

CHIPTS / APLA Policy Brief

What Enhanced Surveillance Could Mean for California

Projected Effects of Increasing the Numbers of Registered HIV Cases On California's Ryan White Funding

The goal of this Policy Brief is to estimate the change in Ryan White funding resulting from an increase in the numbers of HIV/AIDS cases listed in the names-based HIV/AIDS Registry. California began names-based reporting of HIV (non-AIDS) cases in 2006, thus it is likely that some HIV cases are reported in the code-based Registry and not in the names-based Registry. To estimate the likely numbers of cases that can be added to the Registry, we first calculate both an upper and lower-bound estimate of the number of missing cases. Second, we take into account the Ryan White funding formulas to estimate the increase in funding that would come to California as a result of increasing its share of names-based reported HIV/AIDS cases, assuming that other states are not disproportionately increasing their shares as well.

1. How many cases are missing in the names-based Registry?

The California State Office of AIDS (SOA) has estimated that there are approximately 69,000 people living with AIDS in California in 2010.¹ The SOA provides lower bound and upper bound estimates of the numbers of persons living with HIV, non-AIDS. Based on these values, we estimate that there are between 2800 and 20,000 people who have tested positive for HIV, do not have AIDS, and are not in the names-based Registry. The calculations are presented in greater detail in Appendix A.

2. What would increasing HIV cases mean for Ryan White funding?

The impact of increasing the number of cases registered depends on the location of the cases because Part A and Part B funding levels are calculated differently. Part A funding depends on California's share of HIV/AIDS cases living in EMAs and TGAs. Part B funding, which is received by the state, depends on California's share of total HIV/AIDS cases nationally. Appendix B describes the methods used to estimate California's share of EMA/TGA and total cases, based on the latest CDC data, which refer to 2007. Table 2 shows how California's share of HIV/AIDS cases would change, both in Part A sites and statewide, if the numbers of names-reported HIV cases increased by 2800 or 20,000.

HRSA distributes 2/3 of its Part A funding to EMAs and TGAs proportional to their share of all living HIV and AIDS cases across all EMAs and TGAs. One-third of Part A

¹ SOA, Estimated Persons Living with HIV (not AIDS) and Persons Living with AIDS in California, 2006-2020. www.cdph.ca.gov/programs/aids/documents/news2006-2020CACHIVPrevRoughEstTable.pdf. Accessed June 24, 2010.

funding comes from supplemental grants. California received \$101.45 million in Part A funding in FY2009 out of a total Part A funding of \$663.08 million, or 15.3%,² as shown in Table 2.

Part B funding is determined as follows: HRSA distributes 75% of its funding to a state based on the state's share of the nation's HIV/AIDS cases, 20% of the funding depends on the state's share of HIV/AIDS cases outside of EMA/TGAs, and 5% of the funding is distributed to states with no EMAs/TGAs. Part B funding nationally and in California is shown in Table 2. We estimate that California received \$130.95 million in Part B funding in FY09.

Table 1- Numbers and Percentages of HIV cases in California in 2007

	CDC est.	CDC + 2,800	CDC+ 20,000
CA -Total HIV	97,803	100,603	117,803
CA MSA-Total HIV	87,079	89,879*	107,079*
CA –non MSA cases	10,724		
U.S. Total	812,820	815,620	832,820
U.S. MSA Total	659,812	662,612	670,812
U.S. non-MSA Total	153,008		
CA as % of U.S.	12.03%	12.33%	14.15%
CA as % of MSA	13.20%	13.56%	15.96%

Source: CDC HIV Surveillance Report, 2008. Vol. 20. Published June 2010.

* As detailed in Appendix B, data on EMA/TGA case loads are represented by cases in MSAs. Assumes all new cases are in MSAs

² HRSA. HIV/AIDS Program Funding. <http://hab.hrsa.gov/reports/funding.htm> Accessed June 24, 2010.

Table 2 – Ryan White Allocations to California and Nationally, FY09 (in Millions \$)

	National FY09 ³	California FY09 (est) ⁴	California %
Total Part A	663.08	101.45	15.3
Total Part B (including ADAP)	1,223.79	130.95	10.7

Source: HRSA HIV/AIDS Program Funding

3. Increases in Funding for Part A and Part B

Our estimates, detailed in Appendix C and D, indicate that if 2800 cases were added to the names-based reports, Part A funding would increase by \$1.59 million and Part B funding would increase by \$3.10 million, for a total increase of \$4.69 million. If 20,000 cases were added, Part A funding would increase by \$12.21 million and Part B funding would increase by \$21.92 million, for a total increase of \$34.13 million. Table 3 summarizes the estimates and shows that each additional case yields between \$1675 and \$1707 in additional Ryan White funding.

