

HEALTH MATTERS

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A new HIV/AIDS prevalence estimate for Riverside County, CA

The number of people living with HIV/AIDS (PLWH) in Riverside County is significantly higher than previously reported. It is believed that more PLWH move into the county than out. Migration into the county could be the result of housing affordability, improved health care for those who have HIV/AIDS or a desire to retire in the desert communities in the Coachella Valley. Public health professionals throughout Riverside County have long suspected that the prevalence of persons living with HIV/AIDS in the county has been underestimated. The Palm Springs region is known for its welcoming environment of the lesbian, gay, bisexual and transgender (LGBT) community, along with a substantial HIV care and support infrastructure. Using data available for the first time, this brief will explore the total number of PLWH with a current address in Riverside County.

Background

Disease surveillance is used to monitor the spread of disease in order to predict, observe and minimize the harm caused by disease transmission. State law requires the confidential reporting of many diseases, including HIV infection, to the local health jurisdiction (LHJ). Surveillance helps focus prevention efforts, plan services, allocate resources, develop policy and monitor trends in HIV infection. Through surveillance, cases are assigned to a LHJ for strategic planning and funding purposes.

In traditional HIV/AIDS surveillance, a case is assigned to a local health jurisdiction (LHJ) based on where the patient was living when first diagnosed with HIV. These are the cases that are reported as the prevalence numbers for a city, county or state health department regardless of where that person living with HIV/AIDS (PLWH) moves after diagnosis. This method can lead to an inaccurate portrayal of the true population of PLWH, particularly in areas with substantial movement in or out of the jurisdiction (in/out migration). Additionally, funding of HIV service programs has historically been tied to this method of surveillance which can result in misallocation of funds to address the needs of the population.

Due to recent improvements in HIV surveillance data at the state level, it is now possible to develop a more accurate portrait of the number of persons currently living with HIV/AIDS in Riverside County. This health brief will compare the previously established prevalence rates of PLWH that were based on address at diagnosis to the new rates based on recently available data using current address. This can help HIV service providers better understand the current need throughout Riverside County.

KEY FINDINGS

- ▶ There are 51 percent more people living with HIV/AIDS in Riverside County than has been previously reported.
- ▶ The largest total number increase of persons living with HIV/AIDS is in eastern Riverside County (Palm Springs to Blythe).
- ▶ Increases in people living with HIV/AIDS are seen in all regions of the county, age groups and racial/ethnic categories analyzed.

Definitions

For the purposes of this health brief we will define standard and migration prevalence as follows.

Standard Prevalence: PLWH who were living in Riverside County at the time of their diagnosis.

Migration Prevalence: PLWH who now live in Riverside County regardless of where they were diagnosed.

Migration Prevalence Findings

As of December 31, 2016, there were 51.4 percent more PLWH in Riverside County than has been previously reported using standard prevalence calculations. The prevalence rate for HIV/AIDS, or the number of people currently living with HIV or AIDS regardless of year of diagnosis, was 236.0 cases per 100,000 population using the standard calculations and 357.2 per 100,000 using the most-recent-address analysis. This study indicates that nearly 3,000 (2,852) more PLWH have moved into Riverside County (in-migration) than out (out-migration).

