

OREGON TEEN PREGNANCY County Trends, 1993-97, an Update

In its Oregon Vital Statistics Annual Report, the Health Division focuses on the trends and health risks of teen pregnancies statewide. Although summary information in that report does have county specific information it does not present statistics over time for each county. The purpose of this newsletter is to fill the data gap for monitoring teen pregnancy rates at a local level.

From 1993 through 1997, Oregon had an average of 3,199 teen pregnancies per year for a rate of 18.6 pregnancies for every 1,000 females between the ages of 10 and 17. Although the rate has decreased in the last three years, the five year trend shows no significant¹ change.

Five counties have a five year aggregate rate which was significantly higher than the state rate. These counties were Jefferson, Multnomah, Marion, Malheur, and Klamath. Sixteen counties have a rate that is statistically significantly lower than the state rate (Figure 1).

Aggregate five year rates were calculated wherein each county was compared to the state rate. Aggrega-

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Average of 3,199 teen pregnancies per year in Oregon.

The trend rate has remained relatively flat within the last 5 years.

The last 3 years have shown a slight but not significant decline.



Table	1. Oreg	on Teen	Pregna	ncy Rate	1988-1997 Among Females Age				10-17		5 Year	Significantly
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	Aggregate rate 93-97	from State
STATE	20.5	19.6	19.7	19.3	17.9	18.2	18.9	19.2	18.8	18.0	18.6	
BAKER	21.8	22.7	17.2	18.1	17.8	15.2	17.5	9.2	8.1	10.1	12.0	<
BENTON	10.7	11.8	10.8	11.6	8.3	10.1	11.0	10.5	10.0	7.9	9.9	<
CLACKAMAS	14.2	14.2	13.3	13.5	13.3	12.8	14.9	13.9	15.0	14.1	14.1	<
CLATSOP	19.0	15.3	19.3	15.5	12.3	17.7	18.7	21.7	24.4	16.3	19.8	
COLUMBIA	11.9	12.8	13.5	17.1	14.5	17.4	16.0	13.8	21.2	18.8	17.4	
COOS	18.9	17.8	18.2	19.2	17.0	21.2	19.4	15.8	15.3	16.3	17.6	
CROOK	19.8	24.4	33.9	17.4	25.3	10.3	19.3	17.9	21.3	18.9	17.6	
CURRY	17.9	20.0	13.5	16.7	18.1	14.5	17.8	14.7	11.8	17.3	15.2	
DESCHUTES	16.5	15.4	15.5	17.6	12.7	16.9	17.1	16.5	17.9	15.1	16.7	<
DOUGLAS	17.1	20.2	16.8	15.9	16.6	20.1	19.0	21.5	14.7	17.8	18.6	
GILLIAM	*	*	*	*	*	*	*	*	*	*	9.8	<
GRANT	2.0	14.5	19.7	16.4	12.6	20.6	12.1	12.3	8.0	14.4	13.4	<
HARNEY	16.5	14.4	12.1	10.7	20.4	18.0	18.3	20.9	13.6	6.8	15.5	
HOOD RIVER	10.0	25.5	20.1	19.7	24.9	15.4	15.8	13.6	15.0	14.4	14.8	<
JACKSON	19.0	14.8	20.9	19.4	16.5	18.8	15.7	15.9	14.4	14.4	16.4	<
JEFFERSON	40.1	33.7	36.7	56.0	28.4	37.1	32.8	34.5	32.6	21.4	31.3	>
JOSEPHINE	21.4	22.4	24.4	23.8	18.0	16.4	14.0	15.9	16.7	13.0	15.2	<
KLAMATH	28.0	22.3	22.0	23.8	23.2	20.6	24.5	21.7	24.2	15.4	21.3	>
LAKE	21.0	22.7	15.0	10.8	15.2	15.5	23.3	17.6	6.7	23.0	17.2	
LANE	18.8	17.3	15.8	15.3	13.5	14.4	17.0	17.3	17.6	17.8	16.8	<
LINCOLN	18.7	21.5	21.6	27.0	19.5	17.1	18.8	18.7	17.9	21.3	18.8	
LINN	20.6	20.5	17.4	16.0	18.0	15.7	15.6	17.8	19.1	19.3	17.5	
MALHEUR	17.6	16.9	21.2	22.8	23.3	21.9	25.9	27.7	21.9	16.8	22.8	>
MARION	25.1	25.0	22.9	22.5	23.5	22.6	22.6	25.3	23.9	26.6	24.2	>
MORROW	25.2	13.0	28.1	13.9	20.4	23.1	21.6	25.5	20.2	30.3	24.1	
MULTNOMAH	32.5	28.9	28.4	30.1	26.3	27.3	28.7	26.0	23.3	21.8	25.3	>
POLK	14.8	18.5	14.3	9.0	12.3	15.6	15.5	15.5	15.7	16.1	15.7	<
SHERMAN	*	*	*	*	*	*	*	*	*	*	13.5	
TILLAMOOK	14.5	16.1	23.8	19.4	16.3	13.3	7.1	15.7	17.3	15.2	13.7	<
UMATILLA	17.0	23.0	21.6	16.3	23.4	15.3	20.7	24.5	21.2	21.0	20.6	
UNION	17.9	21.5	15.1	10.2	16.8	14.0	12.6	11.1	15.9	12.1	13.1	<
WALLOWA	13.1	13.6	23.1	18.5	15.8	6.6	12.8	10.7	4.1	12.6	9.4	<
WASCO	17.4	23.1	22.5	15.4	19.8	16.2	10.9	16.5	18.7	19.7	16.3	
WASHINGTON	16.0	13.8	15.8	13.5	12.9	13.9	14.0	15.9	16.5	15.9	15.3	<
WHEELER	*	*	*	*	*	*	*	*	*	*	14.1	
YAMHILL	17.3	14.9	20.5	17.6	13.3	13.6	13.7	20.5	19.6	16.8	16.9	<

