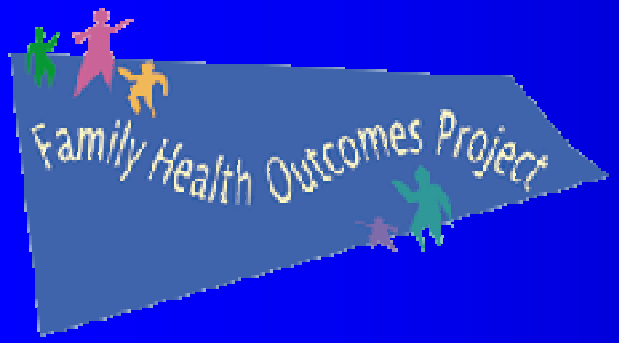

Automated Data Spreadsheets for California's Maternal, Child and Adolescent Health Programs

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Background

- FHOP contracts with California MCAH Branch to support 61 local MCAH programs to use data for assessment, planning and evaluation.
- Every 5 years LHJs are required to submit a comprehensive needs assessment and plan to continue to receive an annual Title V allocation
- In 2001 California MCAH identified 27 health indicators that locals needed to report on
- FHOP was asked to prepare county data on these and to assist counties in data analysis and interpretation

FHOP Areas of Activity

- Web site
- Automated Resources and Tools
- Research and Development
- Analytic Methods
- Training
- Evaluation
- Technical Assistance

Purpose of the Website

- Links to the part of National and California data sites for specific topic area or indicator
- Training schedule and curricula
- Publications on data methods
- Planning methods and tools
- Raw data
- Data spreadsheets
- Indicator table with links to relevant data

www.ucsf.edu/fhop

FHOP Local Databooks

- EXCEL spreadsheets display County-level data over 12 years for required indicators
- Tables and graphs compare rates between County and State data, and Healthy People 2010 Objectives
- Data quality tab alerts counties to missing or unlikely values and how they may affect accuracy of rate calculations
- Trend test results - “are things getting better or worse?” “how does progress in my county compare to the state?”

Data Sources and Spreadsheet Indicators

- Birth data – fertility and birth rates, LBW, VLBW, preterm births, inter-pregnancy interval, 1st trimester care, APNCU
- Death data – infant deaths, child deaths
- Hospital discharge data – asthma, ACS, mental health , injuries

Table of Numerators and Denominators

Description	Ethnicity	1994	1995	1996	1997	1998	1999	2000	2001	2002
Low <2500 grams	Total	5,922	5,824	5,817	5,716	5,999	5,799	6,195	6,176	6,122
	1 White	2,132	2,130	2,120	2,040	2,202	2,013	2,092	2,083	2,019
	2 Black	1,181	1,095	963	943	913	865	833	856	754
	3 Hispanic	1,367	1,389	1,408	1,422	1,541	1,497	1,590	1,588	1,603
	4 Asian	1,216	1,185	1,306	1,292	1,317	1,399	1,659	1,625	1,725
	5 AmIndian	26	25	20	19	26	25	21	24	21
Very Low <1500 grams	Total	989	936	968	995	1,029	1,005	1,058	1,025	1,039
	1 White	342	315	338	351	380	339	352	363	356
	2 Black	225	223	200	213	205	222	162	193	169
	3 Hispanic	225	231	255	256	253	250	287	267	302
	4 Asian	191	165	170	171	186	189	251	196	207
	5 AmIndian	6	2	5	4	5	5	6	6	5
Preterm Birth	Total	8,598	8,368	8,341	8,276	8,613	8,545	8,779	8,823	8,843
	1 White	3,278	3,238	3,129	3,070	3,188	3,105	3,152	3,141	3,102
	2 Black	1,338	1,271	1,117	1,134	1,068	1,043	991	998	925
	3 Hispanic	2,366	2,263	2,346	2,415	2,526	2,533	2,542	2,631	2,689
	4 Asian	1,578	1,557	1,718	1,623	1,799	1,825	2,055	2,004	2,096
	5 AmIndian	38	39	31	34	32	39	39	49	31