HIV Unaware Population

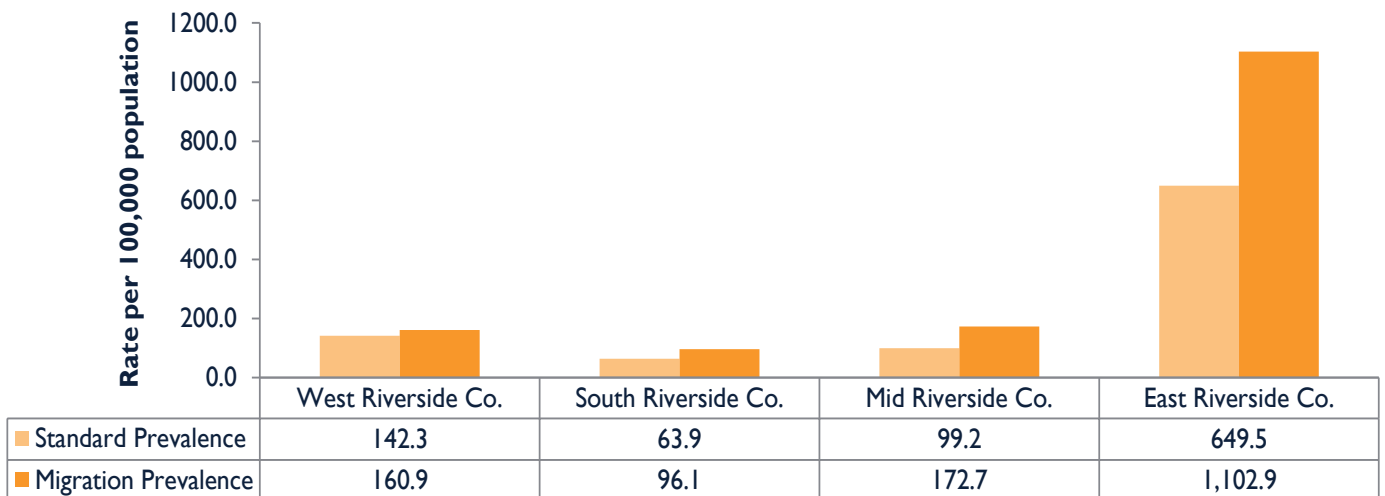
This analysis does not include those people who are unaware of their HIV infection status. The Centers for Disease Control and Prevention (CDC) estimates that an additional 15 percent of persons nationwide living with HIV/AIDS do not know their status. Using that estimate for Riverside County, there are approximately 1,260 additional PLWH who are unaware of their HIV-positive status.

	Standard Prevalence			Migration Prevalence		
	2014	2015	2016	2014	2015	2016
Prevalence	5,140	5,334	5,552	8,018	8,184	8,404
Estimated population	2,294,333	2,323,527	2,352,654	2,294,333	2,323,527	2,352,654
Rate per 100,000	224.0	229.6	236.0	349.5	352.2	357.2

Prevalence by Region

All Riverside County regions show increases (in-migration) in the number of PLWH when comparing standard prevalence with migration prevalence. The largest increase was seen in eastern Riverside County (Palm Springs to Blythe). The 2016 increases in regional HIV prevalence rates between the two methodologies were: west (13.1% more or 224 cases), south (50.4% more or 122 cases), mid (74.1% more or 237 cases) and east (69.8% more or 2,270 cases).

Figure I. Standard vs. migration prevalence rate per 100,000 population of PLWH by county region



Demographics of PLWH in Riverside County

There are increases (in-migration) in all demographic categories analyzed. The largest numerical increases are seen in white, gay, bisexual or other men who have sex with men, 45 - 64 years old (Table 4). Increases are also seen among non-white PLWH (818 more cases), those under 45 years old (435 more cases) and 65 years old and older (472) and assigned female at birth (85 more cases).

Regional Differences

Sixty-six percent of all PLWH in Riverside County currently live in the eastern section of the county. More than 80 percent of all white PLWH and 77 percent of all PLWH 45 years old and older in the county now live in eastern Riverside County (Figures 2 & 3). The remainder of Riverside County is home to a younger (61% of all PLWH under 45 years old) and more ethnically diverse (60% of all non-white PLWH) group of PLWH.

