

Background

Identifying demographic and geographic characteristics of repeat gonorrhea (GC) cases may enable public health agencies to direct services toward populations at risk for re-infection and decrease the potential for late effects of recurrent gonorrhea infections.

Objectives

1. To determine the geographic and demographic characteristics of persons who have repeat gonorrhea infections in Minnesota.
2. Identify next steps in directing services toward populations to prevent re-infection

Methods

Data from the Minnesota Department of Health STD Surveillance System were analyzed using SAS 9.2 to determine the number of recurrent infections among gonorrhea cases diagnosed in Minnesota during 2009 and 2010.

Demographic and geographic variables among cases with repeat infections were compared to cases with single diagnoses to determine re-infection rates by race, ethnicity, age group, gender and geographic location.

Results

- Of the 4,447 reported GC cases during the study period, 687 cases (15%) were considered to be repeat infections.
- Among the 4,079 individuals with GC reported during the study period, 319 (8%) were determined to have at least one repeat infection (range: 1 to 3 repeat infections).
- Re-infected individuals were mostly Black (57%), female (57%), 15-19 years old (35%), and from Minneapolis or St. Paul (52%), compared to non-repeat individuals (47% Black, 57% female, 34% between 20 and 24 years old, and 48% from Minneapolis/St. Paul).
- Fourteen percent of repeat female individuals were pregnant at their initial diagnosis, compared to 11% of non-repeat cases.
- The median time between initial diagnosis and initial treatment was 4 days (range: 1 to 108 days).
- Fifty-nine percent of individuals with repeat infection clinically presented as symptomatic.
- There were more unknown variables in individuals with only one gonorrhea infection compared to those who had repeat infections.

Figure 1. Percentage of Individuals with Gonorrhea by Clinical Diagnosis 2009-2010

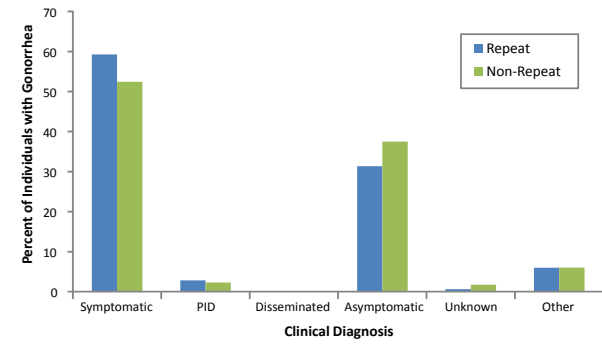
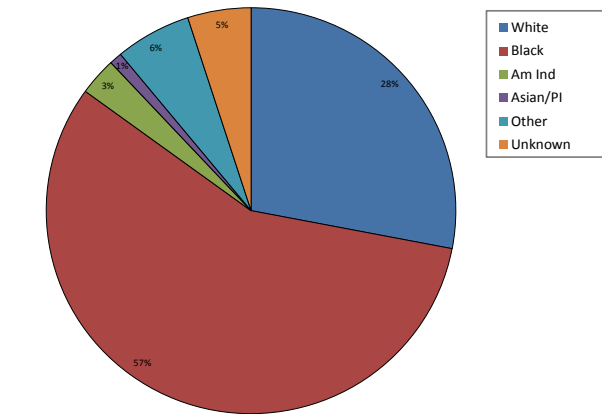


Figure 2. Percentage of Individuals with Repeat Gonorrhea Infections in 2009-2010 by Race



Note: 3.8% of repeat gonorrhea infections were of Hispanic /Latino origin. These individuals can be identified as any race.

Figure 3. Number of Individuals with Repeat Gonorrhea Infections in 2009-2010 by Age

