

#41: Chlamydia and gonorrhea acquisition among adolescent and young adults in Pennsylvania:  
A rural and urban comparison  
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Background: American adolescents and young adults between the ages of 15-24, account for 50% of all sexually transmitted diseases (STDs) annually. Rural populations in this age group remain understudied, yet are more likely to engage in high-risk behaviors that may increase their chances of acquiring an STD.

Objective: To compare adolescent and young adult STD rates in rural versus urban populations of Pennsylvania for the years 2004-2014.

Methods: This study is an exploratory analysis using Pennsylvania STD surveillance data and the US Census to estimate rate ratios using negative binomial regressions within the framework of generalized estimated equations. The analyses were conducted at the school district-level and controlled for poverty, gender, and year.

Results: Compared to urban communities, rural communities had higher rates of chlamydia in 18-19 year-olds (2010-2014), 20 year-olds (2011-2014), 21 year-olds (2011-2014), and 22-24 year-olds (2014) when controlled for poverty and gender ( $p < .05$ ). Higher rates of gonorrhea were noted in rural 18-19 year-olds only (2014,  $p < .05$ ).

Conclusions: In Pennsylvania, adolescents and young adults, aged 15-24 years living in rural populations, are more likely to acquire STDs in recent years than their urban counterparts. The higher rates of STDs is concerning since literature indicates many of these rural youth may not seek care since they are asymptomatic, lack sex education, and fear negative community perception related to lack of anonymity. Additional research is needed to further explore potential causes of this shift of STD acquisition from urban to rural populations.