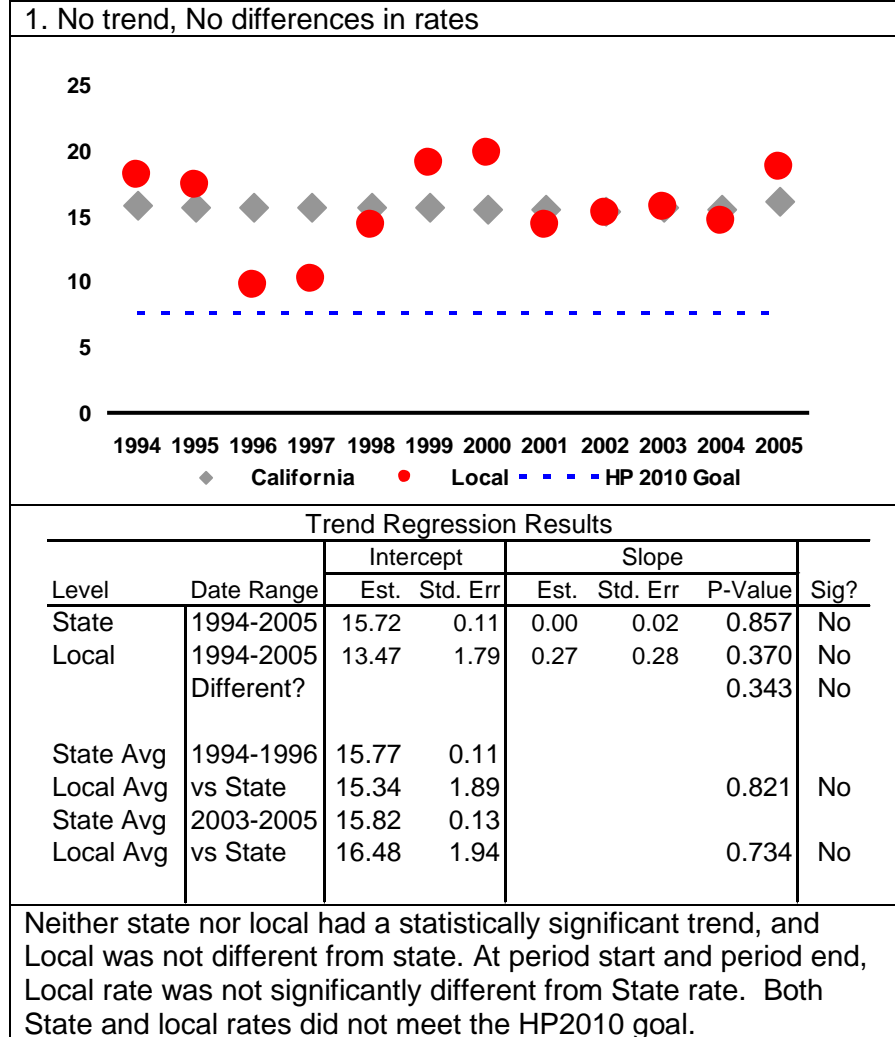


Why Trend Analysis?

- Allows us to look at rates over the time period of 1994-2005 and see if there are significant upward or downward trends on key indicators (as oppose to the inaccurate eyeballing approach)
- Useful for identifying and monitoring trends in disparities among racial/ethnic groups
- Allows for comparisons with the statewide trends on key indicators for different racial/ethnic groups
- Useful for identifying whether a problem is affecting people across groups or disproportionately impacting subgroups
- Allows local health jurisdictions to track their progress toward reaching Healthy People 2010 Goals

What do the trend charts and tables tell us?

- If there are significant upward or downward trends in rates over time in the local jurisdiction
- If there are significant upward or downward trends in rates over time in the local jurisdiction
- If the local trend and the state trend are significantly different
- If the local or state trend is curvilinear (as opposed to linear). Note: When the state or local has a curvilinear trend, it is not possible to test whether the curvilinear trend is significantly different from a linear trend or another curvilinear trend.
- Were the average rates at the beginning time period from 1994-1996 at the local level significantly different from the average rates at the state level
- Were the average rates at the end of the time period from 2003-2005 at the local level significantly different from the average rates at the state level



Look here to see if there is a significant:

