

Visual Display of Public Health Data

Data



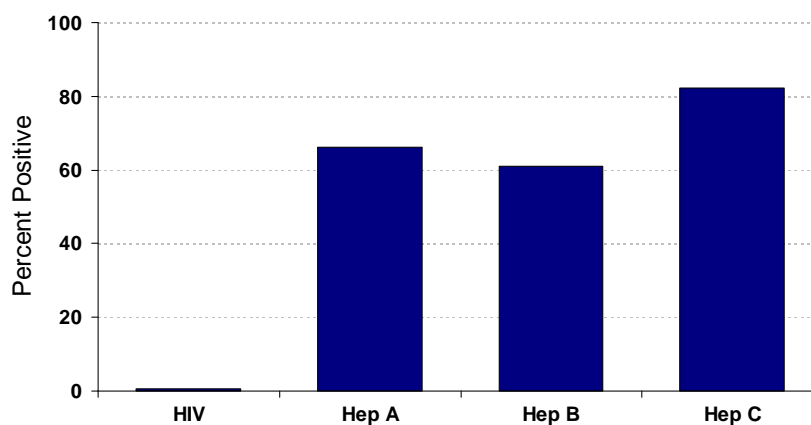
Action

- Program
 - New program
 - Revised program priorities
- New guidelines
- New policy
- New hypothesis (may lead to new action)
- More (or less) money!

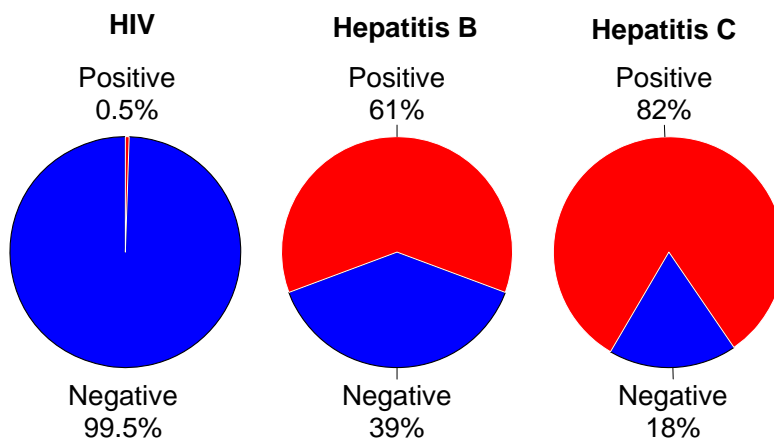
HIV and Hepatitis among Injection Drug Users New Mexico, 1997

	<u>N</u> <u>tested</u>	<u>%</u> <u>Positive</u>	<u>95% C.I.</u>
HIV	1002	0.5	.16-1.6
Hep A	696	66.1	62.4-69.6
Hep B	950	61.1	57.9-64.2
Hep C	945	82.2	79.6-84.6

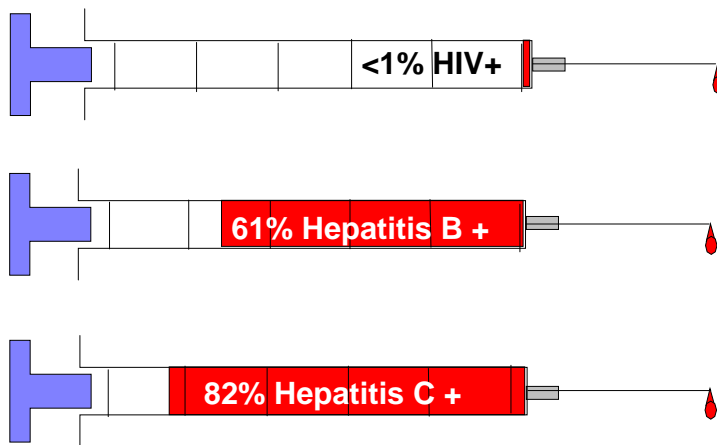
HIV and Hepatitis Among Injection Drug Users New Mexico, 1997



HIV, HBV, and HCV Among Injection Drug Users in New Mexico



HIV, Hepatitis B, and Hepatitis C New Mexico Street Based Injection Drug User Studies





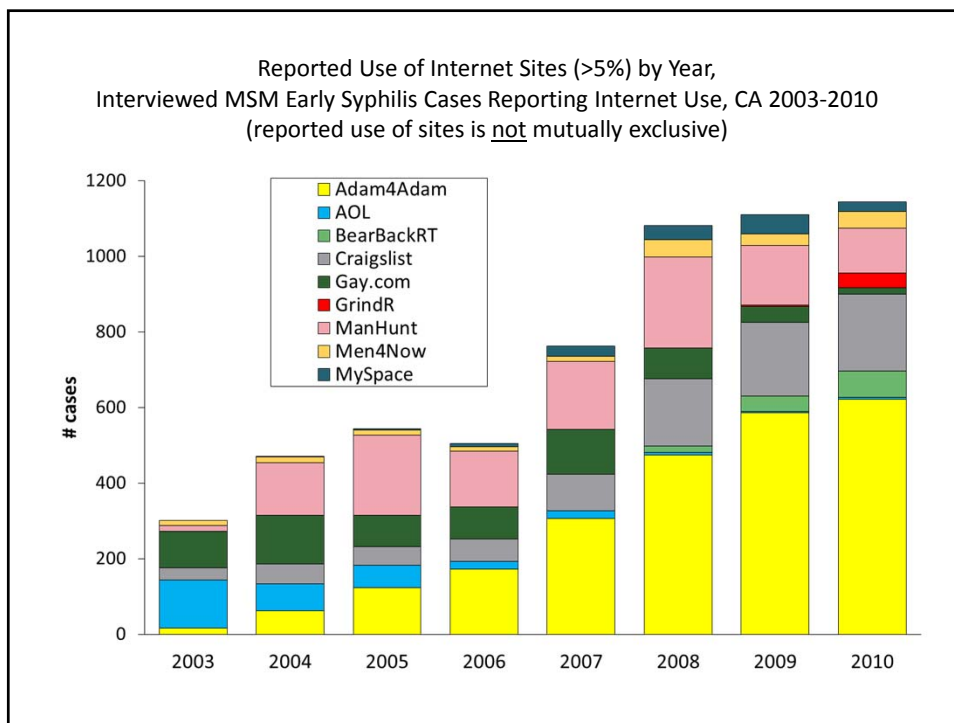
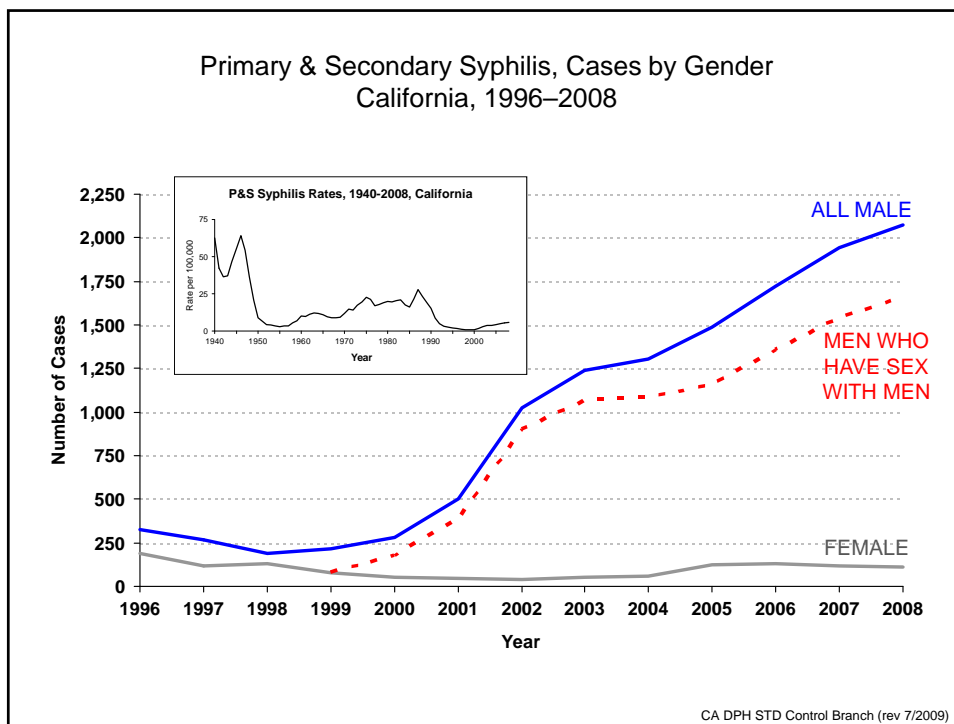
Guidelines for Effective Visual Display

