

Visualizing Geographic Patterns in the HIV Care Continuum in Five Major US Cities

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OBJECTIVE

Online tools are robust for mapping illness data and allow for insights that are not possible with aggregate or static figures.

These resources can be instrumental in targeting areas that need more/better healthcare and public health resources.

Mapping HIV cases at multiple geographic levels in the US has been done for a number of years, but until now no interactive maps have ever been created for HIV care outcomes.

METHODS

In February 2015, HIVContinuum.org began a free online resource for visualizing HIV care continuum outcomes in 5 US cities heavily impacted by HIV:

- ZIP Code Maps
 - Atlanta
 - Chicago
 - New Orleans
 - Philadelphia
- Ward Maps
 - Washington, DC.

HIVContinuum uses public health agencies' case and laboratory surveillance data for persons diagnosed from 2007-2011 to map the following HIV care continuum indicators:

- HIV diagnoses
- Late diagnoses
- Linkage to care
- Engagement in care
- Viral suppression.

Users can view maps by race/ethnicity, sex and age. We also have map overlays of the most current information from CDC and HRSA on HIV testing locations and Ryan White Care Act clinics. The website will be updated at least annually as new data become available.

HIV DIAGNOSES

Five-year risk of new HIV diagnosis, 2007-2011 (per 100,000 population of adults/adolescents in 2010)

LATE DIAGNOSES

Proportion of adults/adolescents newly diagnosed with HIV from 2007-2011 with an AIDS diagnosis within 3 months of HIV diagnosis

LINKED TO CARE

Proportion of adults/adolescents newly diagnosed with HIV from 2007-2011 with a reported CD4/viral load within 3 months of HIV diagnosis

ENGAGED IN CARE

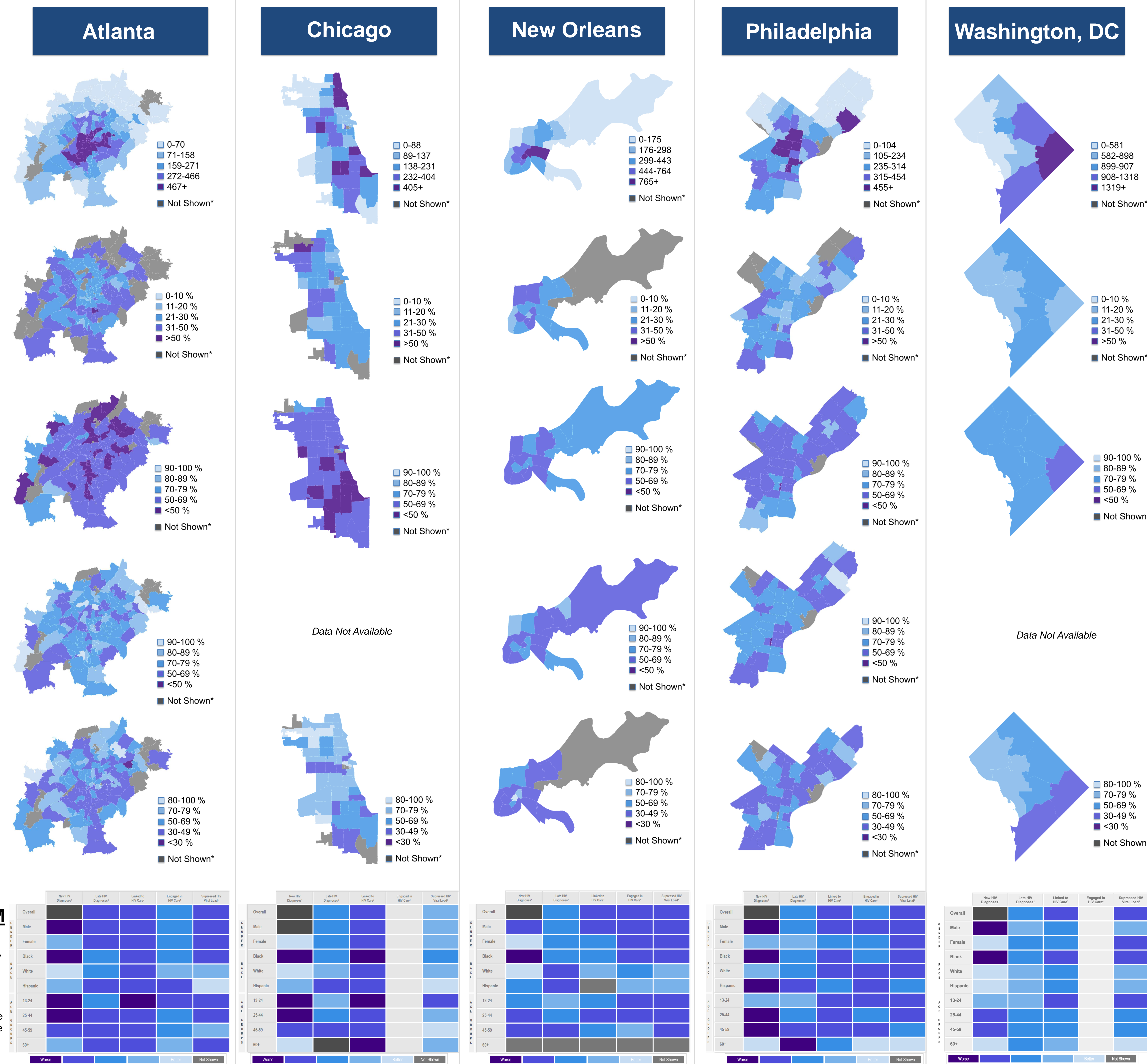
Proportion of adults/adolescents newly diagnosed with HIV from 2007-2011 and engaged in HIV care with a reported CD4/viral load in 2012

SUPPRESSED VIRUS

Proportion of adults/adolescents newly diagnosed with HIV from 2007-2011 and engaged in HIV care in 2012 with a suppressed HIV viral load in 2012

HIV CARE CONTINUUM Among Those Newly Diagnosed with HIV, by Demographic Groups, 2007-2011

The color within each box corresponds to the most frequent category of the outcome at the ZIP/Ward level for each sub-group



RESULTS

HIVContinuum shows that even within our most heavily impacted cities, micro-epidemics exist where some areas experience more new HIV diagnoses than others - something that has been previously noted by local public health agencies, but not at our level of detail for sub-populations.

HIVContinuum is particularly novel in providing the ability to now visualize similar geographic variations in HIV care continuum outcomes.

There are places in each city where outcomes such as engagement in care or viral suppression are better/worse, but the patterns somewhat differ from those of HIV diagnoses. Mapping of testing and treatment locations may help us understand how care outcomes compare to the distribution of these resources in the city.

CONCLUSIONS

HIV care providers, public health agencies, and policy makers should consider how mapping of HIV care continuum outcomes should be used in our collective response to the epidemic.

Further exploration of how care outcomes differ for sub-populations in different areas of these cities may help us resolve some of the pervasive disparities in HIV care outcomes.

HIVContinuum.org will also become a useful resource to monitor the impact our efforts are having within the most heavily affected cities.