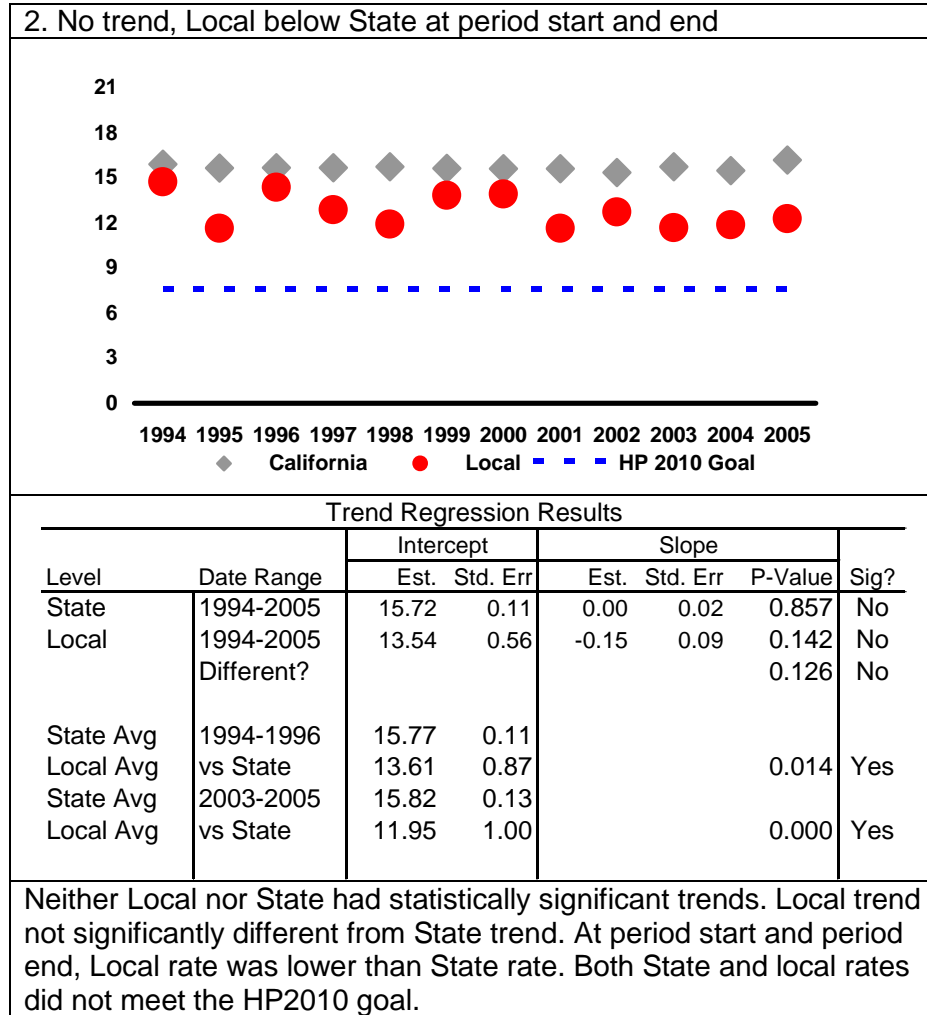
- state trend (No)
- local trend (No)
- and if they differ significantly from each other (No)

Look here to see if state and local average rates differed significantly in:

- 1994-1996 (No)
- 2003-2005 (No)

Example bullet:

- There is no significant upward or downward trend in preterm birth rates for RACE/ETHNIC group in LOCAL and in the state from 1994-2005. The average preterm rate for 1994-1996 for RACE/ETHNIC group in LOCAL was 15.34 and did not differ significantly from the state rate of 17.77 for this group. For 2003-2005, the average LOCAL rate was 16.48 and did not differ significantly from the state rate of 15.82. Both State and local rates for RACE/ETHNIC group did not meet the HP2010 Goal.



Look here to see if there is a significant:

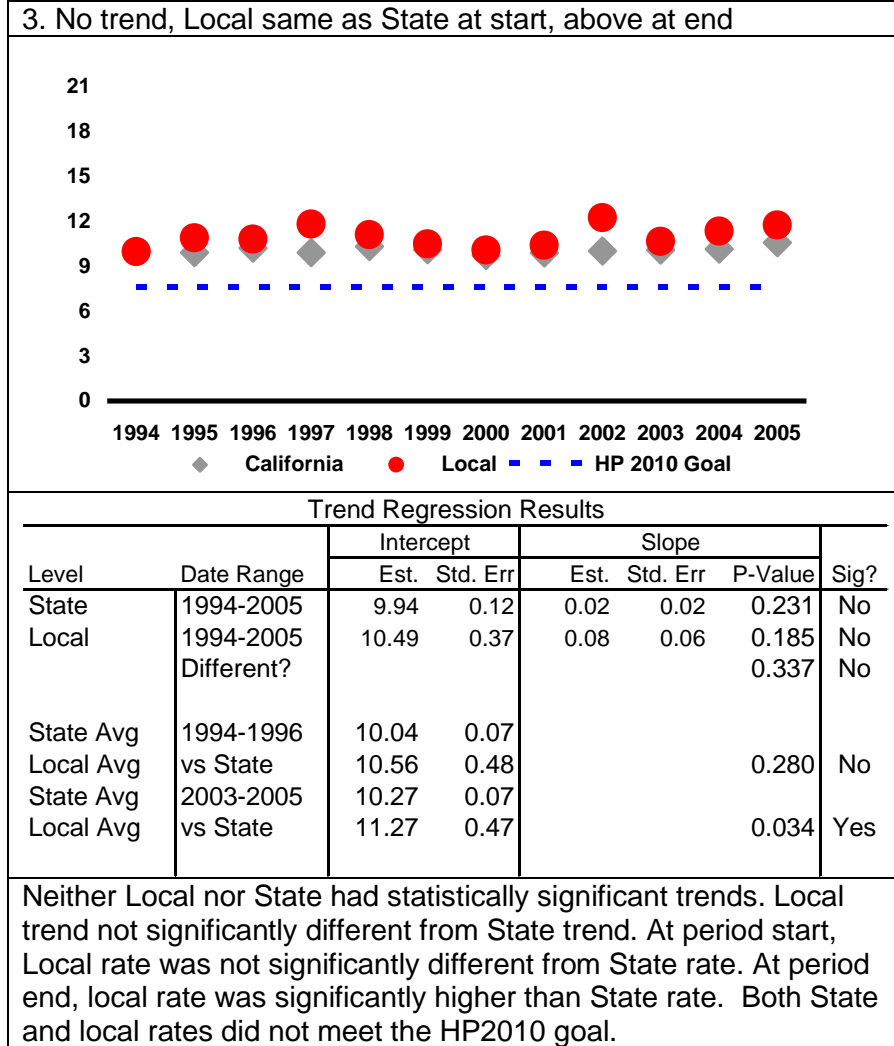
- state trend (No)
- local trend (No)
- and if they differ significantly from each other (No)