- Communicate important information
- Complexity is good, and...
- Keep it simple, stupid
- Know your audience
- Oral presentation vs. written material
- Data integrity
- Clear labels and annotations
- Use appropriate scale(s)
- Use appropriate type of chart
- Pay attention to details
- Avoid extraneous “Chart Junk”



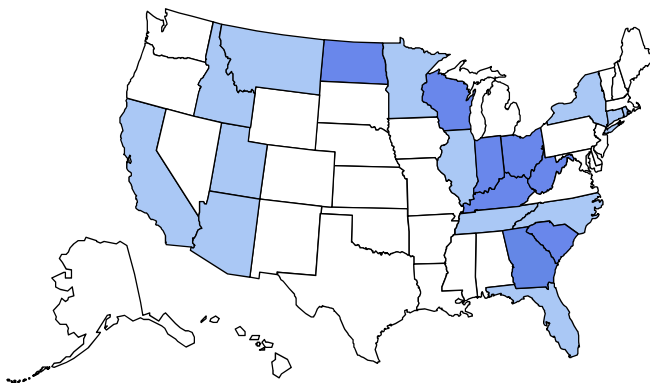
Display Types

- Tables
- Line Charts
- Bar Charts
- Pie Charts
- Scattergrams
- Statistical Charts
 - Box Plots
- Maps
- Others
- Hybrid



Obesity Trends* Among U.S. Adults BRFSS, 1985

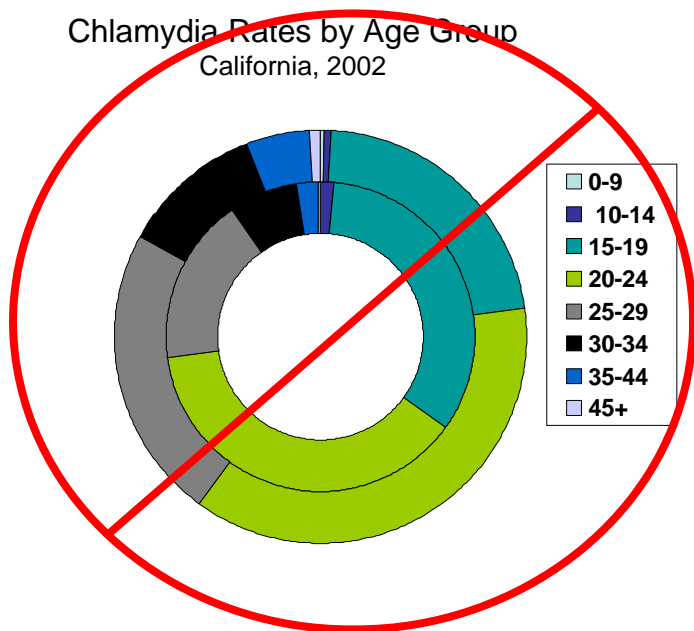
(*BMI ≥30, or ~ 30 lbs. overweight for 5' 4" person)

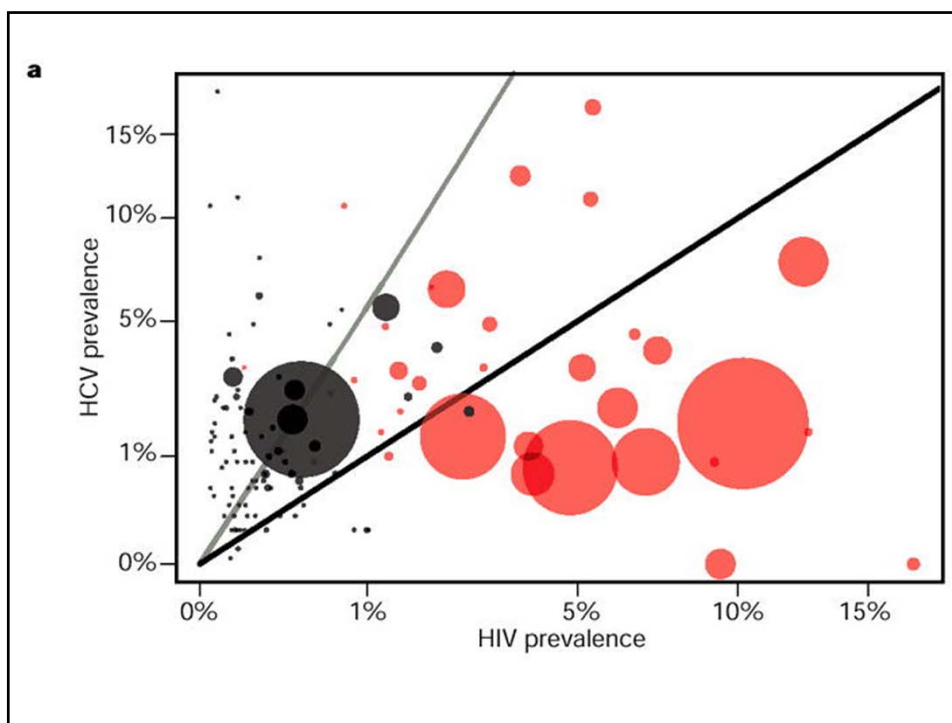


Slides

<http://www.cdc.gov/nccdphp/dnpa/obesity/trend/maps/>

Chlamydia Rates by Age Group California, 2002



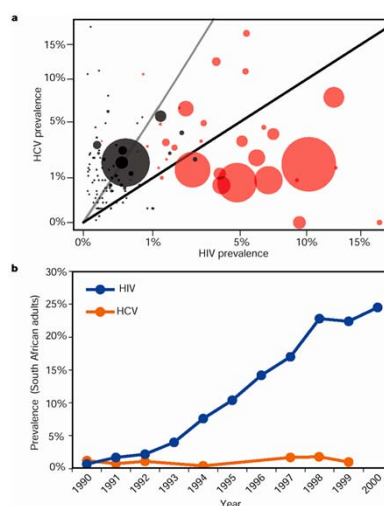


Nature 422, 679 (17 April 2003)

Epidemiology: Sexual transmission of HIV in Africa

Polly R. Walker, Michael Worobey, Andrew Rambaut, Edward C. Holmes and Oliver G. Pybus

Figure 1 Comparison of epidemic histories of human immunodeficiency virus (HIV) and hepatitis C virus (HCV) in different countries, and in South Africa during the 1990s. **a**, HCV and HIV prevalence in the general population (including children) of every country for which data are available. The arcsine square-root transformation for proportions was used because the original distribution of points was strongly L-shaped. Sub-Saharan African countries are represented by red circles; other countries are represented by black circles; the radius of each circle is proportional to the number of HIV infected individuals in that country. Countries below the black line have a higher prevalence of HIV than HCV; the opposite is true for countries above the black line. The grey line represents an HCV:HIV prevalence ratio of 6, which indicates the relative parenteral transmissibility of the two pathogens [3](#). All prevalence figures apart from five HCV values were obtained from World Health Organization sources. **b**, HIV and HCV prevalence in South African adults from 1990 to 2000 (estimates for HIV from ref. [6](#); estimates for HCV from sources listed in supplementary information).

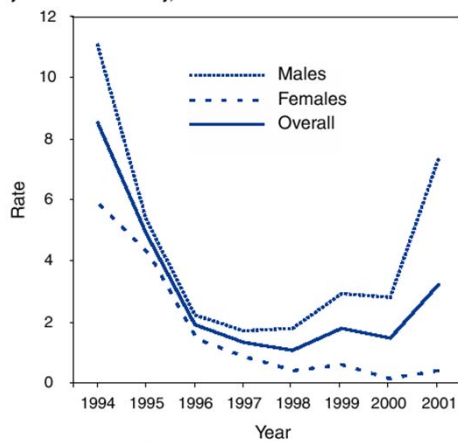


NATURE | VOL 422 | 17 APRIL 2003 | www.nature.com

“Nut and Bolts”

- Scale and Proportion
- Labels and Legends
- Grid Lines
- Color
- Animation/“PowerPoint”
- Font
- 3D
- Production/Reproduction
- Chart Junk
- Software

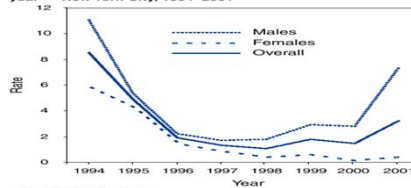
FIGURE. Primary and secondary syphilis rates*, by sex and year — New York City, 1994–2001



