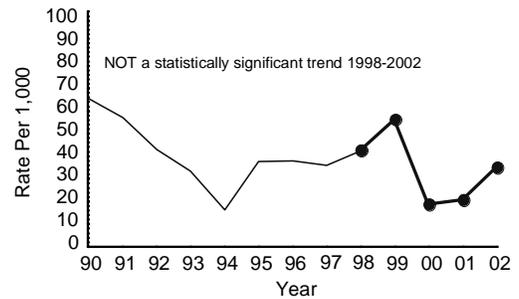
Trend not calculated due to small numbers per year.

- Five-year average of 1 teen pregnancy per year with a rate of 13.2.
- Rate is not statistically significantly different than the state.

Tillamook County

Teen pregnancy Age 15-17, 1990-2002

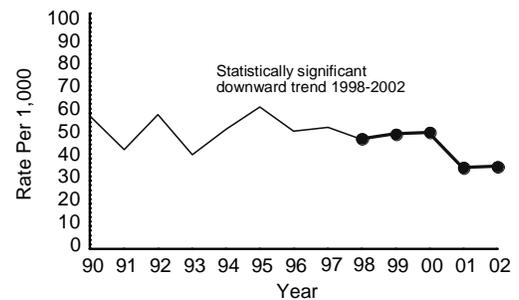
- Five-year average of 17 teen pregnancies per year with a rate of 34.4. Met benchmark goal.
- Rate is not statistically significantly different than the state.
- Trend is not statistically significant.



Umatilla County

Teen pregnancy Age 15-17, 1990-2002

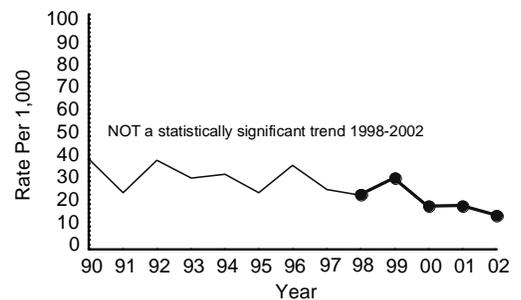
- Five-year average of 73 teen pregnancies per year with a rate of 44.5.
- Rate is not statistically significantly different than the state.
- The downward trend is statistically significant.



Union County

Teen pregnancy Age 15-17, 1990-2002

- Five-year average of 14 teen pregnancies per year with a rate of 21.8. Met benchmark goal.
- Rate is not statistically significantly different than the state.
- Trend is not statistically significant.



Wallowa County

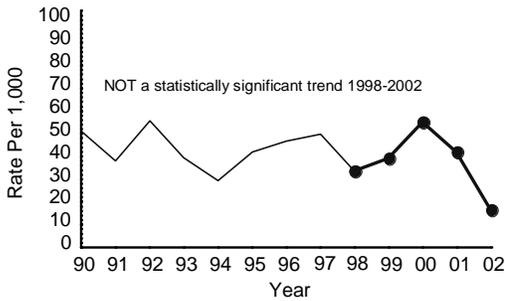
Teen pregnancy Age 15-17, 1990-2002

- Five-year average of 3 teen pregnancies per year with a rate of 18.2. Met benchmark goal.
- Rate is not statistically significantly different than the state.

Trend not calculated due to small numbers per year.

Wasco County

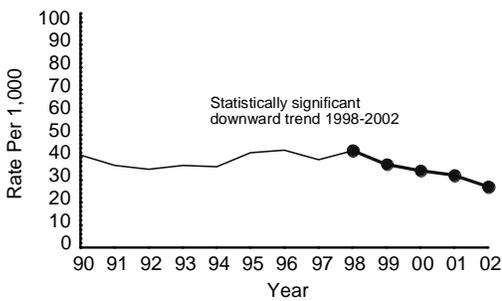
Teen pregnancy Age 15-17, 1990-2002



- Five-year average of 19 teen pregnancies per year with a rate of 36.7.
- Rate is not statistically significantly different than the state.
- Trend is not statistically significant.

Washington County

Teen pregnancy Age 15-17, 1990-2002



- Five-year average of 306 teen pregnancies per year with a rate of 34.5. Met benchmark goal.
- Rate is not statistically significantly different than the state.
- The downward trend is statistically significant.

Wheeler County

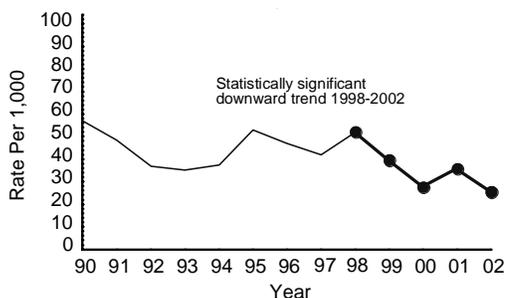
Teen pregnancy Age 15-17, 1990-2002

Trend not calculated due to small numbers per year.

- Five-year average of 1 teen pregnancy per year with a rate of 17.5.
- Rate is not statistically significantly different than the state.

Yamhill County

Teen pregnancy Age 15-17, 1990-2002



- Five-year average of 73 teen pregnancies per year with a rate of 35.7. Met benchmark goal.
- Rate is not statistically significantly different than the state.
- The trend downward is statistically significant.

TEEN PREGNANCY DATA

Teen pregnancy includes births and abortions for a specified age group. We include births occurring to Oregon residents in any state in the U.S., and abortions occurring to Oregon residents in Oregon and in other states that share induced abortion data.

Births - Most of the births in Oregon are in hospitals and are registered by electronic files sent to the Center for Health Statistics. Lay midwives, birthing centers, or parents can also register births. An interstate agreement requires states to share birth information with the resident state of the mother, to allow a full picture of Oregonians. We often receive birth data from other states through June of the following year. Because it is important to include this information in our reports, especially for border counties, we wait for this data.

Induced abortions - In Oregon, physicians are required to report all abortions, regardless of gestation, motivation, or resident state of the patient. While births that occur out of state are always shared, some states, notably California, don't collect resident state information on abortion reports. This means the number of abortions reported as occurring to Oregon residents is lower than actual occurrences. However, this reporting has been consistent over many years so changes in numbers and rates should reflect what is occurring in Oregon.

What isn't included in teen pregnancy counts?

Fetal deaths and spontaneous abortions, also called miscarriages, are not included in teen pregnancy. In 2002 there were seven reported fetal deaths to women aged 15-17. Limited reporting requirements for fetal deaths and lack of any reports for many early spontaneous abortions make it impossible to accurately include these outcomes in teen pregnancy.

Turning counts into rates

To calculate a rate, which is more easily compared over time or between counties, we also need to know the population size. The Center for Population Research at Portland State University publishes population estimates by gender and age group. Population estimates by gender, age group, race, and ethnicity are more difficult to find and inhibit calculating rates by race or hispanic ethnicity for intercensal years. It is essential that the population estimate is for the exact same group reported in the numerator (births and induced abortions).

Learn more about teen pregnancy prevention in Oregon at www.dhs.state.or.us/children/teens/tpp/index.htm

Additional information on teen pregnancy is published in the Oregon Vital Statistics Annual Report, Volume 1, Chapter 3 at www.dhs.state.or.us/publichealth/chs/vol1.cfm



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Center for Health Statistics?

**Teen
Pregnancy**

Pregnancy rates by county
of residence
Pregnancy by zip code

Births

Demographic
characteristics by zip code
Outcomes by zip code

Abortions

Demographic
characteristics by zip code

Youth survey results (YRBS and OHT)

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publichealth/chs](http://www.dhs.state.or.us/publichealth/chs)
or <http://www.healthoregon.org/>