Look here to see if state and local average rates differed significantly in:

- 1994-1996 (YES)
- 2003-2005 (YES)

Example bullet:

- There is no significant upward or downward trend in preterm birth rates for RACE/ETHNIC group in LOCAL and in the state from 1994-2005. The average preterm rate for 1994-1996 for RACE/ETHNIC group in LOCAL was 13.61 and was significantly lower than the state rate of 15.77 for this group. For 2003-2005, the average LOCAL rate of 11.95 was significantly lower than the state rate of 15.82. Both State and local rates for RACE/ETHNIC group did not meet the HP2010 Goal.



Look here to see if there is a significant:

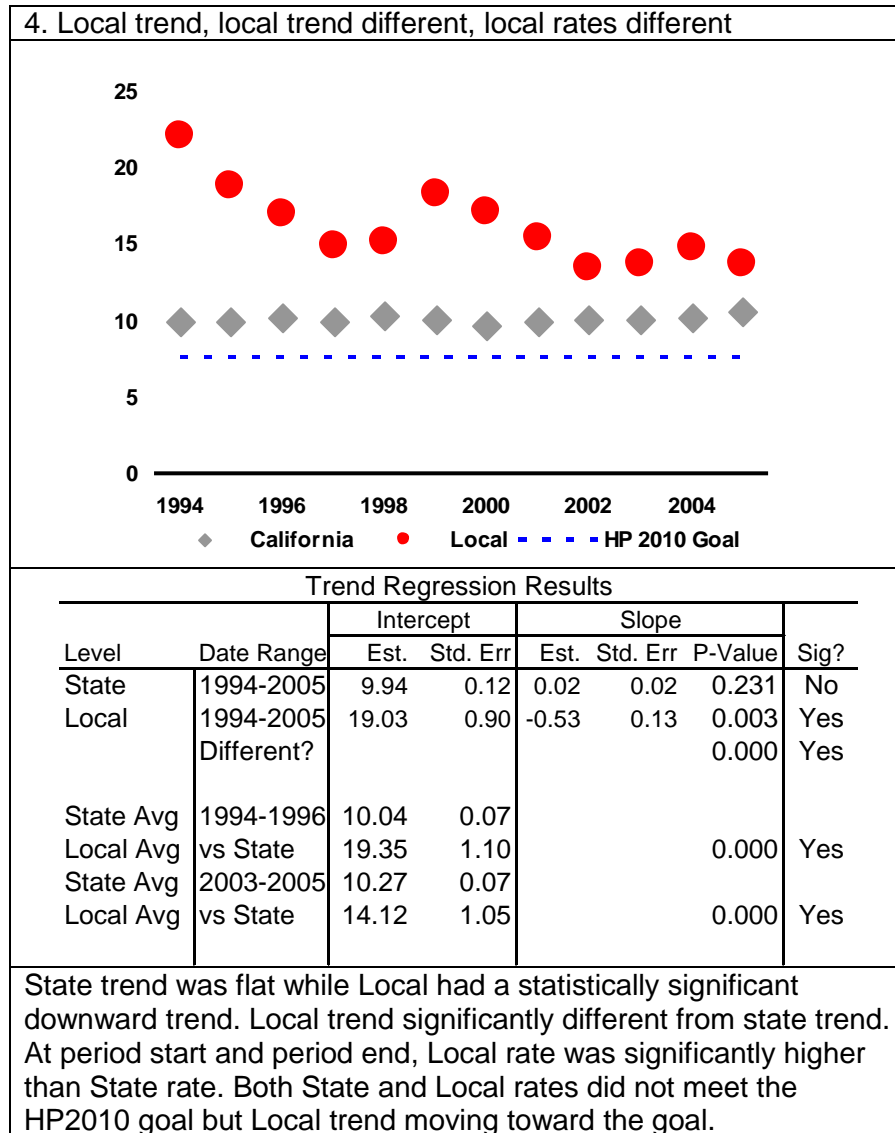
- state trend (No)
- local trend (No)
- and if they differ significantly from each other (No)

Look here to see if state and local average rates differed significantly in:

- 1994-1996 (No)
- 2003-2005 (Yes)

Example bullet:

- There is no significant upward or downward trend in preterm birth rates for RACE/ETHNIC group in LOCAL and in the state from 1994-2005. The average preterm rate for 1994-1996 RACE/ETHNIC group in LOCAL was 10.56 and did not differ significantly from the state rate of 10.04 for this group. For 2003-2005, the average LOCAL rate of 11.27 was significantly higher than the state rate of 10.27. Both State and local rates for RACE/ETHNIC group did not meet the HP2010 Goal.