Databook County Rate Table

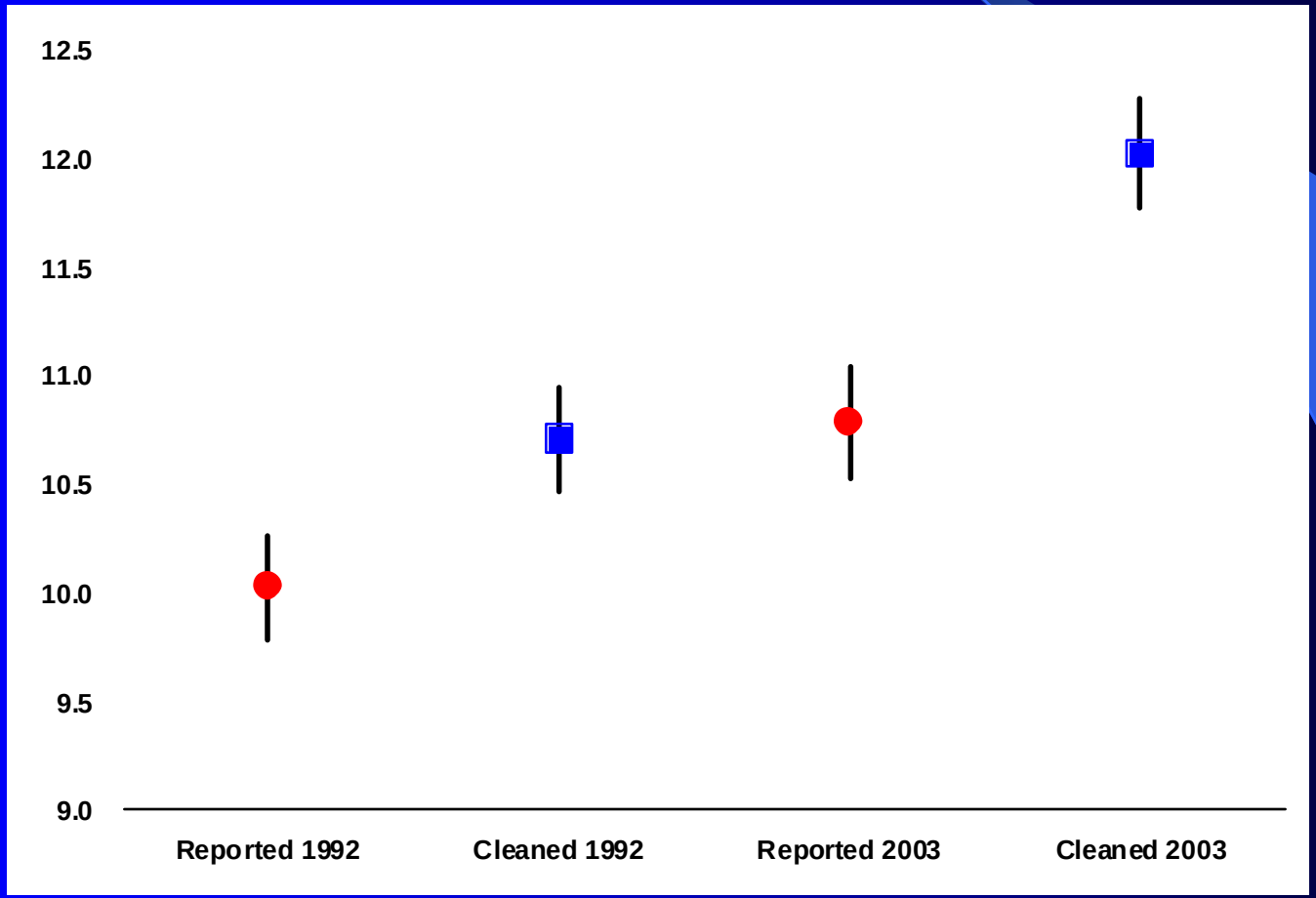
TOTAL POPULATION								
	California				Local			
Year	Births	Rate	Lower C.L.	Upper C.L.	Births	Rate	Lower C.L.	Upper C.L.
1994	34,811	6.2	6.1	6.2	3,883	6.4	6.2	6.6
1995	33,541	6.1	6.0	6.2	3,659	6.3	6.1	6.5
1996	32,599	6.1	6.0	6.1	3,613	6.3	6.1	6.5
1997	32,178	6.2	6.1	6.2	3,409	6.2	6.0	6.4
1998	32,362	6.2	6.2	6.3	3,474	6.2	6.0	6.4
1999	31,627	6.1	6.1	6.2	3,334	6.0	5.8	6.2
2000	32,787	6.2	6.1	6.2	3,638	6.3	6.1	6.5
2001	33,126	6.3	6.2	6.4	3,687	6.3	6.1	6.5
2002	33,782	6.4	6.3	6.5	3,864	6.4	6.2	6.5
2003	35,577	6.6	6.5	6.7	4,259	6.7	6.6	6.9
2004	36,413	6.7	6.6	6.8	4,360	6.7	6.5	6.9
2005	37,581	6.9	6.8	6.9	4,535	6.7	6.5	6.9

