Gonorrhea is the second most commonly reported sexually transmitted infection (STI) and one of the top five most commonly reported communicable diseases in Boston. There were over 350,000 cases of gonorrhea reported in the US in 2014 (Centers for Disease Control & Prevention, CDC).

Boston Epidemiology:
In 2015, there were 734 cases of gonorrhea reported in Boston (119 cases per 100,000), a 21% decrease from 2014. The citywide rate was nearly the same as the most recent national rate (110.7 per 100,000 in 2014, the most recent CDC data available).

High Risk Groups:
Rates were particularly high in men of color ages 20 to 29 living in South Dorchester, North Dorchester, Hyde Park, and Mattapan.

Unlike chlamydia where rates are higher in women, men accounted for 71% of reported gonorrhea cases in Boston (up from 66% in 2014). While rates remained highest in men, the rate decreased by 15% in men from 2014 to 2015.

For race/ethnicity analyses, Latino ethnicity is considered alongside Asian, Black, and White racial groups. In spite of a 31% decrease in gonorrhea cases since 2014, Black residents still had the highest incidence rate with 237 cases per 100,000 in 2015. This rate was 3.6 times as high as that of White residents. Latino residents had a rate 1.5 times as high as that of White residents. Gonorrhea rates were lowest in Asian residents. Rates decreased across all races/ethnicities analyzed from 2014 to 2015.

Disparities by race were more pronounced in 15-19 year olds; the rates in Black and Latino residents were 24 and 6 times that of White residents in this age group, respectively.

Gonorrhea rates were highest in residents 15-29 years old, with 61% of all cases occurring in this age group (212 cases per 100,000). However, there was a 29% decrease in this age group from 2014 to 2015. White residents were
diagnosed at a substantially older age (Median years of age at diagnosis: White=32, Latino=26, Black=24). The median age at diagnosis for men was 5 years older than the median age for women (28 vs. 23, respectively).

The overall incidence rate was highest in the South End (221 cases per 100,000). North Dorchester, South Dorchester, Mattapan, and Roxbury all had rates higher than 150 cases per 100,000. Map 1 shows rates by neighborhood. Mattapan and South Dorchester had rates higher than 500 cases per 100,000 in all residents 15-29 years old (Map 2).

In 2015, 27% of all people diagnosed with gonorrhea were also diagnosed with chlamydia at some point during the year. Most were men (61%), and Black residents made up the largest proportion of those coinfected (45%). The majority of cases with both infections resided in South Dorchester, North Dorchester, the South End, and Fenway, and 65% were 15-29 years old.

A risk analysis revealed that a large proportion of gonorrhea cases in 2015 were in men who have sex with men (MSM). This is likely a major reason that men were disproportionately affected by gonorrhea in Boston in 2015, especially in contrast to chlamydia.
Future Directions:
While the rate of chlamydia infection in Boston is four times as high as the rate of gonorrhea, the high gonorrhea rate is of particular concern in light of the rise in antibiotic resistant gonorrhea nationwide. Populations at high risk for gonorrhea are not necessarily the same populations at high risk for chlamydia, indicating that outreach methods need to vary. Early detection and treatment of gonorrhea cases and their partners as well as initiatives to promote safer sex are important to decrease the number of gonorrhea cases.

Data:
Data for this report were collected and analyzed by BPHC.

Gonorrhea data from 2008 to 2015 are available online at http://bphc.org/healthdata/other-reports/Pages/Other-Reports.aspx. Please note: Due to a change in the gonorrhea data source in 2014, BPHC cautions against drawing comparisons of data analyzed prior to the change (2013 and prior) to data analyzed after the change (2014 to present).

Additional information about gonorrhea in Boston can be obtained by emailing infectiousdisease@bphc.org or by calling the BPHC Infectious Disease Bureau at (617) 534-5611.