

Adolescent chlamydia cases rates: Impact of screening heterogeneity

Lizzi Torrone

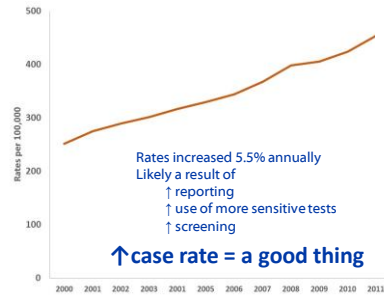
Surveillance and Data Management Branch
Division of STD Prevention
Centers for Disease Control and Prevention

ISSTD
September 22, 2015

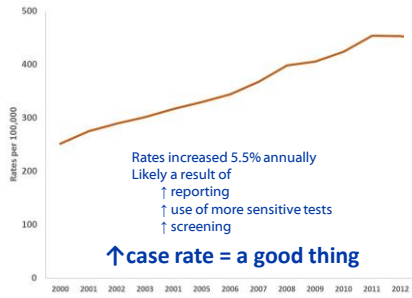
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Division of STD Prevention



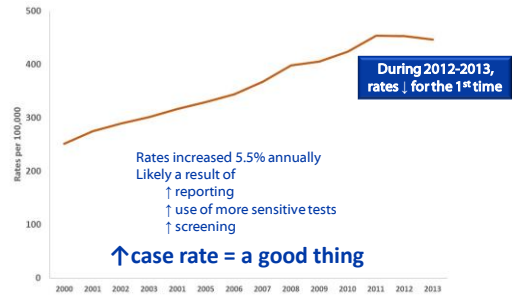
Rates of Reported Cases of Chlamydia, United States, 2000–2011



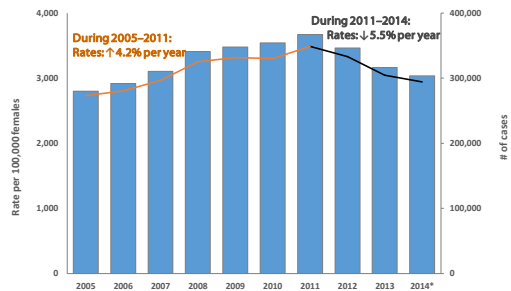
Rates of Reported Cases of Chlamydia, United States, 2000–2012



Rates of Reported Cases of Chlamydia, United States, 2000–2013



Rates of Reported Cases of Chlamydia Among 15-19 Year Old Females, United States, 2000–2014



*2014 data are preliminary

One interpretation....

- Chlamydia incidence is decreasing among adolescent females.

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- Chlamydia incidence is decreasing among adolescent females.
 - Assume reporting completeness has not decreased
 - Assume NAAT use has not decreased
 - Assume screening has not decreased
 - ??

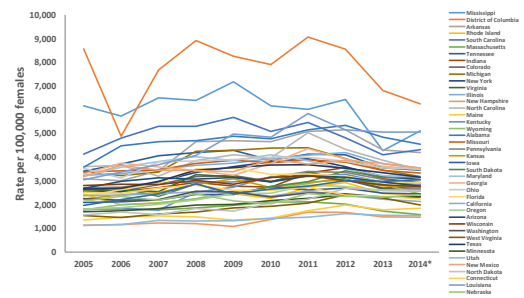
Has reporting completeness decreased?

- Hopefully not! But maybe.
 - Jurisdictions switching to new information systems

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- Is it happening in all geographic areas?

Jurisdictions where chlamydia case rates among females aged 15–19 years decreased during 2011–2014 (n=43)



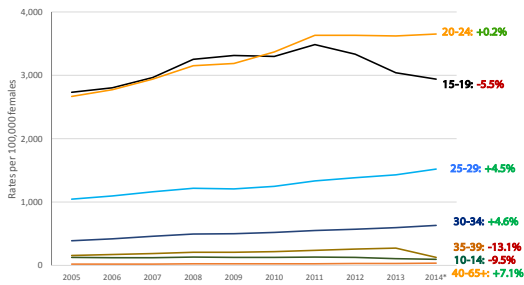
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- Is it happening in all age groups?

Rates of Reported Cases of Chlamydia Among Women by Age, United States, 2005–2014



*2014 data are preliminary; Average annual percent change during 2011–2014

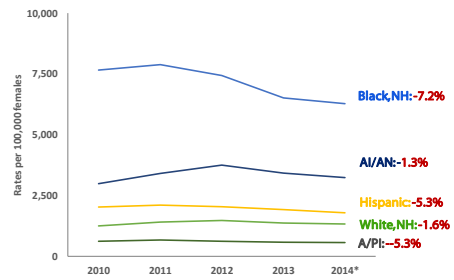
Has reporting completeness decreased?

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- **Is it happening in all geographic areas?**
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- **Is it happening in all age groups?**
 - No

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- **Is it happening in all geographic areas?**
 - 43/51 jurisdictions reported decreases during 2011–2014
- **Is it happening in all age groups?**
 - No
- **Is it happening among all race/ethnicities?**

Rates of Reported Cases of Chlamydia Among Women Aged 15–19 years by Race/Ethnicity, United States, 2010–2014*



*2014 data are preliminary. Among the 43 jurisdictions reporting in OMB compliant format. Average annual percent change during 2011–2014. NH = Non-Hispanic; AI/AN = American Indian/Alaskan Native; A/Pi = Asian/Pacific Islander

Has reporting completeness decreased?