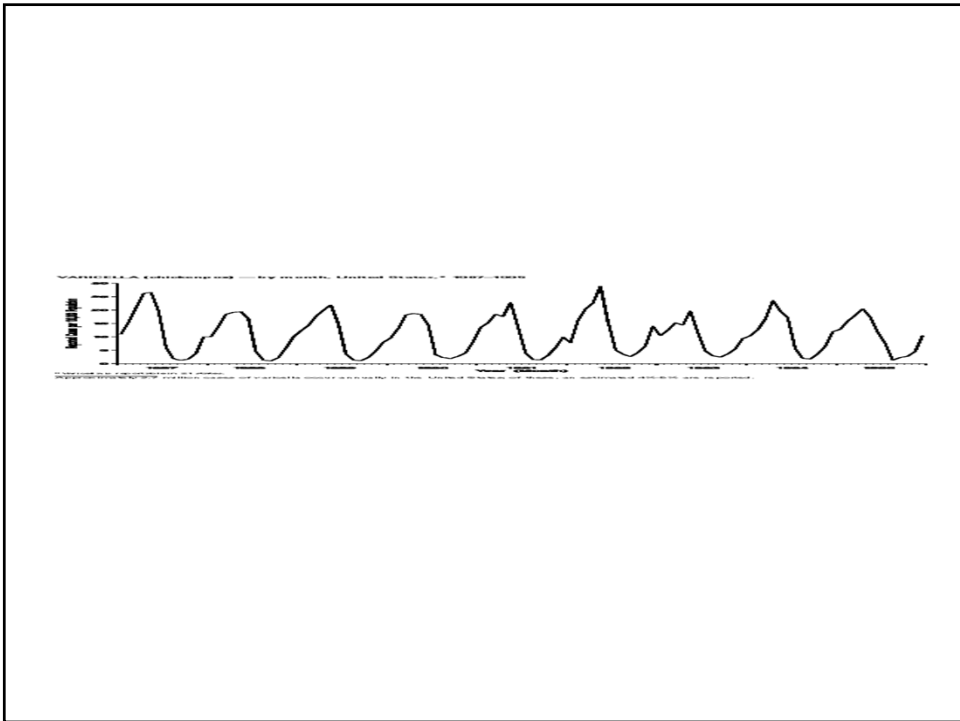
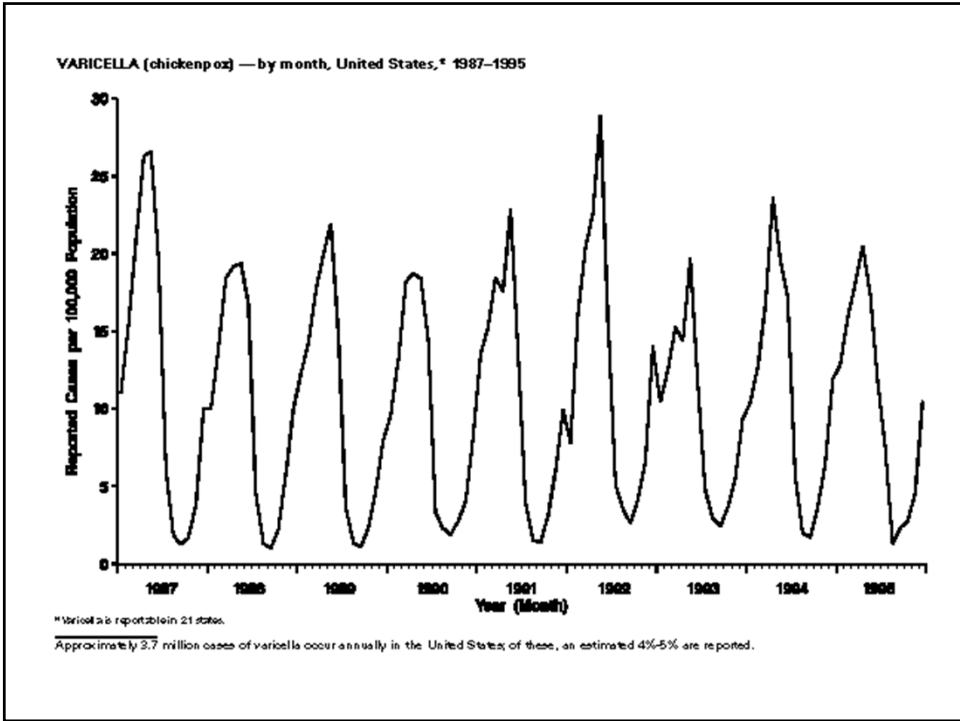
* Per 100,000 population.

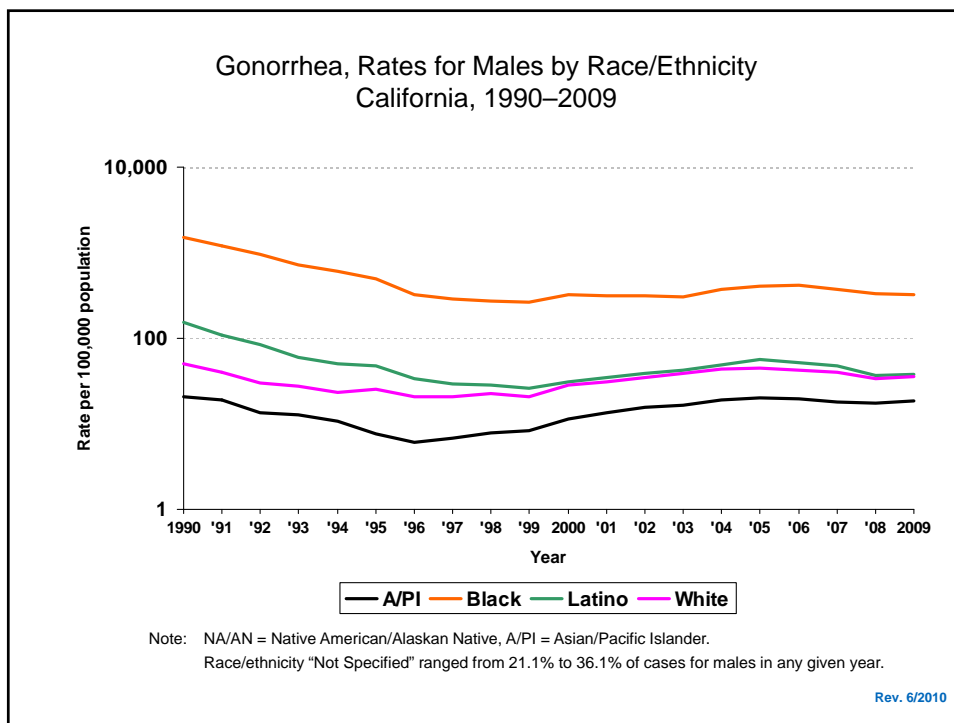
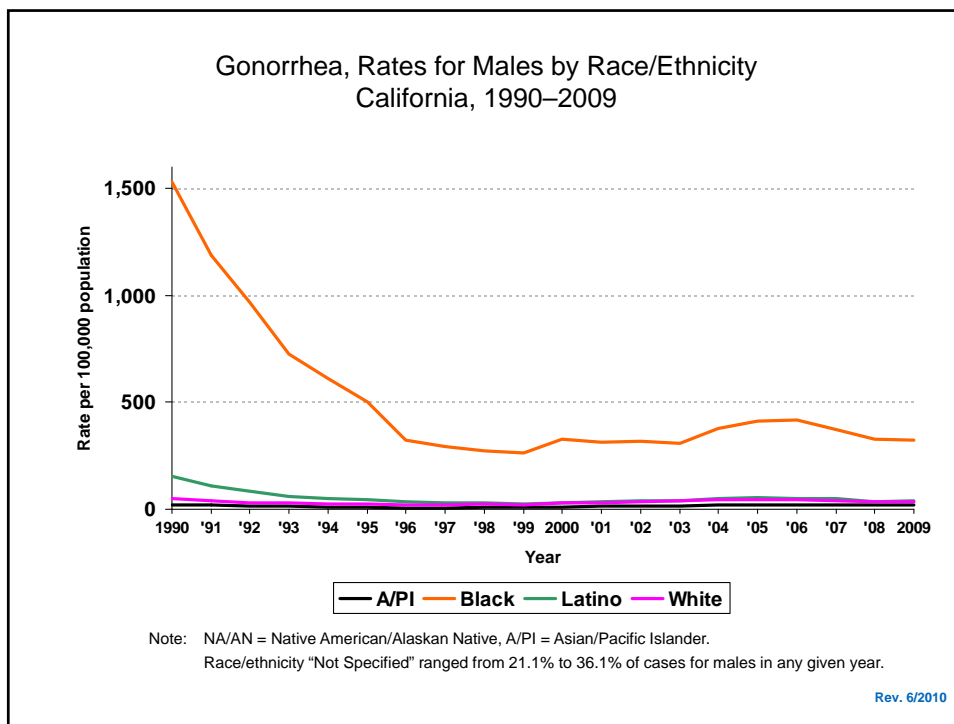
MMWR September 27, 2002 / 51(38):853-856

FIGURE. Primary and secondary syphilis rates*, by sex and year — New York City, 1994–2001



* Per 100,000 population.