Look here to see if there is a significant:

- state trend (No)
- local trend (YES)
- and if they differ significantly from each other (YES)

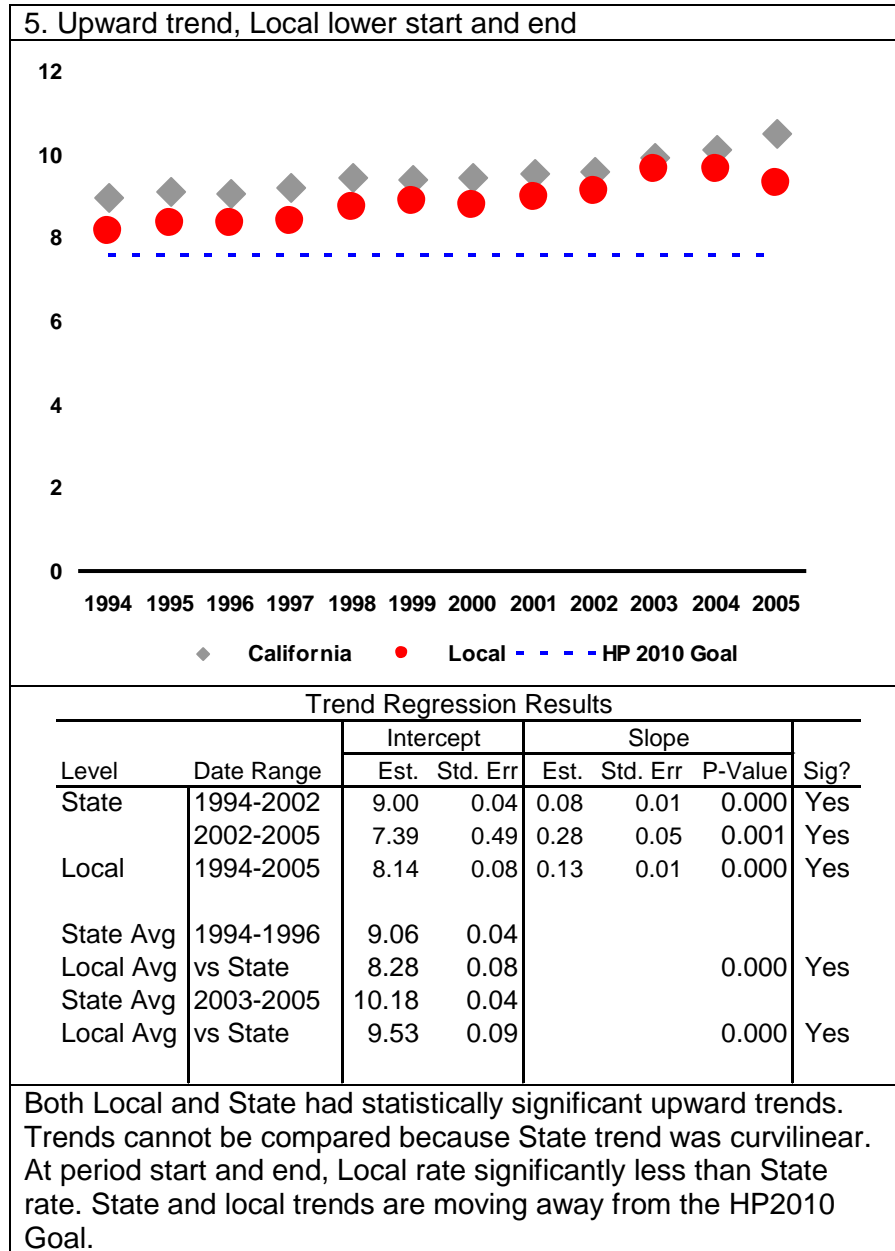
Look here to see if state and local average rates differed significantly in:

- 1994-1996 (YES)
- 2003-2005 (YES)

Example bullet:

- There was a significant downward trend in preterm birth rates for RACE/ETHNIC group in LOCAL but local rates were significantly higher than state rates which remained fairly flat from 1994-2005. The average preterm rate for 1994-1996 for RACE/ETHNIC group in LOCAL was 19.35 and was significantly higher than the state rate of 10.04 for this group. For 2003-2005, the average LOCAL rate of 14.12 was significantly higher than the state rate of 10.27. Both State and local rates for RACE/ETHNIC group did not meet the HP2010 Goal.