- **Hopefully not! But maybe.**
 - Jurisdictions switching to new information systems
- **Is it happening in all geographic areas?**
 - 43/51 jurisdictions reported decreases during 2011–2014
- **Is it happening in all age groups?**
 - No
- **Is it happening among all race/ethnicities?**
 - Yes, but not at the same slope

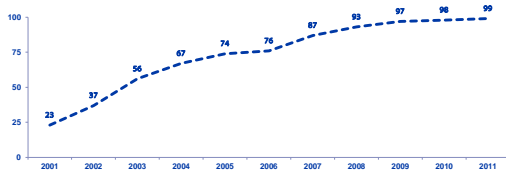
One interpretation....

- **Chlamydia incidence is decreasing among adolescent females.**
 - Assume reporting completeness has not decreased **Probably true**
 - Assume NAAT use has not decreased
 - Assume screening has not decreased
 - ??

Has NAAT use decreased?

□ No current data available

Percent of chlamydia tests among females in aged 15-24 years in family planning clinics that were NAATs



CDC unpublished data

One interpretation....

□ Chlamydia incidence is decreasing among adolescent females.

- Assume reporting completeness has not decreased **Probably true**
- Assume NAAT use has not decreased **Probably true**
- Assume screening has not decreased
- ??

Measuring chlamydia screening

What we want to measure (screening coverage)

$\frac{\text{\# of females tested}}{\text{\# of sexually-active females}}$

What we actually measure (screening uptake)

$\frac{\text{\# of females tested}}{\text{\# of sexually-active females who saw a provider}}$

Measuring chlamydia screening

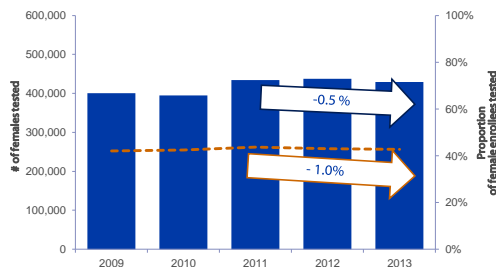


What we actually measure

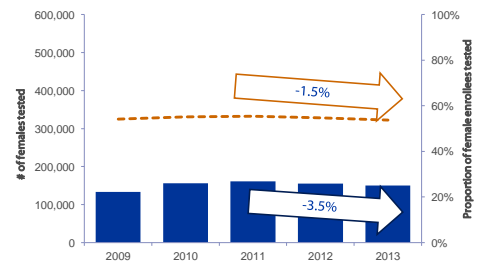
$\frac{\text{\# of females tested}}{\text{\# of sexually-active females who saw a provider}}$



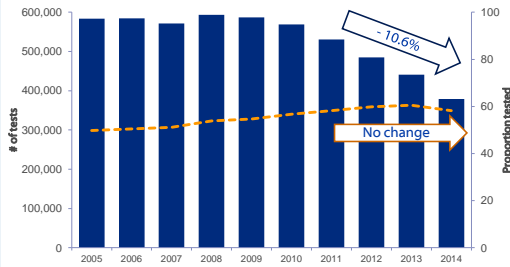
Number of female enrollees aged 16-20 years tested for chlamydia and proportion tested in commercial plans, HEDIS, 2009-2013 (among continuously contributing plans, n=272)



Number of female enrollees aged 16-20 years tested for chlamydia and proportion tested in Medicaid plans, HEDIS, 2009-2013 (among continuously contributing plans, n=101)



Number of female family planning users aged 15–19 years tested for chlamydia and proportion tested, Title X Family Planning, 2005–2014

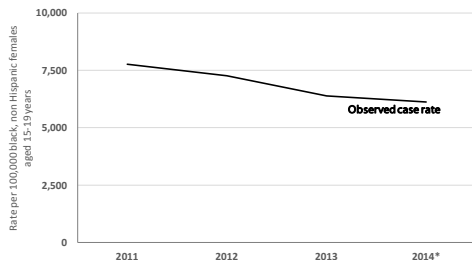


One interpretation...

Chlamydia incidence is decreasing among adolescent girls

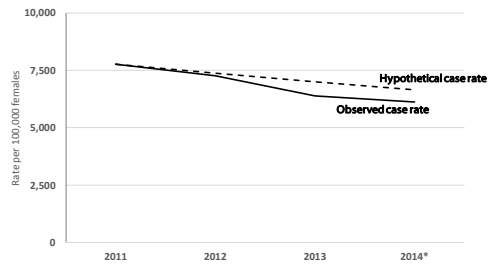
- Assume reporting completeness has not decreased. **Probably true**
- Assume NAAT use has not decreased **Probably true**
- Assume screening has not decreased **???**
- ??

What if prevalence was constant, but screening coverage decreased annually by 5%...



*2014 data are preliminary; Among the 43 jurisdictions reporting in OMB compliant categories

What if prevalence was constant, but screening coverage decreased annually by 5%...



*2014 data are preliminary; Among the 43 jurisdictions reporting in OMB compliant categories
Assumptions: 2011 screening coverage based on screening coverage estimated from population prevalence estimates and observed case counts

Conclusions

- **Still a fair amount of unknowns**
 - Limited data on screening coverage
 - Limited data on screening uptake by race
- **Denominators matter**
- **What can we do**
 - Look where we have screening estimates
 - Think about a paradigm shift—what should we be measuring

Acknowledgements

- Hillard Weinstock
- Catherine Satterwhite
- Guoyu Tao
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Thank you!
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For more information please contact Centers for Disease Control and Prevention

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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

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