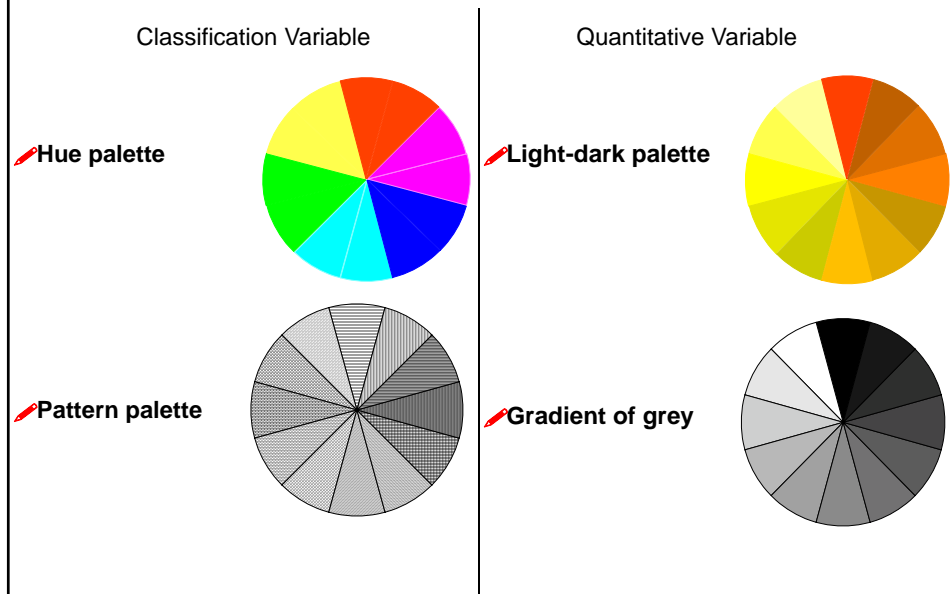




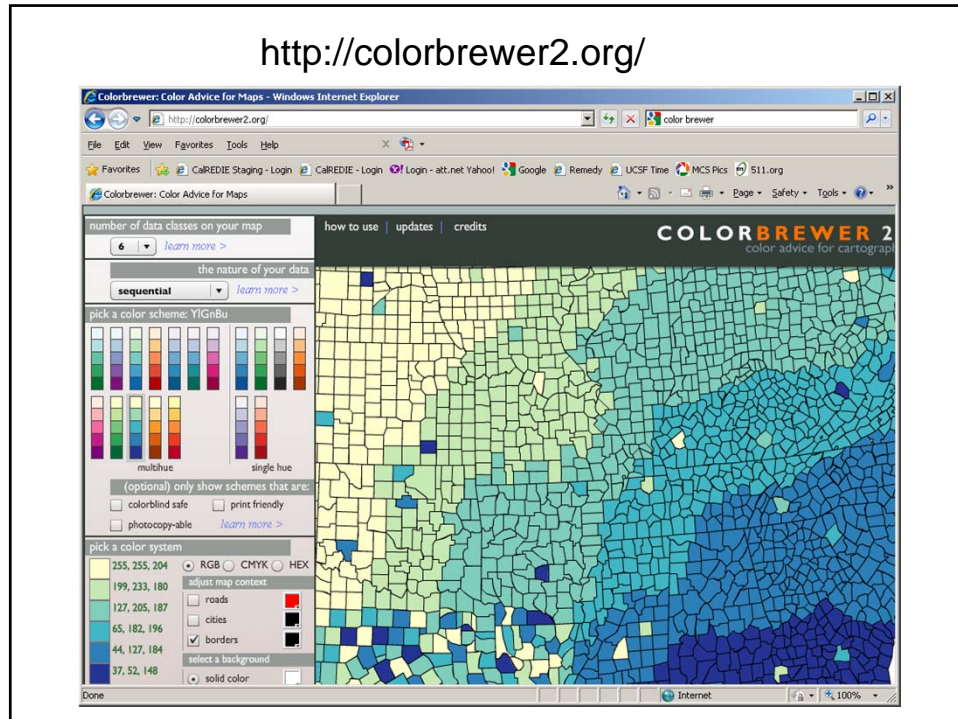
Color

- Use for a reason
- Use nice colors
 - Shades of Blue
 - Shade of Yellow
 - Colors of Nature
- Use color sparingly
- **RED** can be good for **Main Point**, if used sparingly
- Red often does not project well with slides and LCDs
- Use consistent colors (and fonts, etc.)

Color/Pattern Choice



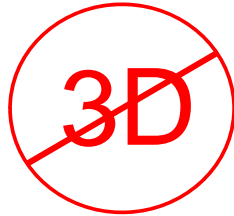
<http://colorbrewer2.org/>



Fonts / Fonts

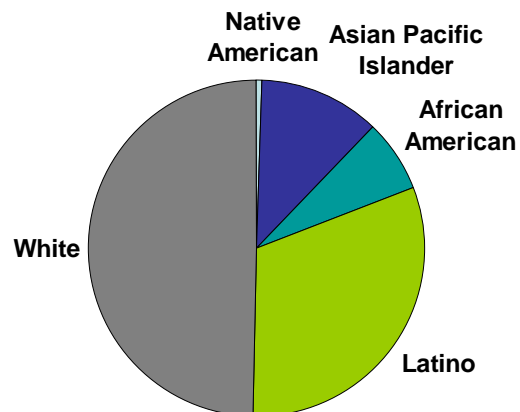
- Use San Serif Fonts, Like Arial
- Not Serif Fonts, Like Times Roman
 - They Are Harder to Read
 - Particularly in Oral Presentations
 - When the Font Is Small
 - See, Isn't This Better
- ALSO, ALMOST NEVER USE ALL CAPS
 - IT'S HARD TO READ TOO
- Big Enough to read