Methodology

Numbers of pregnancies were estimated by combining the sum of live births and induced abortions among Oregon residents age ten through seventeen. 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 10-17. Oregon uses the 10-17 year-old category for its teen pregnancy Benchmark. This age group of females is usually still in middle and 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, so care should be taken when comparing Oregon rates to U.S. rates, that identical age groups are being compared.

Та	Table 2. Total Pregnancies for Oregon females ages 10-17: 1988-1997										5 Year
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	Aggregate 93-97
STATE	3,007	2,887	2,986	3,085	2,913	3,027	3,214	3,284	3,274	3,197	15,996
BAKER	17	17	14	16	16	14	17	9	8	10	58
BENTON	35	39	36	40	29	36	40	38	36	29	179
CLACKAMAS	233	234	213	236	231	229	276	248	267	259	1,279
CLATSOP	33	28	35	29	23	34	37	41	47	31	190
COLUMBIA	30	32	34	43	37	44	41	34	52	48	219
COOS	63	59	64	67	60	75	69	55	53	56	308
CROOK	16	20	28	15	22	9	17	16	19	17	78
CURRY	14	16	11	16	17	14	18	15	12	18	77
DESCHUTES	65	61	63	77	59	83	87	84	96	84	434
DOUGLAS	96	113	97	91	94	116	111	122	84	102	535
GILLIAM	2	0	1	1	0	0	2	0	1	3	6
GRANT	1	7	10	8	6	10	6	6	4	7	33
HARNEY	8	7	6	5	9	8	8	9	6	3	34
HOOD RIVER	9	23	19	20	27	17	18	15	17	16	83
JACKSON	150	117	165	162	139	163	141	144	156	133	737
JEFFERSON	30	26	29	47	24	32	30	34	34	23	153
JOSEPHINE	68	70	79	82	63	59	51	60	63	50	283
KLAMATH	90	71	74	79	78	71	86	74	84	54	369
LAKE	9	10	7	5	7	7	11	8	3	10	39
LANE	269	252	239	235	208	230	276	278	289	295	1,368
LINCOLN	33	39	40	56	40	37	42	43	41	49	212
LINN	107	106	94	87	97	87	86	98	109	111	491
MALHEUR	29	27	36	41	42	40	47	50	41	31	209
MARION	297	303	285	298	320	317	327	363	352	398	1,757
MORROW	12	6	13	7	11	13	13	14	12	18	70
MULTNOMAH	809	717	758	845	750	775	833	802	739	712	3,861
POLK	37	46	37	27	38	49	49	49	50	53	250
SHERMAN	0	1	1	3	1	2	3	1	1	0	7
TILLAMOOK	15	17	27	23	20	17	9	20	22	19	87
UMATILLA	59	79	78	59	86	58	80	93	84	81	396
UNION	26	31	22	15	25	21	19	16	23	17	96
WALLOWA	5	5	9	8	7	3	6	5	2	6	22
WASCO	20	28	28	20	27	22	15	22	25	26	110
WASHINGTON	256	225	256	246	243	271	279	322	347	346	1,565
WHEELER	1	0	1	1	0	3	1	0	1	1	5
YAMHILL	63	55	77	75	57	61	63	96	94	82	396

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 1993 to 1997. 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 rate was compared to the 5 year state rate with a t-test on the difference between the proportion of means. Directions for calculations of these statistical tests can be found in the Appendix: B. Technical Notes - Formulas of the Oregon Vital Statistics Annual Report on the web at: http://www.ohd.hr.state.or.us/cdpe/chs/arpt/95v2/appendb/formulas.pdf

tion allowed analysis of the smaller population areas of the state by rates and average number of pregnancies. (Table 1).

