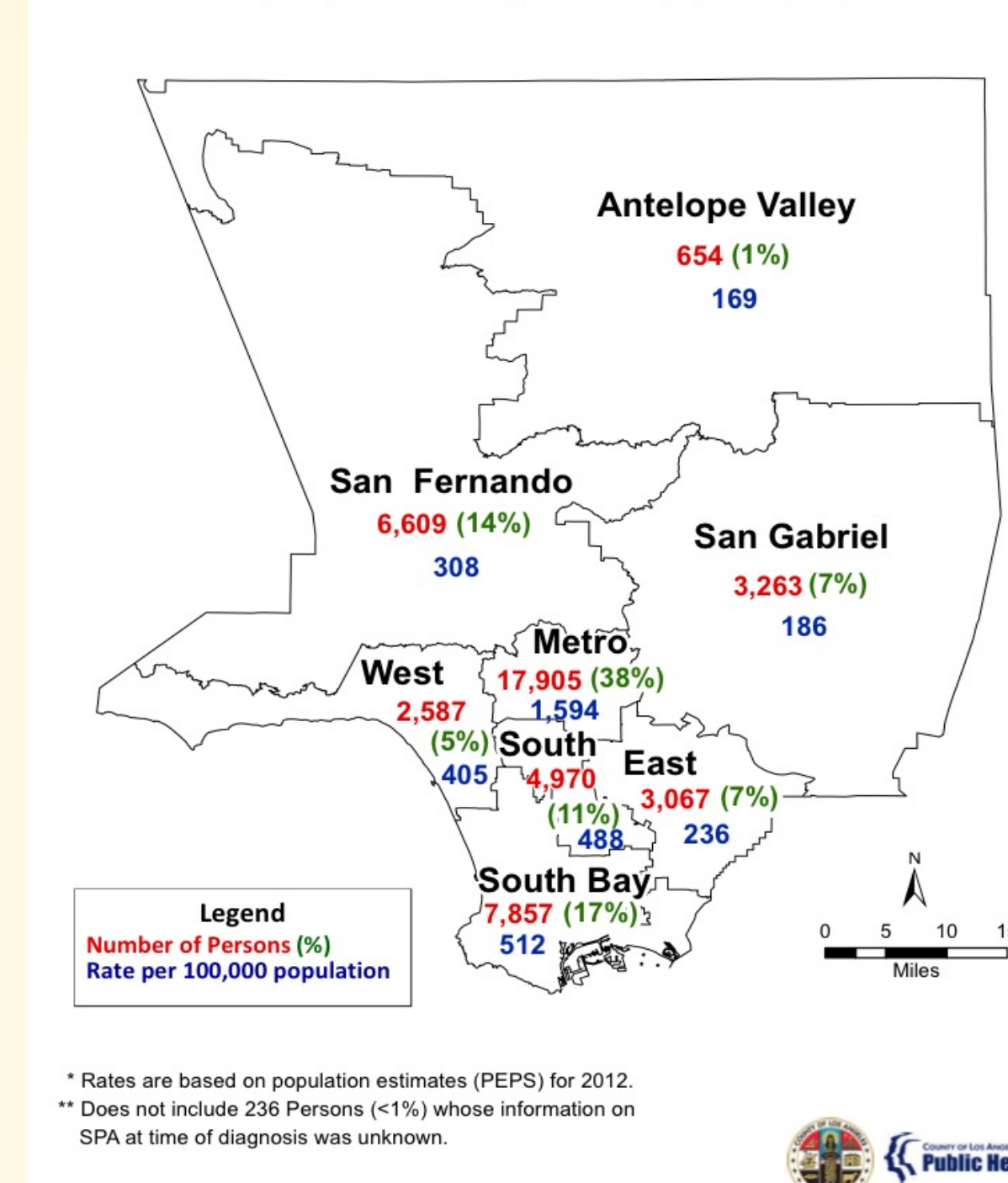


Objectives

Implementation of fourth generation laboratory-based emergency department HIV testing provides an opportunity to identify and possibly intervene earlier in acute HIV infections, potentially decreasing the size of HIV reservoirs¹⁻⁴. At Los Angeles County plus the University of Southern California Emergency Department (ED) we began a routine screening program in March 2011 and began implementation of 4th generation testing in June 2013. To date, we have screened over 53,000 patients identifying 769 HIV positive of which 252 were newly diagnosed HIV positive patients including 27 acutely infected individuals. In December 2014 we made a decision to begin empiric antiretroviral therapy in the ED for 4th gen Ag/Ab positive patients suspected of acute HIV. However, emergency room treatment may be undermined by concerns of false positive tests resulting in unnecessary antiretroviral side-effects exposure, and concerns about inducing viral resistance. We describe the rationale driving our decision and the criteria developed for empiric treatment of suspected acute HIV infections.

Figure 11. Persons Reported Living with HIV Infection as of 12/31/2013 and Rate Per 100,000 Population* by Service Planning Area (SPA)** in Los Angeles County (N = 47,148)



Methods

An HIV specialty team considered the risks and benefits of empiric treatment including: the safety of ART for PEP in HIV negative patients⁵, the fact that cART is generally well tolerated with minimal side effects which can be monitored for and is unlikely to develop resistance⁶, the improved access to care for patients, patients can be called to stop medicines for negative confirmatory results, and the potential benefit of decreasing further HIV transmission⁷. A consensus decision was reached with the following eligibility criteria used to begin empiric cART in the emergency room:

1. Clinical history c/w acute HIV infection
2. Negative HIV test < 6 months
3. No co morbid conditions that have risks that outweigh the benefits
4. 4th gen positive test w/pending Multi-spot and VL by PCR
5. Stable baseline CBC and chemistry panel
6. Genotype and CD4 are able to be ordered in ED
7. Patient understands/agrees:
 - a) Confirmatory tests are still pending
 - b) They are willing to take the medicine
 - c) To commit to abstinence and 100% condoms use if they fail to abstain
 - d) To partner notification
 - e) To the importance of adhering to a follow up appointment.
 - f) And they have a phone, text, or email available for contact.

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Results

Since beginning empiric treatment in the emergency room on December 10, 2014, there have been a total of 14 patients who have had confirmatory diagnosis of acute HIV infection. Of these, 8 patients were thought to be acutely infected with HIV at the time of their emergency room visit. All of the 8 patients agreed to empirically start ART in the emergency room. One of the 8 patients left AMA prior to beginning their ART but the other seven all began ART empirically in the emergency room. All 14 patients were urgently reported to the public health department following acute HIV infection confirmation for public health investigation referral.



Conclusion

Emergency Department 4th generation testing allows a unique opportunity to identify and intervene early in acute HIV infections. Recent data supports the potential benefit of urgent cART intervention on decreasing viral reservoirs. We identified rationale and criteria to support empiric ART for suspected cases of acute HIV infection. Our early experience shows empiric treatment in the emergency room is feasible and well received by patients. Future goals will be to capture more of the acute patients while still in the emergency room by possibly adding a rapid antibody test to rule out chronic infection in the emergency room, and increase our ability to identify those who are more likely to be acutely infected, and therefore potentially eligible for empiric treatment.

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