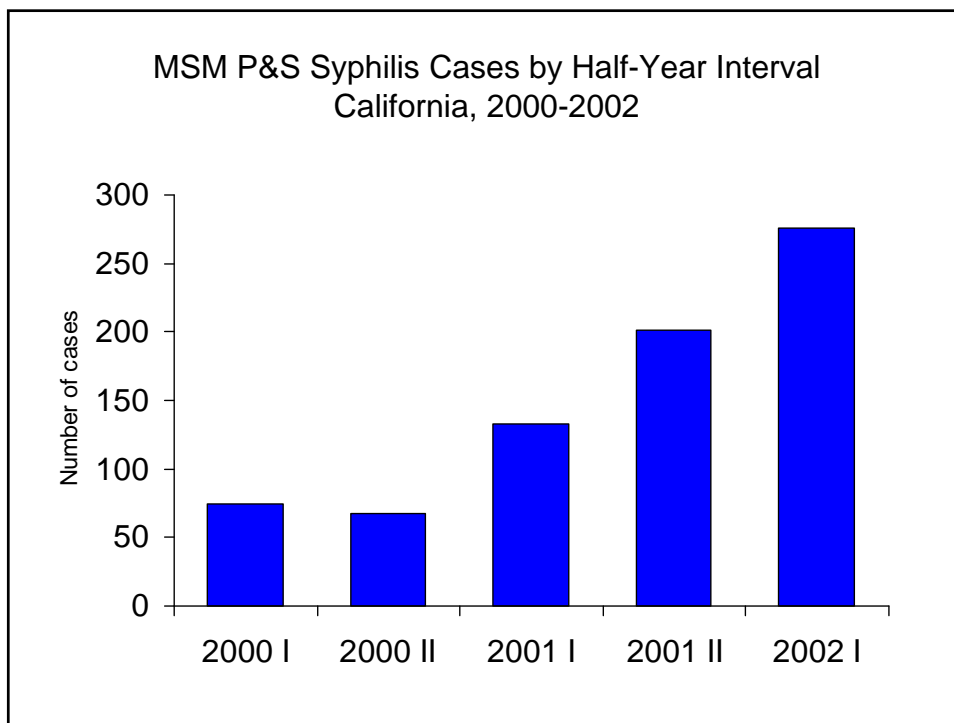
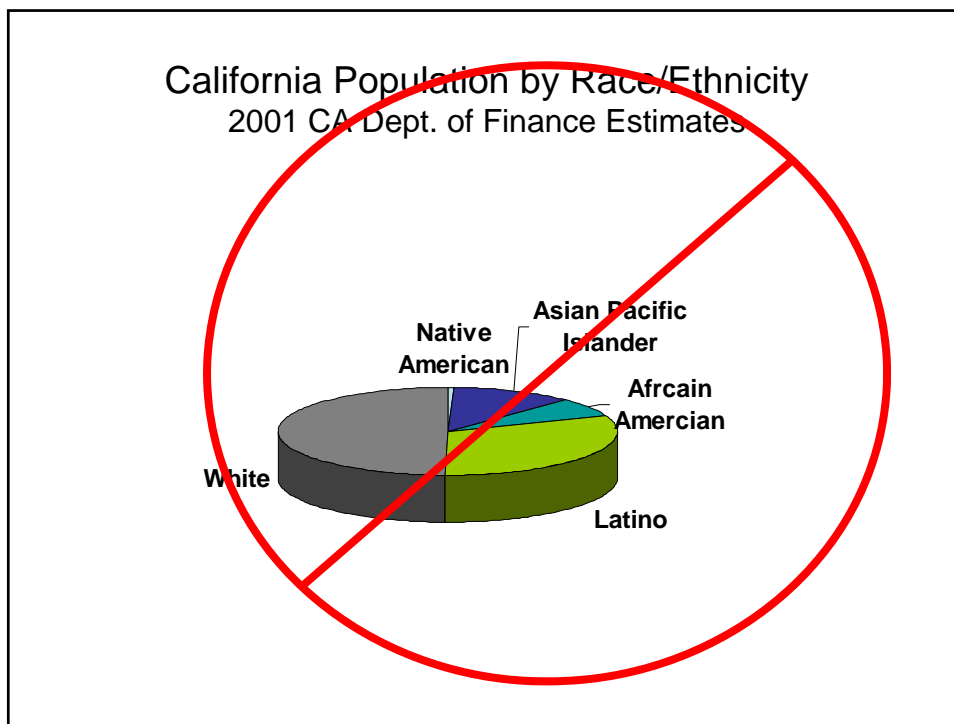
3D Charts

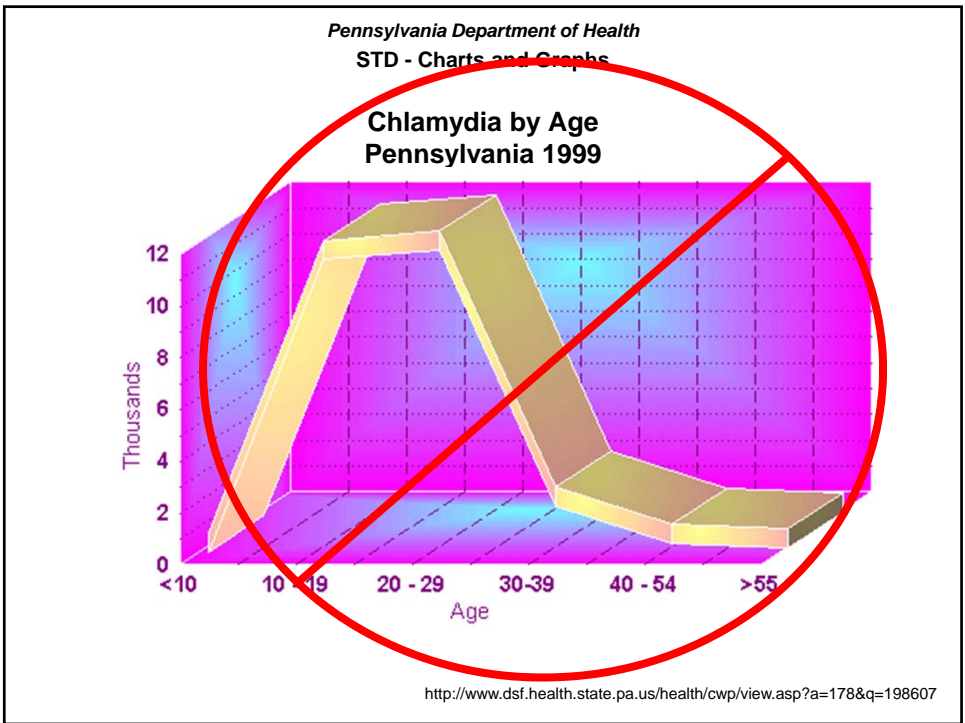
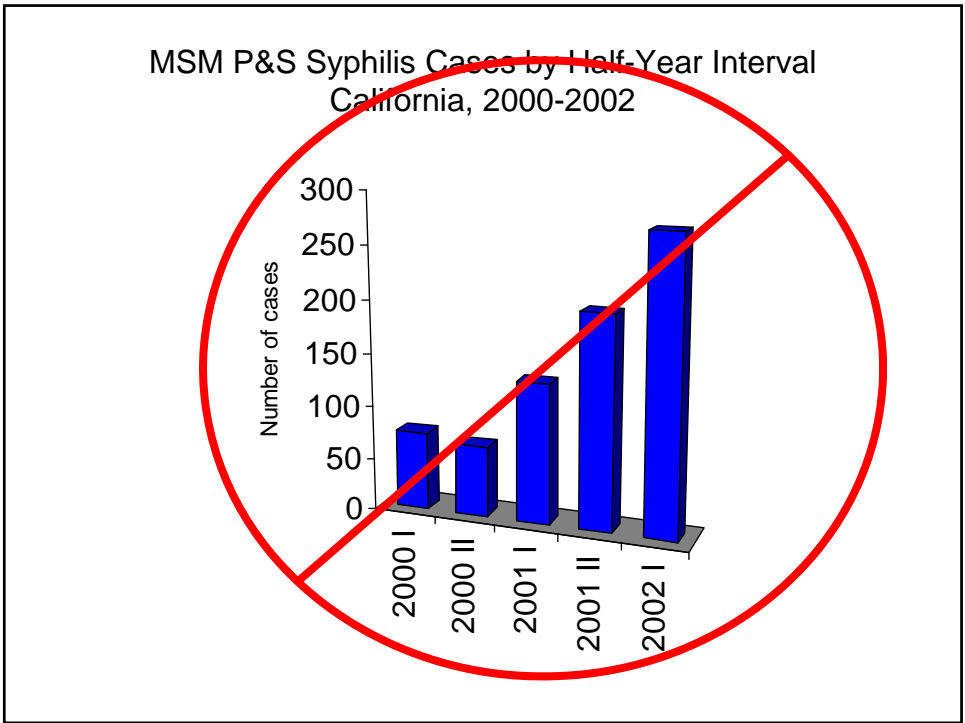


- Unless there are 3 dimensions and the audience can handle it!

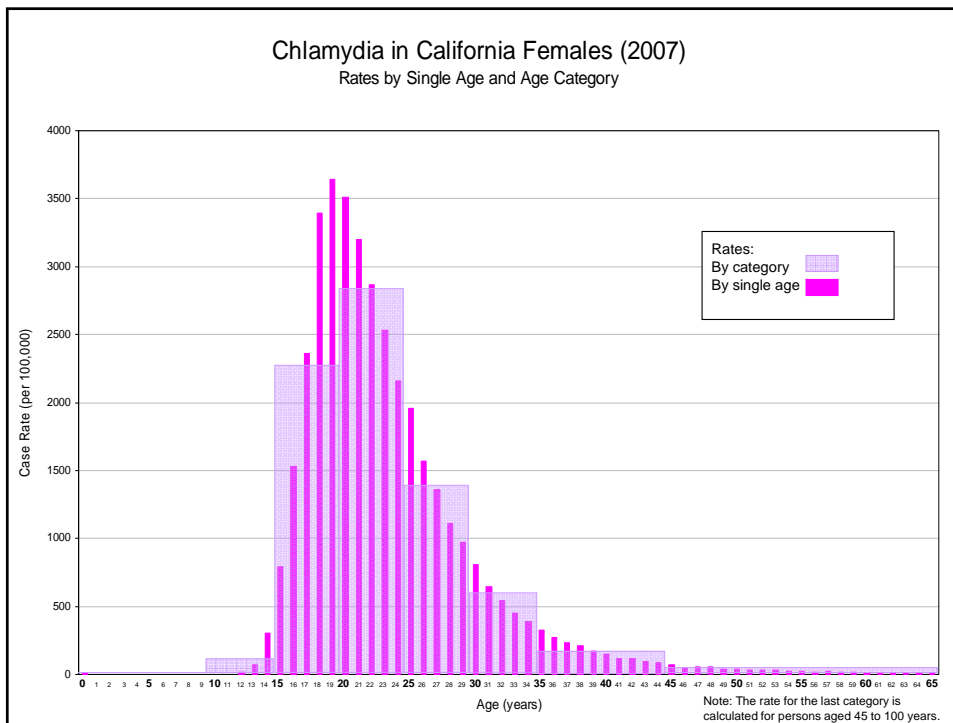
California Population by Race/Ethnicity
2001 CA Dept. of Finance Estimates