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 (1993-1997). Although the graphs in each special county narrative display rates from 1988 to present, the statistical method focuses on the 1993-1996 trend and accounts for the 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. Only Multnomah and Coos counties had significantly decreasing rates for teen pregnancies between 1993 and 1997. Three counties show significantly increasing rates (Lane, Marion and Washington). Trend

analysis was not done on counties with fewer than 5 pregnancies in any of the five years.

The teen pregnancy rate in Oregon is unlikely to decrease unless the rates decrease in 4 particular counties (Multnomah, Lane, Marion, and Washington). The changes in these four counties with large populations, have a greater impact than other counties on the overall state rate.

To succeed statewide:

Multnomah County must be able to continue its success story with a variety of programs that have helped to decrease teen pregnancy.

Communities in Marion County need to first stop the upward trend, then make overall reductions in the number of pregnant teens.

Lane and Washington counties need to monitor and seek ways to change the trend for their rate of teen pregnancies. Although their rates are lower than the state, the trend is moving in the wrong direction.

However, since all policy decisions and intervention programs are ultimately local in nature, other counties with disparately high rates need to be pro-active in finding ways to decrease teen pregnancy in their local communities. Their success will make a local difference even though they may not have a large impact on the total state rate.

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ENDNOTE

1. Use of the word significant in this article means a statistical test for significant difference was computed and found at the $p \leq 0.05$ level.







- Rate is statistically significantly **lower** than the state.
- Trend generally shows a decreasing but not statistically significant decline in teen pregnancy rates.

- Benton County Teen pregnancy Age 10 -17, 1988-1997 50 Rate Per 1,000 25 88 89 90 91 92 93 94 95 96 97 Year NOT a statistically significant trend 1993-1997
- Average of 36 teen pregnancies per year with a rate of 9.9.
- Rate is statistically significantly lower than the state.
- Trend during the last 5 years has remained relatively flat.



- Average of 256 teen pregnancies per year with a rate of 14.1.
- Rate is statistically significantly lower than the state.
- Trend during the last decade has remained relatively flat.



- Average of 38 teen pregnancies per year with a rate of 19.8.
- Rate is not statistically significantly different than the state.
- The trend in Clatsop county shows considerable year to year variation.

- Average of 44 teen pregnancies per year with a rate of 17.4.
- Rate is not statistically significantly different than the state.
- Yearly rates are subject to considerable variation.
- There is no statistically significant change in the trend rate.



- Average of 62 teen pregnancies per year with a rate of 17.6.
- Rate is not statistically significantly different than the state.
- There is a **significant decline** in the yearly teen pregnancy rate during the last 5 years.



- Rate is not statistically significantly different than the state.
- Single year rates vary considerable from year to year.



- Rate is not statistically significantly different than the state.
- The trend for teen pregnancy rates is relatively flat with minor variation from year to year.









- Average of 87 teen pregnancies per year with a rate of 16.7.
- Rate is statistically significantly lower than the state.
- The trend in the last 5 years is relatively flat.



Gilliam County

Teen pregnancy Age 10 -17, 1988-1997

92

93 94 95

Year

96 97

50

25

0

88 89 90 91

Small numbers make statistical testing unreliable

Rate Per 1,000

- Average of 107 teen pregnancies per year with a rate of 18.6.
- Rate is not statistically significantly different from the state.
- The trend has been relatively stable with minor variation from year-to-year.

- Average of 1 teen pregnancy per year with a rate of 9.8.
- Rate is statistically significantly lower than the state.
- Trend shows considerable variation due to small numbers.



- Average of 7 teen pregnancies per year with a rate of 13.4.
- Rate is statistically significantly lower than the state.
- Trend has considerable variation due to small numbers.

- Average of 7 teen pregnancies per year with a rate of 15.5.
- Rate is not statistically significantly different from the state.
- Trend shows considerable variation.



- Average of 17 teen pregnancies per year with a rate of 14.8.
- Rate is statistically significantly lower than the state.
- The trend is relatively flat during the last 5 years.