Example with a curvilinear trend



Look here to see if there is a significant:

- state trend (YES – but note dates are broken into 2 ranges and each range has a different slope (0.08 and 0.28) indicating there is a curvilinear trend)
- local trend (YES)
- NOTE that there is no test to see if the state and local trends are different because you can't test to see if a curvilinear trend is statistically different from a linear trend

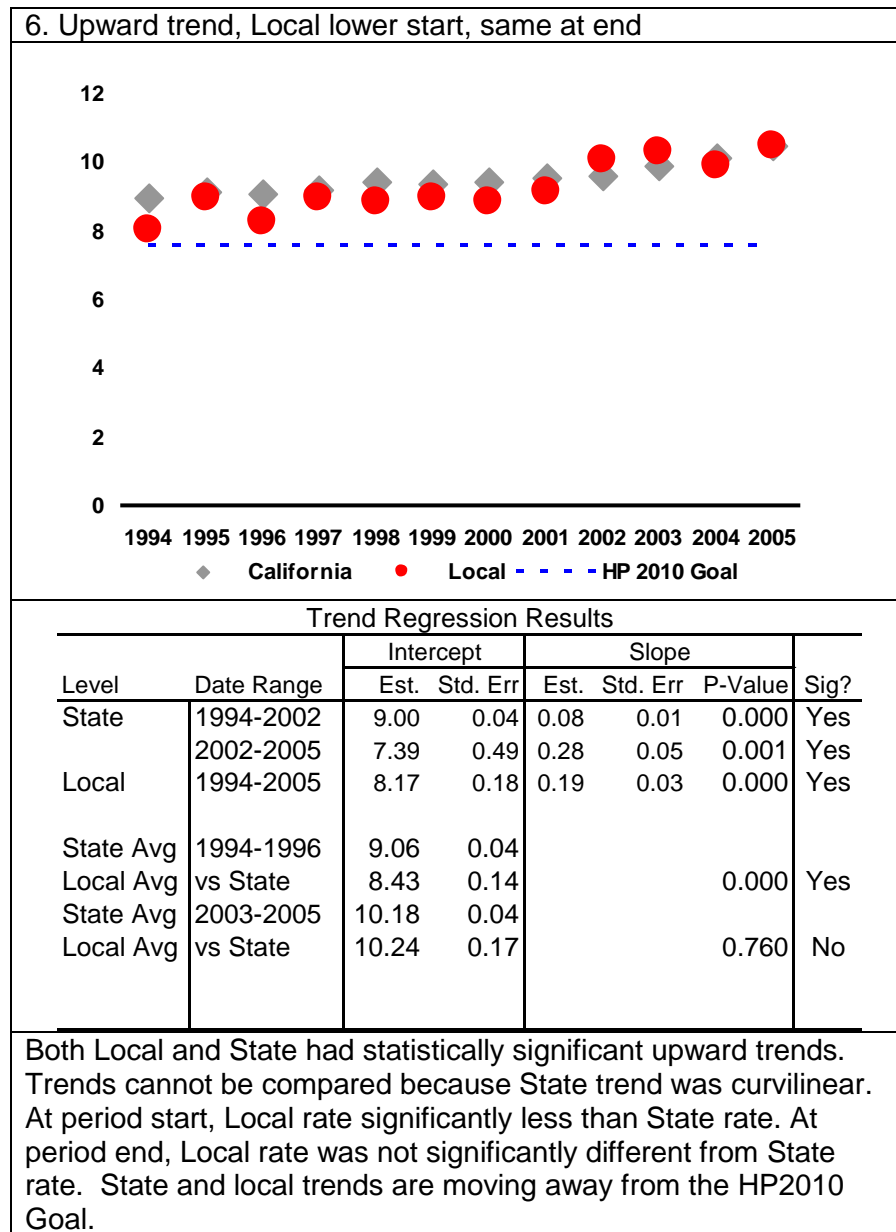
Look here to see if state and local average rates differed significantly in:

- 1994-1996 (YES)
- 2003-2005 (YES)

Example bullet:

- There were significant upward trends in preterm birth rates for RACE/ETHNIC group in both LOCAL and in the state from 1994-2005. LOCAL had a linear upward trend while the state trend was curvilinear trend and therefore the trends cannot be compared. The average preterm rate for 1994-1996 for RACE/ETHNIC group in LOCAL was 8.28 and was significantly lower than the state rate of 9.06 for this group. For 2003-2005, the average LOCAL rate was 9.53 and was also significantly lower than the state rate of 10.18. Both State and local rates for RACE/ETHNIC group did not meet the HP2010 Goal.

Example with a curvilinear trend



Look here to see if there is a significant:

- state trend (YES – but note dates are broken into 2 ranges and each range has a different slope - indicating there is a curvilinear trend)
- local trend (YES)
- NOTE that there is no test to see if the state and local trends are different because you can't test to see if a curvilinear trend is statistically different from a linear trend