R



```

dat <- read.table("c:/0.Samuel.Visual/Cases and Rates.csv",sep=","na.strings="" ,as.is=TRUE,header=T)

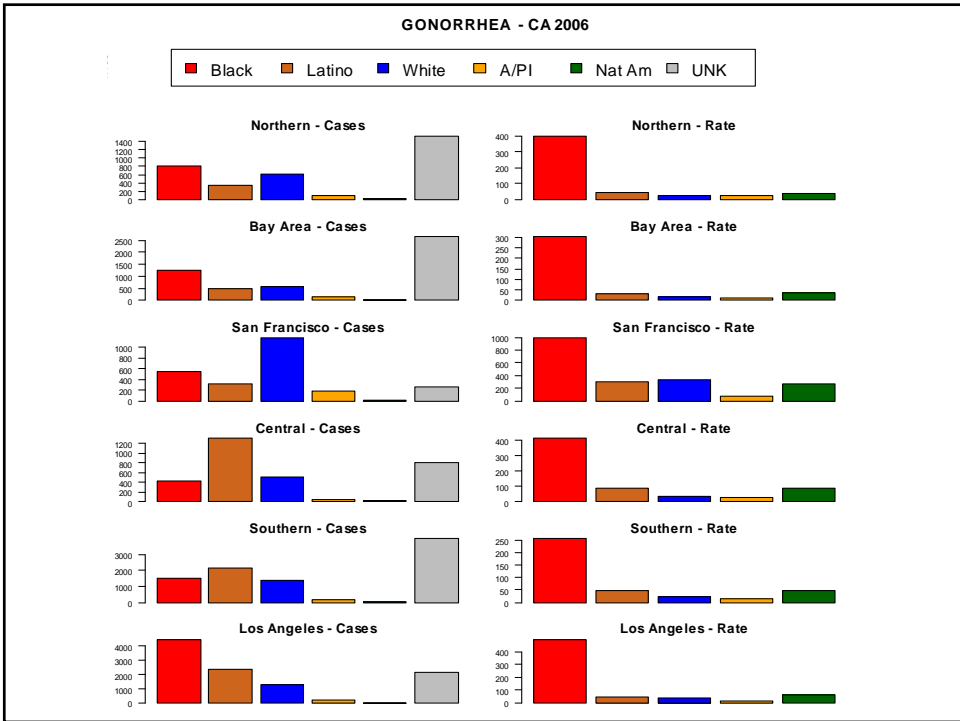
cex1 <- 1.2
cex2 <- .7
mycol <- c("red","chocolate3","blue","orange","darkgreen","grey")

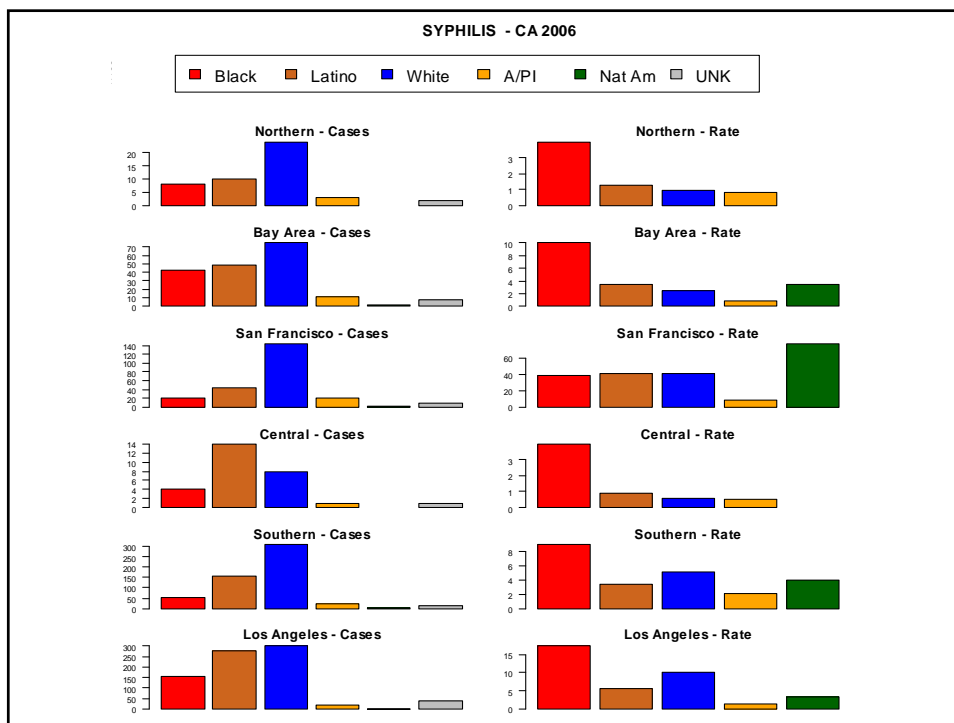
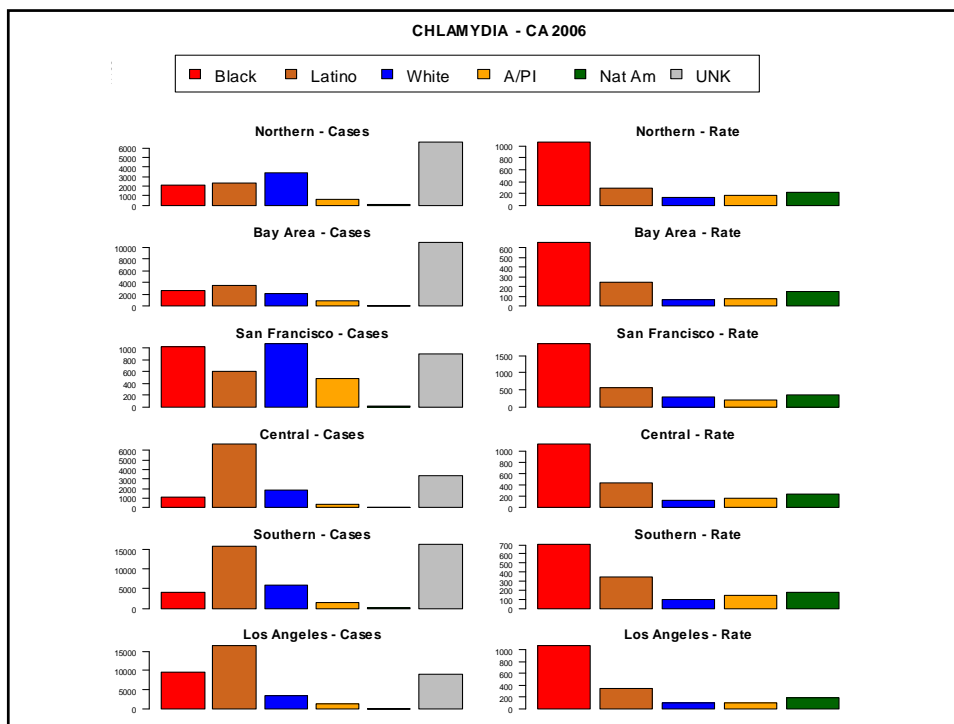
cases <- 4:9
rates <- 10:14
order <- c(4,1,5,2,6,3)

caplot <- function(dx,rows){
layout(matrix(c(1,1,2:13),7,2,byrow=TRUE))
par(mar=c(0,2,1,0)+1,las=1)
plot(1:100,1:100,type="n",xaxt="n",yaxt="n",main=paste(dx," - CA 2006"),cex.main=1.4,bty="n")
legend(1,80,legend=c("Black","Latino","White","A/PI","Nat Am","UNK"),fill=mycol,cex=1.5,horiz=T)
for (i in rows)
{
barplot(as.numeric(dat[i,cases]),cex.main=cex1,cex.axis=cex2,col=mycol,main=paste(dat[i,2],"- Cases"))
barplot(as.numeric(dat[i,rates]),cex.main=cex1,cex.axis=cex2,col=mycol,main=paste(dat[i,2],"- Rate"))
}
}

caplot("GONORRHEA",6+order)
caplot("SYPHILIS",12+order)
caplot("CHLAMYDIA",order)

```





Data and Statistics

Sexually Transmitted Diseases Data - Microsoft Internet Explorer

Address: <http://www.cdph.ca.gov/DATA/STATISTICS/Pages/STDData.aspx>

CA.GOV California Department of Public Health CDPH

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- Diseases & Conditions
- Job Opportunities
- News Room
- Public Availability of Documents

Home > Data > Statistics > Sexually Transmitted Diseases Data

Sexually Transmitted Diseases Data

The following tables, slide presentations, and annual reports provide data and statistics for reportable sexually transmitted diseases (STDs) in California. These files include data for [chlamydia](#), [gonorrhea](#), [syphilis](#), and [pelvic inflammatory disease](#).
 Prior versions of reports can be requested from the STD Control Branch Epidemiology Unit at stdepi@cdph.ca.gov or 510-620-3400.
 For more information about STDs, please visit the [STD Control Branch program page](#).