Figure 2. Percent of PLWH by county region (columns total 100%)

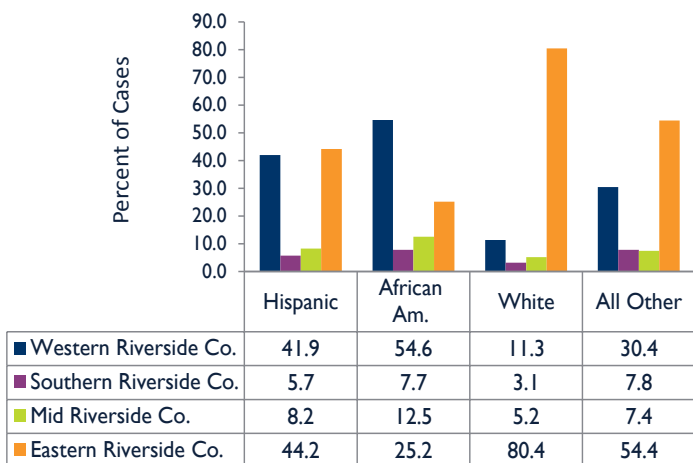


Figure 3. Percent of PLWH by county region (columns total 100%)

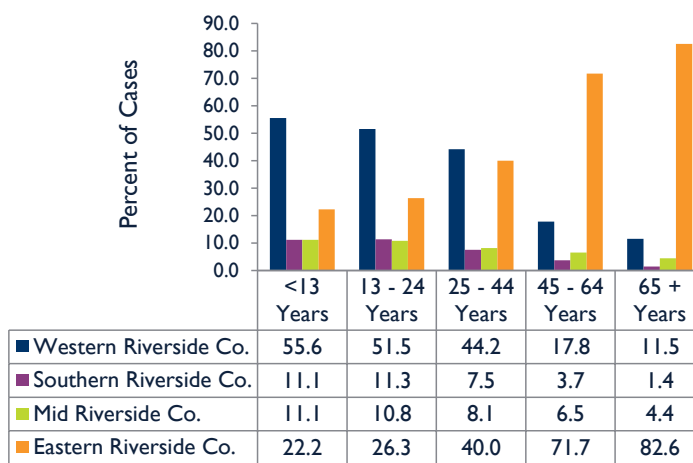


Table 2. Standard vs. migration prevalence of PLWH, rate per 100,000 population and percent increase, Riverside County, 2016			
Race/Ethnicity	Standard	Migration	Percent Increase
White	375.5	604.0	60.8%
Black/African American	385.6	548.8	42.3%
Hispanic	133.6	176.8	32.4%
Asian/Pacific Islander	66.3	102.6	54.6%
Native American	139.4	196.8	41.2%
Multi-racial	140.8	226.1	60.5%
Age Group (current age)	Standard	Migration	Percent Increase
<13	1.7	2.2	28.6%
13-24	39.0	44.2	13.5%
25-44	218.1	286.2	31.2%
45-64	572.8	912.1	59.2%
65+	240.5	386.4	60.7%
Gender assigned at birth*	Standard	Migration	Percent Increase
Males	429.3	657.0	53.0%
Females	44.4	60.0	35.3%

*There are 21 transgender individuals identified in the migration dataset up from 11 in the standard.

Discussion and Future Directions

Accurate health statistics are essential for designing and targeting public health interventions, guiding the allocation of adequate resources and helping gauge progress in controlling the epidemic. Good public health policy depends on using the best available health statistics (Brookmeyer, 2010).

Table 3. Standard vs. migration prevalence case counts of PLWH by HIV risk category and percent increase, Riverside County, 2016

HIV Risk Category	Standard	Migration	Percent Increase
Gay, bisexual or other men who have sex with men (MSM)	4,110	6,459	57.2%
Injection Drug Use (IDU)	277	338	22.0%
MSM/IDU	311	466	49.8%
Heterosexual sex	483	616	27.5%
Other or unknown	357	497	39.2%

Improved health, longer lives and reduced transmission of HIV/AIDS depends on specialized HIV care and support services. These services rely on the adequate allocation of resources which are currently based on the standard prevalence methodology that only counts those individuals who live in the county at the time of their diagnoses. As this analysis demonstrates, Riverside County experiences a great deal of in-migration of PLWH which poses significant policy and health service challenges. New and expanded data on PLWH will provide local HIV/AIDS service providers and policy makers a clearer picture of the true scope of the epidemic in Riverside County.