- Average of 147 teen pregnancies per year with a rate of 16.4.
- Rate is statistically significantly lower than the state.
- Trend is relatively flat during the last 5 years.





Year

88 89 90 91 92 93 94 95 96 97

NOT a statistically significant trend 1993-1997



- Jefferson has the highest teen pregnancy rate in the state.
- Average of 31 teen pregnancies per year with a rate of 31.3.
- Rate is statistically significantly higher than the state.
- Rates show considerable variation; so there is no significant change in the trend.

50

25

88

50

88 89 90 91 92 93 94 95 96 97

Small numbers make statistical testing unreliable

* Statistically significant upward trend: 1993-1997

Rate Per 1,000

89 90 91 92 93 94 95

NOT a statistically significant trend 1993-1997

Rate Per 1,000

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Klamath County Teen pregnancy Age 10 -17, 1988-1997

Lake County Teen pregnancy Age 10 -17, 1988-1997 97

96

- Average of 57 teen pregnancies per year with a rate of 15.2.
- Rate is statistically significantly **lower** than the state.
- During the last 5 years, trend show considerable variation.

- Average of 74 teen pregnancies per year with a rate of 21.3.
- Rate is statistically significantly higher than the state.
- There is no significant change in the trend.

- Average of 8 teen pregnancies per year with a rate of 17.2.
- Rate is not statistically significantly different than the state.
- There is no significant change in the trend.

Lane County Teen pregnancy Age 10 -17, 1988-1997 50 Rate Per 1,000 25 88 89 90 92 93 94 95 96 97 91 Year

Year

- Average of 274 teen pregnancies per year with a rate of 16.8.
- Five rate is statistically significantly **lower** than the state rate.
- From 1988 until 1992 the rate of teen pregnancy dropped. It then began to increase.
- The 5 year upward trend is statistically significant.

- Average of 42 teen pregnancies per year with a rate of 18.8.
- Rate is not statistically significantly different than the state.
- Yearly rates fluctuate considerably.
- There is no significant change in the trend.



- Average of 98 teen pregnancies per year with a rate of 17.5.
- Five year rate is not statistically significantly different than the state.
- Yearly rates are edging up but the trend is not significant



- Average of 42 teen pregnancies per year with a rate of 22.8.
- Rate is statistically significantly higher than the state.
- Since 1995 the rates have improved, but the 5 year trend does not show a significant change in the teen pregnancy rate.



- Average of 351 teen pregnancies per year with a rate of 24.2.
- Rate is statistically significantly higher than the state.
- There has been a significant **increase** in the trend during the last 5 years.









- Average of 14 teen pregnancies per year with a rate of 24.1.
- Rate is not statistically significantly different than the state.
- Yearly rates have generally increased since 1991, but the trend is not statistically significant due to the erratic nature of the year to year rates.

- Average of 772 teen pregnancies per year with a rate of 25.3.
- Rate is statistically significantly **higher** than the state.
- Trend has dropped significantly during the last 5 years.

- Average of 50 teen pregnancies per year with a rate of 15.7.
- Rate is statistically significantly **lower** than the state.
- The trend has remained relatively flat during the last 5 years..



- Average of 1 teen pregnancy per year with a rate of 13.5.
- Rate is not statistically significantly different than the state.
- A trend statistic was not calculated due to the small number and extreme year to year variation.

- Average of 17 teen pregnancies per year with a rate of 13.7.
- Rate is statistically significantly lower than the state.
- Yearly rates showed dramatic improvement from 1990 to 1994, but then began to increase
- The trend during the last 5 years shows no significant change due to yearly variation.





- Rate is not statistically significantly different than the state.
- Rates show considerable year-to-year variation.

- Average of 19 teen pregnancies per year with a rate of 13.1.
- Rate is statistically significantly lower than the state.
- The last 5 years shows no significant difference in the trend.







- Wallowa has the **lowest** rate in the state.
- Average of 4 teen pregnancies per year with a rate of 9.4.
- Rate is statistically significantly lower than the state.
- Yearly variation in the rates and the small numbers involved show there is no significant change in the trend during the last 5 years.



- Average of 22 teen pregnancies per year with a rate of 16.3.
- Rate is not statistically significantly different than the state.
- There is no significant change in the trend for teen pregnancy rates.



Wheeler County Teen pregnancy Age 10 -17, 1988-1997

50



- Rate is statistically significantly lower than the state.
- There is significant **increase** in the yearly teen pregnancy rate during the last 5 years.
- Average of 1 teen pregnancy per year with a rate of 14.1.
- Rate is not statistically significantly different than the state.
- Yearly rates are too erratic due to small numbers.
- There is no significant change in the trend for teen pregnancy rates.
- Average of 79 teen pregnancies per year with a rate of 16.9.
- Rate is statistically significantly lower than the state.
- Trend has significantly increased during the last 5 years.