Data Quality Report
Preterm Delivery

County	Births		Gestational Age (Weeks)					
			Improbable				Improbable %	
	N	% Total	Missing	Lt 18	Gt 47	Total	Local	State
State	548,700	100.0	18,537	324	3,408	22,269	4.1	4.1
1 Alameda	20,902	3.8	214	5	53	272	1.3	0.0
2 Alpine	15	0.0	0	0	0	0	0.0	0.0
3 Amador	288	0.1	12	0	0	12	4.2	0.0
4 Butte	2451	0.4	152	1	13	166	6.8	0.0
5 Calaveras	371	0.1	6	0	1	7	1.9	0.0
6 Colusa	381	0.1	5	0	2	7	1.8	0.0
7 Contra Costa	13143	2.4	279	4	78	361	2.7	0.1
8 Del Norte	327	0.1	10	0	0	10	3.1	0.0
9 El Dorado	1930	0.4	81	0	12	93	4.8	0.0
10 Fresno	15936	2.9	395	66	508	969	6.1	0.2
11 Glenn	431	0.1	32	0	2	34	7.9	0.0
12 Humboldt	1598	0.3	75	2	7	84	5.3	0.0
13 Imperial	3058	0.6	31	3	18	52	1.7	0.0
14 Inyo	205	0.0	4	0	2	6	2.9	0.0
15 Kern	14022	2.6	1,296	10	126	1,432	10.2	0.3
16 Kings	2554	0.5	38	6	32	76	3.0	0.0
17 Lake	728	0.1	74	1	8	83	11.4	0.0
18 Lassen	289	0.1	25	0	0	25	8.7	0.0
19 Los Angeles	150377	27.4	6,236	85	781	7,102	4.7	1.3

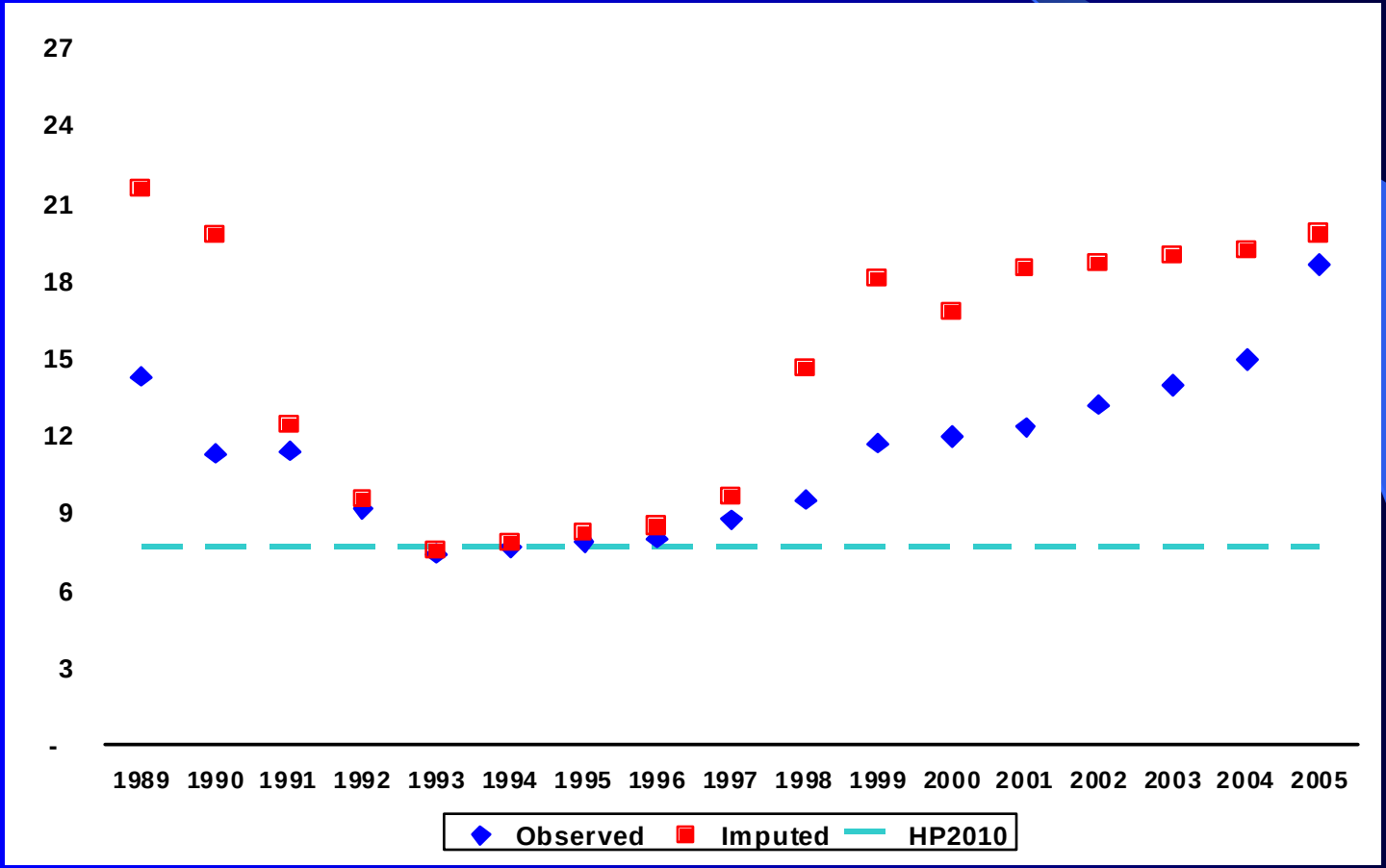
Why is Data Quality Important?