Local Health Jurisdiction STD Data Summaries

- Link to STD Data Summaries and teen birth rates for all 61 California local health jurisdictions (LHJs).

Data Tables

- Link to most recent STD data tables of cases and rates.

Slide Sets

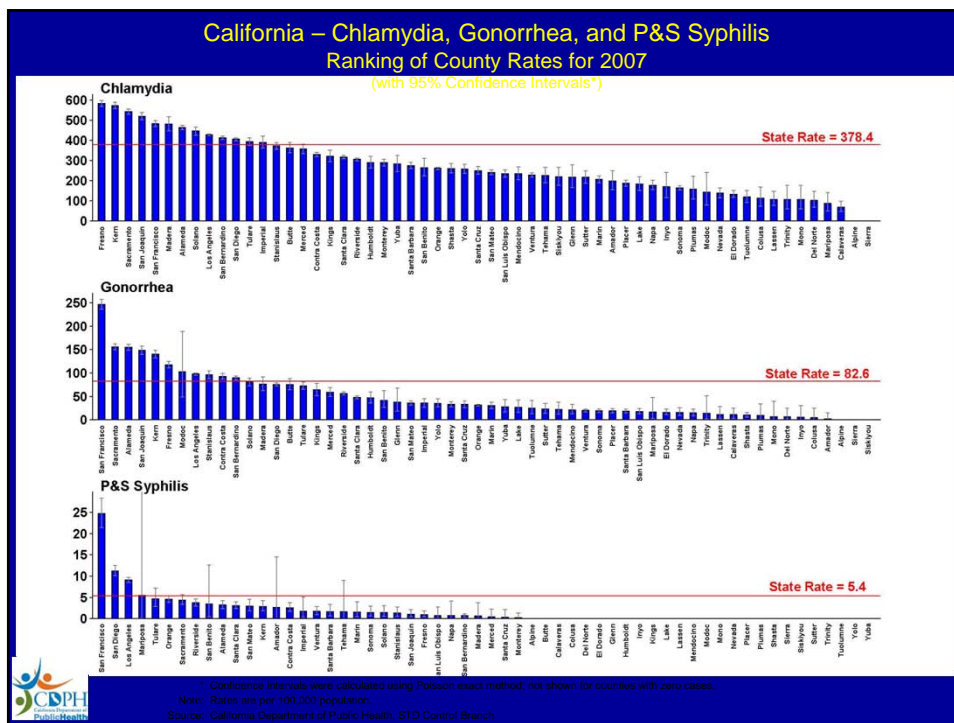
- 2006 California STD Surveillance Slides (PowerPoint, 2MB, New Window) STD surveillance data slide sets from our annual report. These slides show the key patterns and trends of STDs in California.
- Quarterly Updated California STD Surveillance Slides (PowerPoint, New Window) Chlamydia, gonorrhea, and P&S syphilis annualized quarterly rates slides.

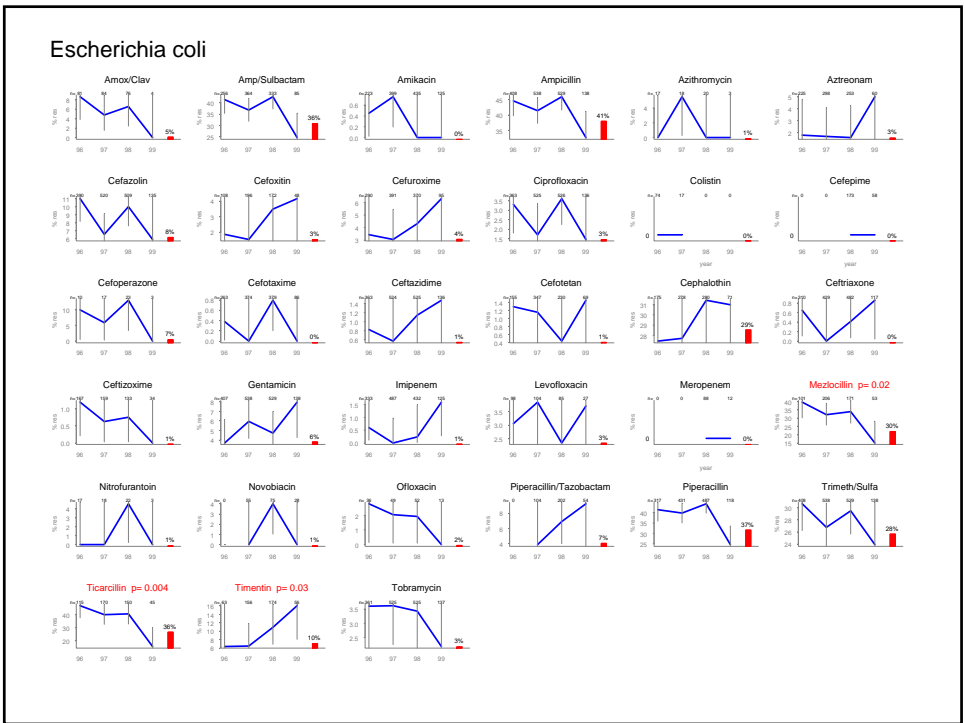
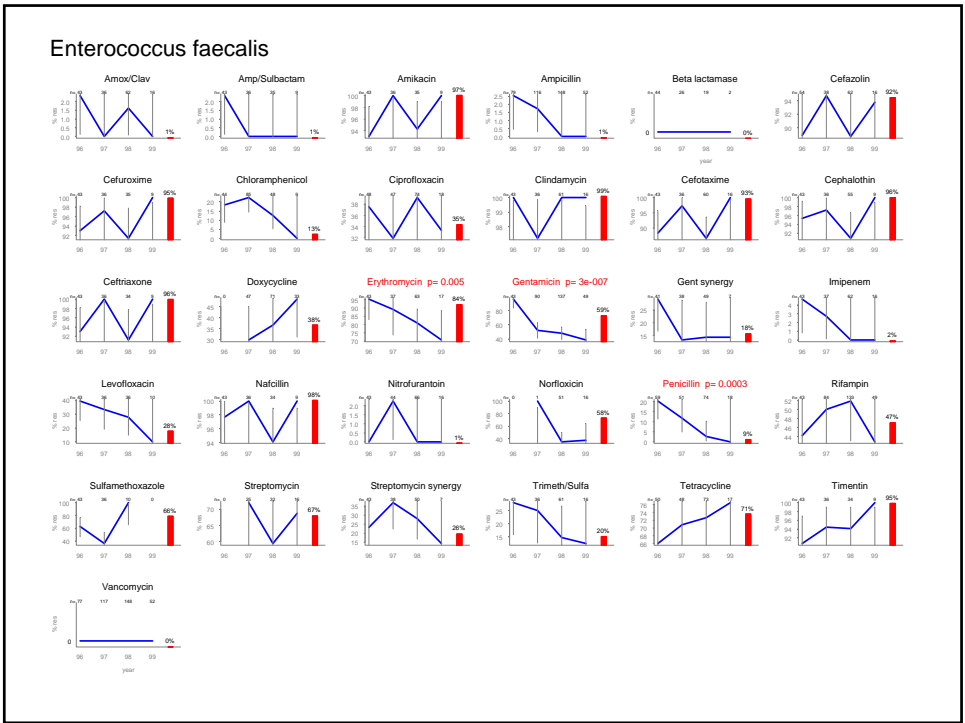
Annual Laboratory Survey Summary Report