TEEN PREGNANCY PREVENTION

Excerpted from a larger report which gives more specific ideas and strategies for reducing teen pregnancy.

Call to Action

The Action Agenda '97, developed by a broad-based coalition at Governor Kitzhaber's request, seeks to solidify teen pregnancy prevention effort by both local and state partners into a cohesive, integrated course of action for 1997 and into the future. In addressing the complicated and critical issue of teen pregnancy prevention, Governor Kitzhaber recognizes that only through coordinated effort can progress be made. The action Agenda stresses the concept of shared responsibility:

- Young females and males must take responsibility for their decisions and the direction their lives are taking.
- *Parents* have the responsibility to provide support, supervision and guidance in developing their children's values and behaviors.
- *Schools and communities* have the responsibility to provide programs that allow all youth to become educated and understand the importance of delaying parenthood.
- *Governments* have the responsibility to implement appropriate policies that support comprehensive pregnancy prevention activities and to protect our youth from sexual abuse.
- Leaders in government, education and health services have the responsibility to provide focus and serve as catalysts for effective statewide action.

The strategies outlined in this agenda have been built upon years of effort throughout the state. Since the late 1970's, a large and diverse number of individuals and agencies have been working toward the goal of reducing teen pregnancy. In 1997, STOP (Sex, Teens & Oregon's Plan) was developed as a comprehensive plan for teen pregnancy prevention. Today, we will build upon this momentum.

STRATEGIES FOR ACTION:

This Action Agenda focuses on prevention strategies. It is clearly understood that links between individuals, agencies and communities will be critical in addressing the underlying causes of teen pregnancy especially sexual abuse, sexual exploitation, drug and alcohol use, poverty and lack of economic opportunity.

Our ability to reduce teen pregnancy is directly dependent on our ability as a community to reduce these risk factors. Working together, local and state efforts must address the connections between these primary causes and later risk-taking behaviors in order to generate the best solutions. To reduce teen pregnancy there must be a concerted effort on two levels:

- •Local coalitions: Communities need to implement strategies and programs that are sensitive to local needs, character & attitudes.
- •Statewide efforts: The state needs to provide leadership, data, technical assistance, policy development & resources to support local efforts.

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Together local and statewide efforts will concentrate on six strategies in confronting the primary issues surrounding teen pregnancy:

- 1. Supporting Positive Community Values and Norms
- 2. Skills for Life Instruction
- 3. Responsible Sex Education
- 4. STARS: Postponing Sexual Involvement
- 5. Contraceptive Access
- 6. Legal Issues and Protections

Strengthening Local Coalitions:

Many communities currently have local teen pregnancy prevention coalitions including RAPP groups, committees operating in partnership with the Commission for Children and Families, local health departments, and community-based groups sponsored by schools, health departments, churches and non-profit, social service agencies.

These coalitions have autonomy in developing their own action programs. They can, however, increase their strength by integrating their efforts with the statewide team. Local coalitions are encouraged to engage in the following actions:

- Identify effective means of communicating with youth in their communities; use those means to deliver the messages of the statewide public awareness campaign.
- Strengthen membership of the local coalition by including members from the medical community and school boards.

- Target messages on the responsible sexual behavior to males in school, out of school, and among the young adult population.
- Support development of STARS programs in their communities.
- Identify barriers for both males and females in the utilization of family planning services in their communities and work to reduce activities.
- Increase protective factors for youth by supporting structured environments which promote positive youth development through after school, evening, and weekend activities.
- Support parent education efforts to help improve family communication.

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The state must also help to strengthen Oregon's local coalitions through the following actions:

- Provide technical assistance, support, and consultation to communities as they develop their locally selected strategies.
- Provide information, research, data, and best practices (models) to assist communities in identifying and implementing teen pregnancy prevention strategies.
- Monitor the progress of strategies that are being implemented in communities and provide special assistance if coalitions encounter difficulties.

For more information, please contact Judy Fightmaster, Oregon Health Division, Center for Child and Family Health, Child & Adolescent Health Section, Adolescent Pregnancy Prevention Coordinator at (503) 731-3242.

PLEASE VISIT OUR WEB SITE AT:

http://www.ohd.hr.state.or.us/cdpe/chs/

Within the next month detailed tables on teen pregnancy outcomes at zipcode level should be available.

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