Local Asian Preterm Birth Rates
Reported and Cleaned 1992 and 2003



Why is Data Quality Important?

Local Asian Preterm Birth Rates Reported and Imputed 1989-2005



Trend Analysis

Purpose:

- **To monitor the impact of a program or system change, need to know not only whether an indicator rate improved significantly but the significance of the rate of change before and after the event of interest for both the groups of interest and a comparison group**

Method:

- **Incorporate small numbers guidelines and decision rules that prescribe aggregates of 1, 2 or 3 years of data to have enough statistical power for meaningful comparisons over time**
- **JoinPoint (NCHS software) http://srab.cancer.gov/joinpoint/faq.html selects best regression model, smoothes data, and calculates intercept, slope and P values.**
- **SAS macros drive the entire process from reading data into SAS, classifying and summarizing data, calculating rates and confidence intervals, calling JoinPoint to do the regressions, and outputting results to Excel.**

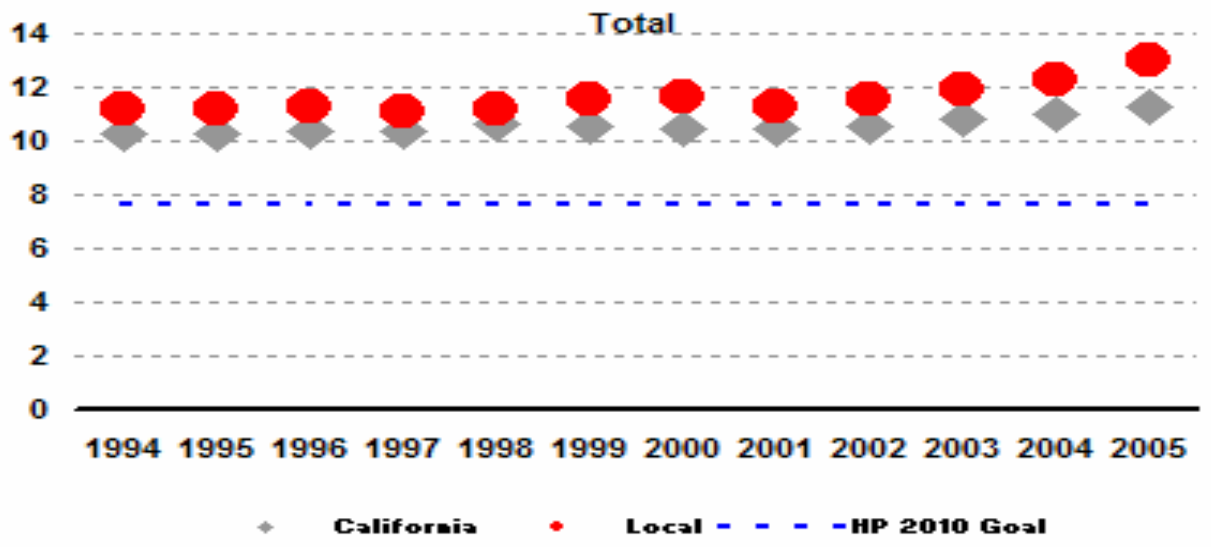
What We Get

- **Slope** – the average rate of change over time where:
  - zero = flat
  - (+) = increasing trend
  - (-) = downward trend
- **Intercept** – the rate at the start of the study period - where the line intercepts the vertical (x) axis

Statistical Terms for Trend Regression Analysis

- **P-value -** likelihood that model results are statistically significant
- **Standard Error -** the confidence interval around the slope and intercept
- Both are used to test significance of indicator trend and differences among comparison groups

Trend Analysis Table



Trend Regression Results

		Intercept		Slope			
Level	Date Range	Est.	Std. Err	Est.	Std. Err	P-Value	Sig?
State	1994-2002	10.31	0.06	0.03	0.01	0.060	No
	2002-2005	8.75	0.64	0.22	0.06	0.010	Yes
Local	1994-2002	11.15	0.10	0.04	0.02	0.132	No
	2002-2005	7.74	1.14	0.47	0.11	0.004	Yes
State Avg	1994-1996	10.30	0.02				
Local Avg	vs State	11.20	0.08			0.000	Yes
State Avg	2003-2005	11.00	0.03				
Local Avg	vs State	12.42	0.08			0.000	Yes

MCAH Title V Indicator Table

Data Sources for Title V Indicators

Click on the link to view or download the file. If you have a problem accessing the file, you may need and additional piece of software:WinZip (for) or Adobe Acrobat Reader (for).

Please note: The numerator and the denominator are provided as further explanation of how the data are calculated.

1. Fertility Rates per 1,000 Females (Ages 15 to 44)	