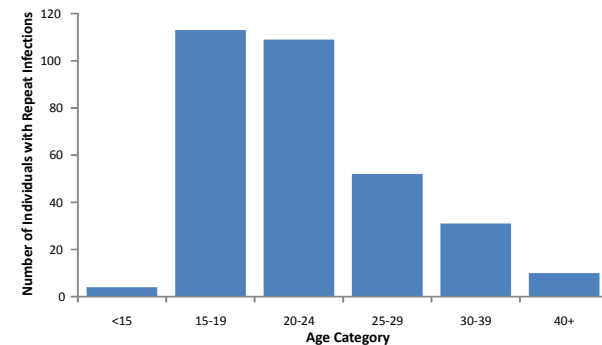
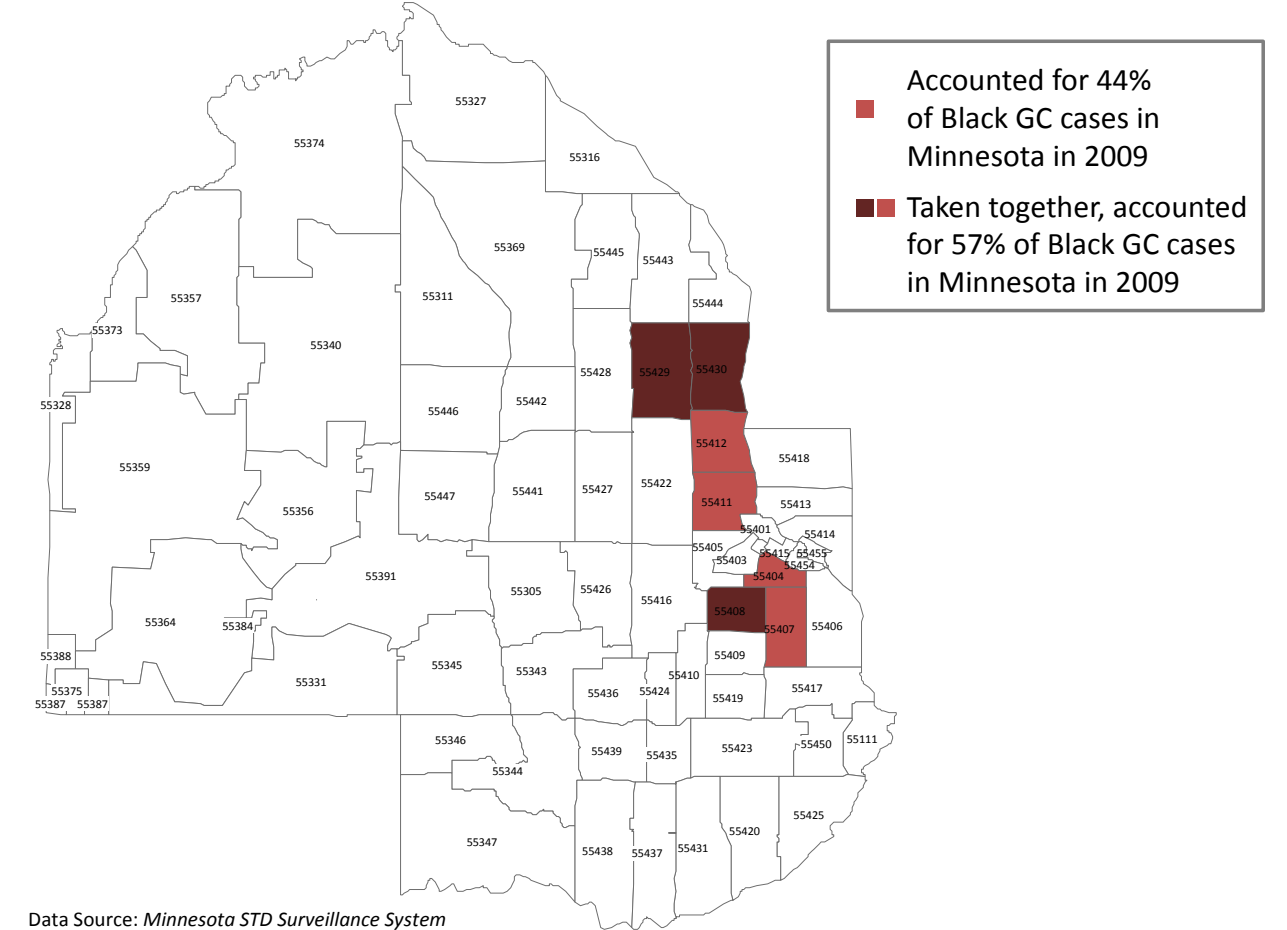


Figure 4. Hennepin County Black GC Cases, 2009



Data Source: Minnesota STD Surveillance System

Conclusions

- Some disparities among persons with repeat GC infections remain evident among Minnesota cases. Surveillance data should be used to help target services toward populations to prevent re-infection of gonorrhea.

Implications for Programs, Policy, or Research

- Strategies for reducing re-infection should be tailored for populations at risk for re-infection.
- Next steps include the Minnesota Department of Health Partner Services Program interviewing individuals with repeat infections in high morbidity zip codes to collect risk factor information and to help determine if their partners are being treated.
- Additional monitoring of surveillance data will continue to determine if there are additional high morbidity areas and to help identify individuals that require interviewing.