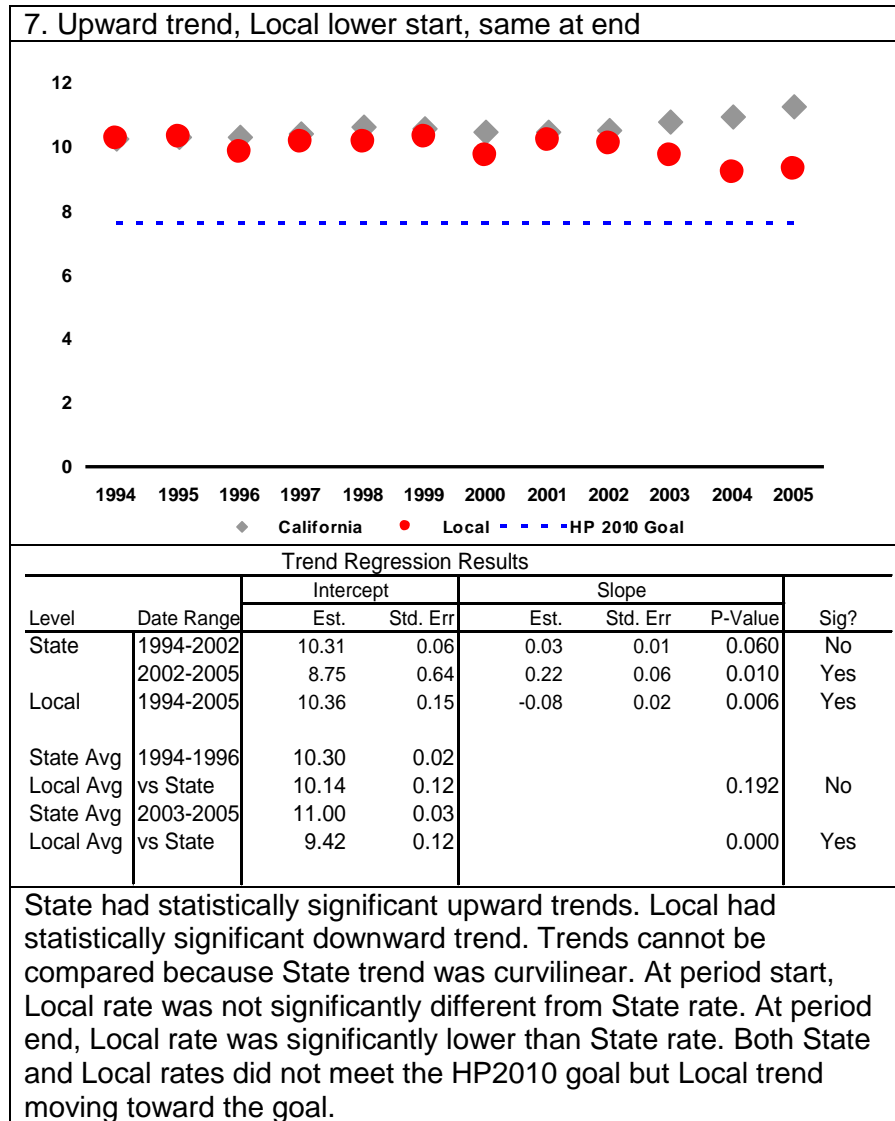
Look here to see if state and local average rates differed significantly in:

- 1994-1996 (YES)
- 2003-2005 (No)

Example bullet:

- There were significant upward trends in preterm birth rates for RACE/ETHNIC group in both LOCAL and in the state from 1994-2005. LOCAL had a linear upward trend while the state trend was curvilinear trend and therefore the trends cannot be compared. The average preterm rate for 1994-1996 for RACE/ETHNIC group in LOCAL was 8.43 and was significantly lower than the state rate of 9.06 for this group. For 2003-2005, the average LOCAL rate was 10.24 and did not differ significantly from the state rate of 10.18. Both State and local rates for RACE/ETHNIC group did not meet the HP2010 Goal.

Example with a curvilinear trend



Look here to see if there is a significant:

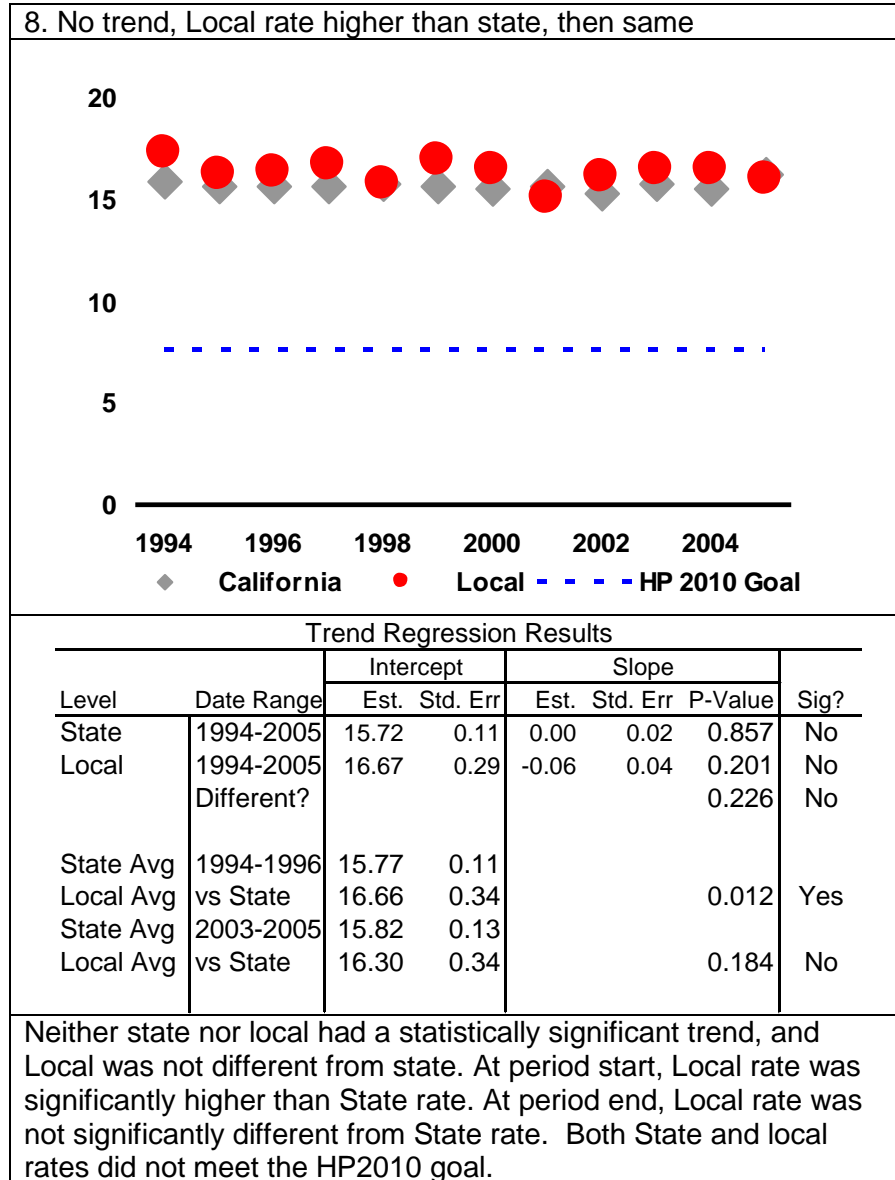
- state trend (NO trend for 1994-2002, but YES for 2002-2005. Note dates are broken into 2 ranges and each range has a different slope - indicating there is a curvilinear trend)
- local trend (YES)
- NOTE that there is no test to see if the state and local trends are different because you can't test to see if a curvilinear trend is statistically different from a linear trend