Future areas for health data and policy research should attempt to answer the following questions:

- What are the public health implications for the total breadth and location of HIV services in Riverside County?
- What is the typical stage of illness of PLWH who move into the county?
- What is the impact on senior services as well as HIV/AIDS care?
- What are the implications for future funding formulas?

From the desk of Danielle Huntsman, LCSW—Deputy Director of Public Health

As highlighted in this brief report, the number of people living with HIV/AIDS (PLWH) in Riverside County is significantly higher than previously reported. Recent improvements in HIV surveillance data at the state level has provided the opportunity to identify an increased need for specialized HIV care and support services to meet the needs of those living with HIV/AIDS. It is essential to address the existing migration as well as the continued migration prevalence as this underscores the need for additional funding and on-going service provider collaboration in order to reach goals of improving access to pre-exposure prophylaxis (PrEP), increased and improved HIV testing, increased linkage to care and retention in care, receipt of antiretroviral therapy, and achievement of viral suppression.

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2. California Department of Public Health, Office of AIDS, Enhanced HIV/AIDS Reporting System (eHARS), July 2017 Download.
3. [Centers for Disease Control and Prevention. HIV Surveillance Report, 2015; vol. 27. November 2016](#)
4. [Brookmeyer, R. \(2010\). Measuring the HIV/AIDS epidemic: approaches and challenges. *Epidemiologic reviews*, 32\(1\), 26-37.](#)
5. [California Department of Finance, Demographic Research Unit, Report P-3, "State and County Total Population Projections by Race/Ethnicity and Detailed Age" 2010 through 2060 \(as of July 1\). December 2014.](#)

Supplemental Data

Table 4. Riverside County - HIV/AIDS in-migration prevalence 2014—2016

	Standard Prevalence PLWH			Migration Prevalence PLWH/A		
	2014	2015	2016	2014	2015	2016
Prevalence	5,140	5,334	5,552	8,018	8,184	8,404
Estimated Population	2,294,333	2,323,527	2,352,654	2,294,333	2,323,527	2,352,654
Rate per 100,000	224.0	229.6	236.0	349.5	352.2	357.2
Risk						
Gay, bisexual or other men who have sex with men (MSM)	3,809	3,956	4,110	6,186	6,313	6,459
Injection Drug Use (IDU)	289	282	277	340	335	338
MSM/IDU	297	297	311	461	458	466
Heterosexual sex	463	472	483	599	606	616
Other	269	313	357	405	444	497
Perinatal	13	14	14	27	28	28
TOTAL	5,140	5,334	5,552	8,018	8,184	8,404
Sex assigned at birth						
Males	4,654	4,826	5,028	7,347	7,495	7,695
Females	486	508	524	671	689	709
TOTAL	5,140	5,334	5,552	8,018	8,184	8,404
Race/Ethnicity						
White	3,211	3,249	3,331	5,258	5,290	5,357
Black/African American	468	512	546	721	748	777
Hispanic	1,285	1,396	1,485	1,755	1,860	1,966
Asian/Pacific Islander	85	89	97	136	140	150
Native American	16	16	17	23	23	24
Multi-race	75	72	76	122	120	122
Unknown	0	0	0	3	3	8
TOTAL	5,140	5,334	5,552	8,018	8,184	8,404
Age Group (current age)						
<13	9	7	7	8	9	9
13-24	127	143	171	82	124	194
25-44	1,183	1,248	1,313	1,478	1,600	1,723
45-64	3,225	3,254	3,283	5,172	5,195	5,228
65+	596	682	778	1,278	1,256	1,250
TOTAL	5,140	5,334	5,552	8,018	8,184	8,404
County Region						
Western Riverside County	1,490	1,607	1,716	1,723	1,824	1,940
Mid Riverside County	272	292	320	519	533	557
Southern Riverside County	222	229	242	338	346	364
Eastern Riverside County	3,136	3,186	3,252	5,414	5,459	5,522
Unknown	20	20	22	24	22	21
TOTAL	5,140	5,334	5,552	8,018	8,184	8,404