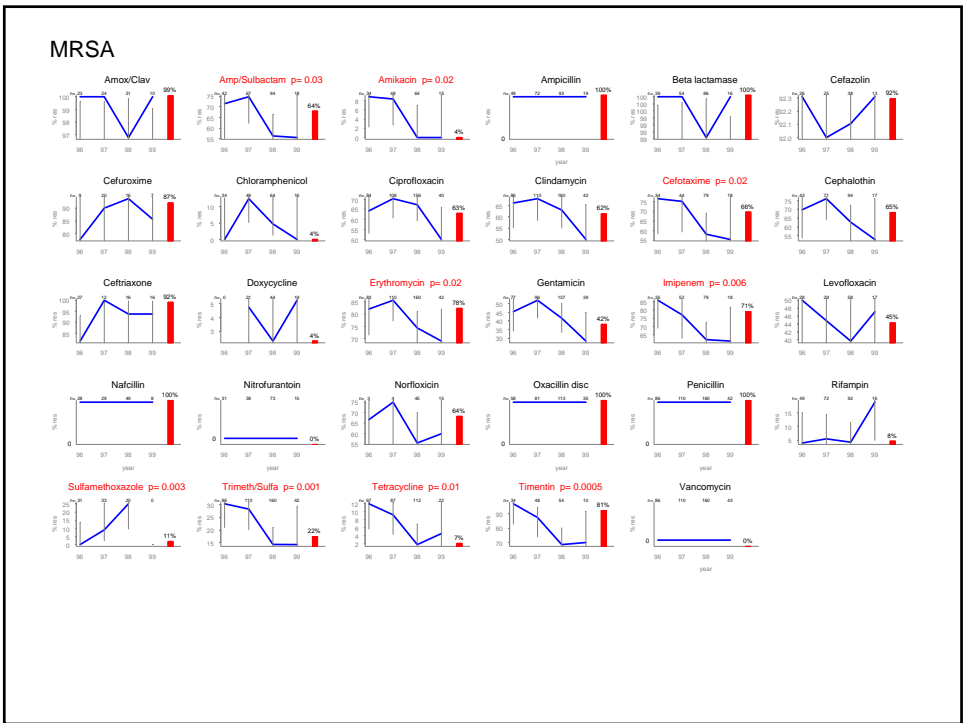
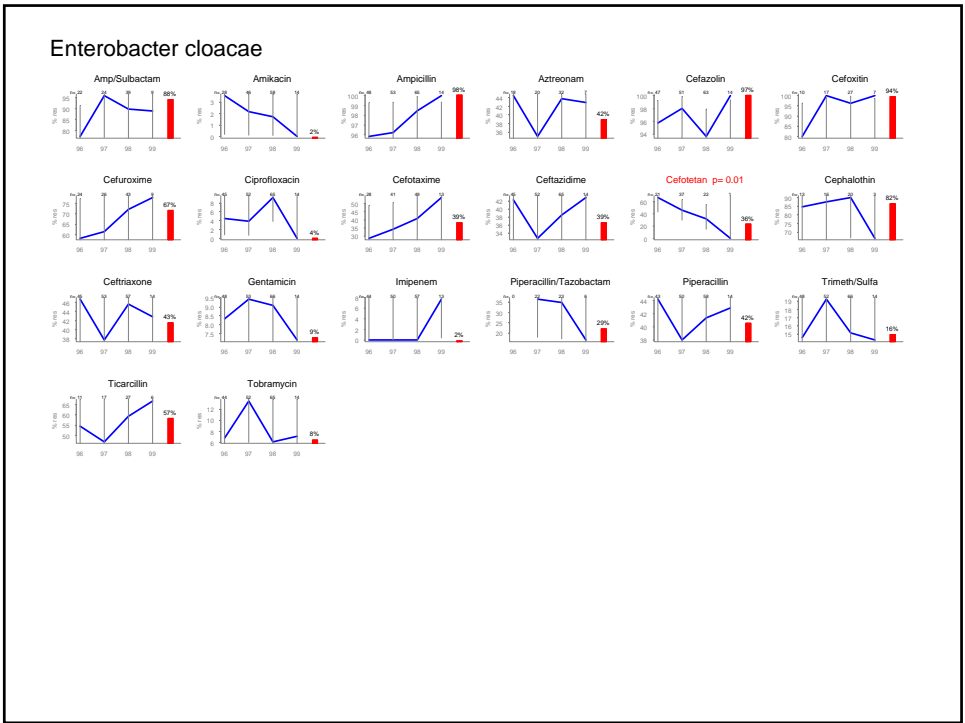
- STD Testing in California, 2005 Clinical Laboratory Survey Summary (PDF, New Window) Summary report of California STD Control Branch's survey of clinical laboratories. This report includes information on uses of test technology, test volume, and results for laboratories throughout California that perform testing for syphilis, gonorrhea, or chlamydia.

Syphilis Elimination Programs

- California Syphilis Elimination Monthly Update - Early Syphilis Morbidity (PDF, New Window) This report displays early syphilis case count comparisons for January through the end of the most recently completed month of the current year with the same time period from the prior year.
- Semi-annual syphilis elimination surveillance data summary through December 31, 2006 (PDF, New Window)







Address http://www.cdc.gov/STD/health-disparities/default.htm

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CDC Department of Health and Human Services
Centers for Disease Control and Prevention

Search CDC

Sexually Transmitted Diseases

Sexually Transmitted Diseases > STD Health Disparities

STD Health Disparities

HOME BY LOCATION BY GENDER BY AGE BY RACE

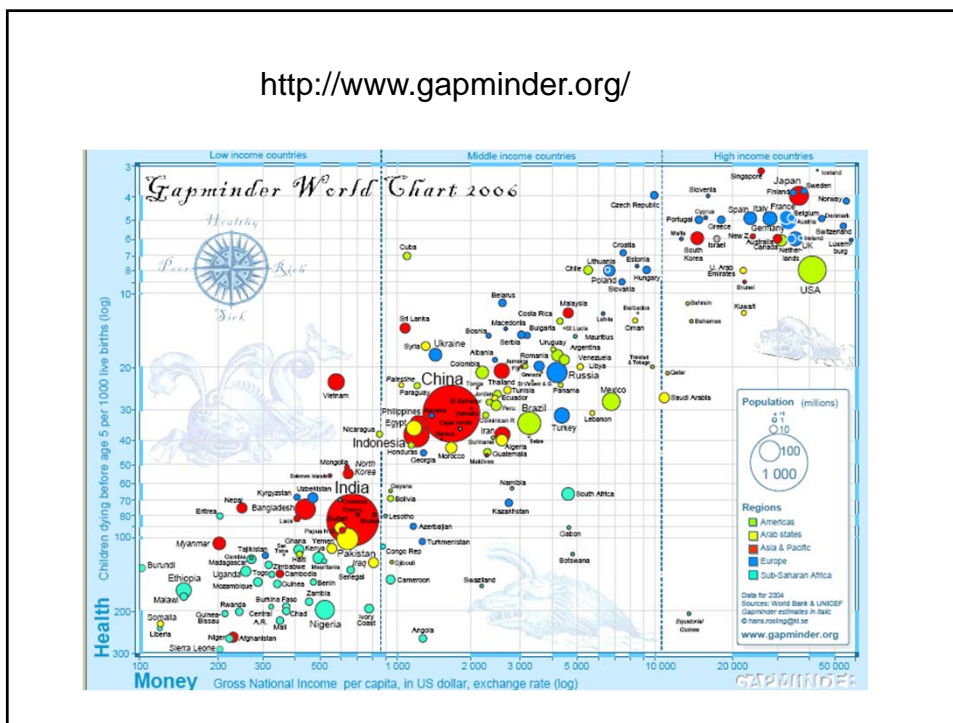


Click on the images or the tabs above to view interactive STD Health Disparities data.

STD health disparities are differences in disease rates that occur by gender, race or ethnicity, education or income, disability, geographic location, or sexual orientation.

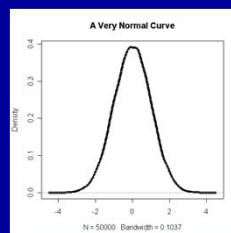
What is CDC doing about STD disparities?

<http://www.cdc.gov/STD/health-disparities/default.htm>



For More Information:

- Michael.Samuel@cdph.ca.gov
- 510.620.3198



- www.cdlnh.com
- www.cdlnh.com/clickhere.cfm?type=p&id=223&title=Presenting%20Health%20Data