Look here to see if state and local average rates differed significantly in:

- 1994-1996 (No)
- 2003-2005 (YES)

Example bullet:

- There was significant downward trend in preterm birth rates for RACE/ETHNIC group in LOCAL from 1994-2005, and while flat from 1994-2002, the state trend had a significant upward trend from 2002-2005. LOCAL had a linear upward trend while the state trend was curvilinear trend and therefore the trends cannot be compared. The average preterm rate for 1994-1996 for RACE/ETHNIC group in LOCAL was 10.14 and it did not differ significantly from the state rate of 10.30 for this group. For 2003-2005, the average LOCAL rate was 9.24 and was significantly lower than the state rate of 11.00. Both State and local rates for RACE/ETHNIC group did not meet the HP2010 Goal, but the local trend is moving toward the goal.



Look here to see if there is a significant:

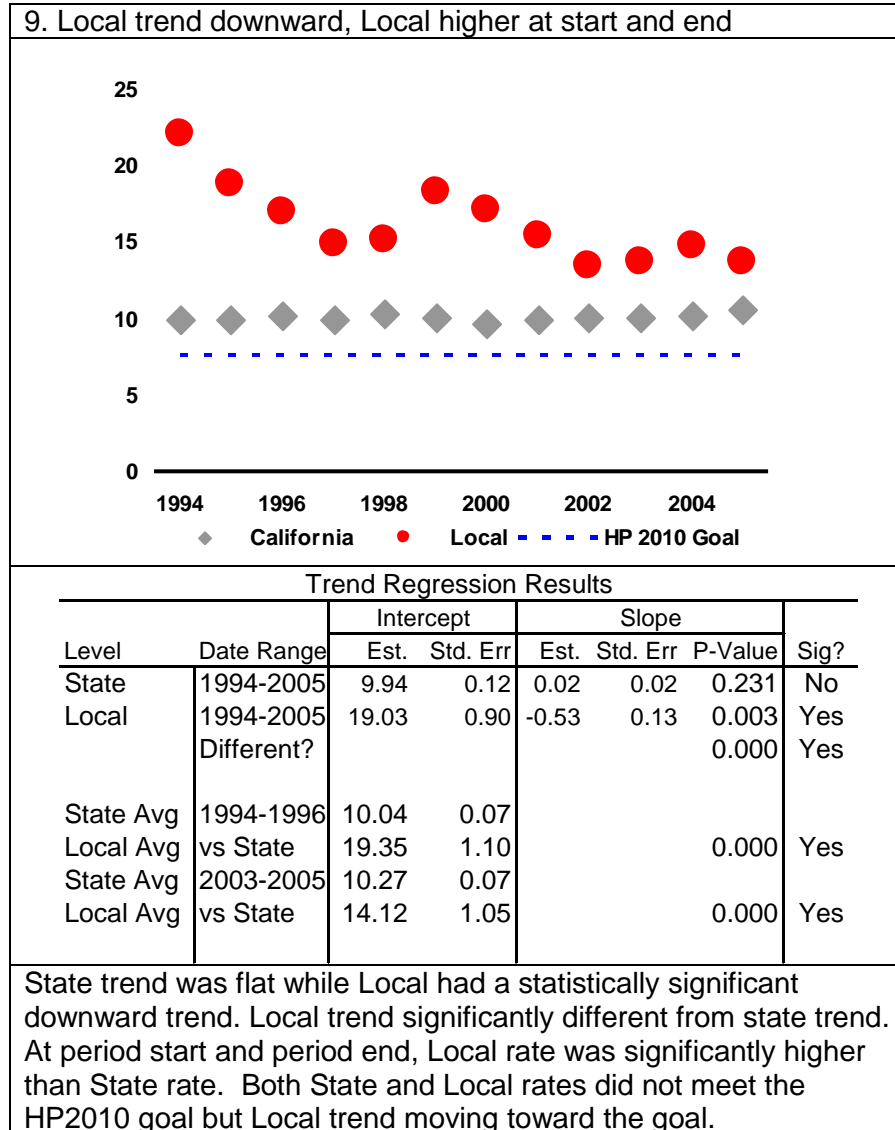
- state trend (No)
- local trend (No)
- and if they differ significantly from each other (No)