numerator # of live births **denominator** total # of females in specified age grp	File: ***Fertility 1994- 2005*** Location: California County MCAH Data *You will need a password to gain access to this file. If you do not have one, please fill out this form and fax it to 415-502-0848.*
2. Teen Birth Rate per 1,000 Females (Ages 10 to 14, 15 to 17, 18 to 19)	
numerator # of births in specified age grps **denominator** total # of females in specified age grps	File: ***Fertility 1994- 2005*** Location: California County MCAH Data *You will need a password to gain access to this file. If you do not have one, please fill out this form and fax it to 415-502-0848.*
3. Percent Low Birth Weight (Live Births)	

Automated Resources

- EXCEL Templates
  - Calculate Rates and confidence intervals
  - Calculate Risk statistics
- Analysis – EpiInfo Based software
  - EpiBC
  - EpiHOSP

FHOP Data Templates

Year	California		County				County/State Comparison		
	Events	Percent	Events	Percent	Lower 95% C.L.	Upper 95% C.L.	Ratio	Lower 95% C.L.	Upper 95% C.L.
1994	56,064	10.3%		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
1995	54,453	10.3%		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
1996	53,022	10.3%		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
1997	51,875	10.4%		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
1998	52,441	10.6%		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
1999	51,807	10.6%		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2000	52,522	10.5%		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2001	51,974	10.4%		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2002	52,067	10.5%		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2003	54,311	10.8%		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2004	55,738	11.0%		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2005	59,225	11.2%		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

3 Year Aggregates	California		County				County/State Comparison		
	Events	Percent	Events	Percent	Lower 95% C.L.	Upper 95% C.L.	Ratio	Lower 95% C.L.	Upper 95% C.L.
1994-1996	163,539	10.3%	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
1997-1999	156,123	10.5%	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
200-2002	156,563	10.5%	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2003-2005	169,274	11.0%	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Utility

- Local MCAH programs no longer have to spend time on data acquisition, data routine epidemiological analysis and presentation and can focus on in depth analysis, doing special focused assessments and priority setting
- The site is well utilized as indicated by number of hits and downloads

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