Look here to see if state and local average rates differed significantly in:

- 1994-1996 (YES)
- 2003-2005 (No)

Example bullet:

- There is no significant upward or downward trend in preterm birth rates for RACE/ETHNIC group in LOCAL and in the state from 1994-2005. The average preterm rate for 1994-1996 for RACE/ETHNIC group in LOCAL was 16.66 and was significantly higher than the state rate of 15.77 for this group. For 2003-2005, the average LOCAL rate of 16.30 did not differ significantly from the state rate of 15.82. Both State and local rates for RACE/ETHNIC group did not meet the HP2010 Goal.



Look here to see if there is a significant:

- state trend (No)
- local trend (YES)
- and if they differ significantly from each other (YES)

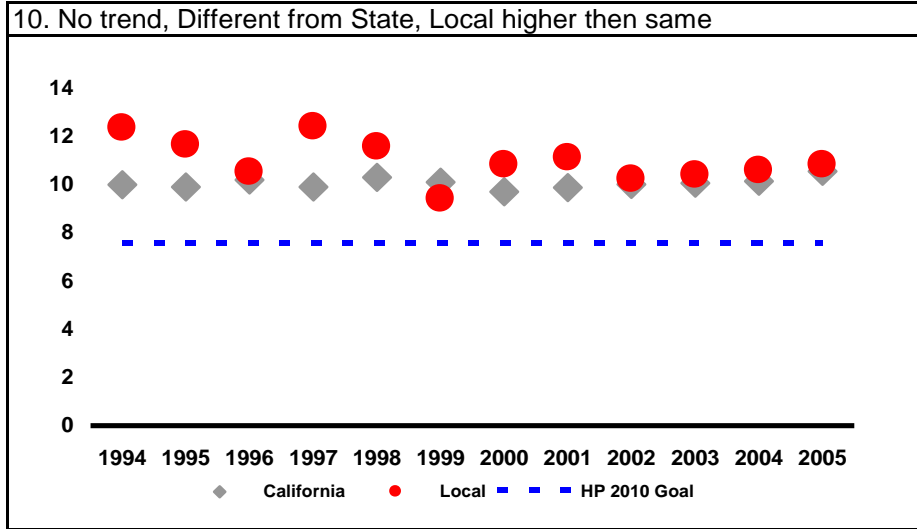
Look here to see if state and local average rates differed significantly in:

- 1994-1996 (YES)
- 2003-2005 (YES)

Example bullet:

- There was a significant downward trend in preterm birth rates for RACE/ETHNIC group in LOCAL but local rates were significantly higher than state rates which remained fairly flat from 1994-2005. The average preterm rate for 1994-1996 for RACE/ETHNIC group in LOCAL was 19.35 and was significantly higher than the state rate of 10.04 for this group. For 2003-2005, the average LOCAL rate was 14.12 and was significantly higher than the state rate of 10.27. Both State and local rates for RACE/ETHNIC group did not meet the HP2010 Goal.

10. No Trend, Different from State, Local higher then same



Trend Regression Results

Level	Date Range	Intercept		Slope			Sig?
		Est.	Std. Err	Est.	Std. Err	P-Value	
State	1994-2005	9.94	0.12	0.02	0.02	0.231	No
Local	1994-2005	11.62	0.44	-0.12	0.06	0.094	No
	Different?					0.033	Yes
State Avg	1994-1996	10.04	0.07				
Local Avg	vs State	11.52	0.33			0.000	Yes
State Avg	2003-2005	10.27	0.07				
Local Avg	vs State	10.63	0.28			0.204	No

Look here to see if there is a significant:

- state trend (No)
- local trend (No)
- and if they differ significantly from each other (YES)

Look here to see if state and local average rates differed significantly in:

- 1994-1996 (YES)
- 2003-2005 (No)

Both State and Local trends were statistically non-significant but moving in different directions. As a result, Local trend is significantly different from State trend. At period start, Local rate was higher than State rate. At period end, Local rate was same as State rate. Local and state rates did not meet HP2010 Goal.

Example bullet:

- There is no significant upward or downward trend in preterm birth rates for RACE/ETHNIC group in LOCAL and in the state from 1994-2005. However, local rates started higher and moved down while state rates increased slightly, resulting in the LOCAL trend being significantly different from the state trend. The average preterm rate for 1994-1996 for RACE/ETHNIC group in LOCAL was 11.52 and did not differ significantly from the state rate of 10.04 for this group. For 2003-2005, the average LOCAL rate of 10.63 was not significantly different than the state rate of 10.27. Both State and local rates for RACE/ETHNIC group did not meet the HP2010 Goal.