Table 3 –Financial Impact of Increasing Registration of HIV/AIDS Cases

	FY09	Add 2800	% Increase	Add 20,000	% Increase
Part A funding	\$101.45 M	\$ 1.59 M	1.57 %	\$12.21 M	12.0 %
Part B funding	\$130.95 M	\$ 3.10 M	2.36%	\$21.92 M	16.7%
Total Parts A+B	\$232.40 M	\$ 4.69 M	2.02%	\$34.13 M	14.7%
Funding/new case		\$1675		\$1707	

4. Discussion

Increasing the numbers of cases in the AIDS Registry would add substantially to California’s Ryan White funding. However, registering these cases would also require some expenditure. An estimate for LA County was that surveillance cost \$992 for each case found. Thus, finding an additional 2800 cases is estimated to cost \$2.78 million and finding 20,000 cases is estimated to cost \$19.84 million. Both scenarios yield a positive margin for the state even in the first year in which the cases are registered. It is important

³ HRSA. 2008 State Profiles. United States. Program Grantees and Funding. <http://hab.hrsa.gov/stateprofiles/states/us/Pogram-Grantees-and-Funding.htm>. Accessed June 24, 2010.

⁴ Estimated by applying the percentage of CA funding derived from State Profiles for FY08 to the FY09 total funding appropriation. . HRSA. 2008 State Profiles. California. Program Grantees and Funding <http://hab.hrsa.gov/stateprofiles/states/ca/Pogram-Grantees-and-Funding.htm>. Accessed June 24, 2010.

to note that it may be more costly than \$992 to register the cases not already in the names-based reporting system.

Put another way, a budget of \$2.5 million for enhanced surveillance would be offset by additional Ryan White allocations if it were to add as few as 1519 new names to the HIV Registry. An important point is that the costs of identifying a case are incurred only once, but the increment to Ryan White funding will continue beyond that first year. The increases in reported cases will also have a positive effect on CDC allocations, further increasing the value of adding to the HIV Registry.

Clearly, California will gain a net increase in funding from registering persons already receiving Ryan White services, since no additional treatment costs will be incurred. Registering persons receiving medical care financed by private insurance is also likely to be cost-beneficial. However, the \$1675 in additional funding for a new case will not begin to cover the additional treatment costs for a person not currently in care if these newly identified HIV positive individuals access Ryan White services.

There is a strong economic argument for ensuring that all persons currently receiving Ryan White services are registered. The state would also gain resources for HIV from registering those receiving privately financed medical care. The case for detecting previously undetected cases of HIV must be made on a moral or health basis, rather than on a purely financial basis.

Appendix A – Numbers of HIV/AIDS cases remaining to be registered by name

The California State Office of AIDS (SOA) has estimated that there are approximately 69,000 persons living with AIDS in California in 2010.⁵ The California Registry contains 36,412 names-based cases of HIV, non-AIDS. However, the SOA believes there are greater numbers of people who have tested positive for HIV, but whose names are not in the Registry. Given the uncertainty associated with the Registry for the non-AIDS cases, the SOA provides a lower bound and an upper bound estimate of the numbers of non-AIDS HIV cases, 68,382 and 109,116, respectively. Thus, the estimate for the total numbers of cases ranges from a low of 137,472 to a high of 176,796. The CDC estimates that 21% of the total numbers of persons living with HIV and with AIDS are unaware of their status.⁶ Thus the lower bound estimate on the total numbers of cases suggests that there are 28,770 persons who are unaware of their infection, leaving 39,230 HIV non-AIDS cases that should be in the Registry. In fact, the Registry now contains 36,412 named cases. A lower bound estimate for the number of cases that need to move from code-based to name-based reporting is 2800.

SOA's upper bound estimate is that there are 109,000 people living with HIV (non AIDS) and 74,410 living with AIDS, for a total of 183,526. Twenty-one percent of that number yields an estimate of 38,500 people who are unaware of their infection. This leaves 70,486 who know they are living with HIV, non-AIDS, of whom only ½ are registered. This seems unlikely since code-based reporting included only 41,155 names, and we know that some have been included in names based reporting. Assume that only half of the code-based cases have been included in names based reporting (assuming they have not become AIDS cases). Thus, the upper bound estimate is that there are 20,000 persons with HIV who need to be registered, compared to the lower bound estimate of 2800.

Appendix B – California's share of HIV/AIDS Cases

We rely on the most recent CDC Surveillance data, released in June 2010⁷ to determine California's share of the national total of HIV/AIDS cases in EMAs/TGAs and

⁵ SOA, Estimated Persons Living with HIV (not AIDS) and Persons Living with AIDS in California, 2006-2020. www.cdph.ca.gov/programs/aids/documents/news2006-2020CACHIVPrevRoughEstTable.pdf. Accessed June 24, 2010.

⁶ Centers for Disease Control and Prevention. *New Estimates of U.S. HIV Prevalence, 2006*. <http://www.cdc.gov/hiv/topics/surveillance/resources/factsheets/prevalence.pdf>

⁷ CDC HIV *Surveillance Report, 2008*. Vol. 20. <http://www.cdc.gov/hiv/topics/surveillance/resources/reports/>. Published June 2010. Accessed June 24, 2010.

nationally. CDC’s report of HIV and AIDS cases in California shows that most of the AIDS cases in Metropolitan Statistical Areas (MSAs) are living in EMAs or TGAs (89%). In order to have comparable data nationally, we use the MSA data to proxy for EMA/TGA numbers of HIV/AIDS cases. The CDC estimates that California has 87,079 people living with HIV in Metropolitan Statistical Areas (MSAs), of whom 57,080 have AIDS and 29,999 have HIV, non-AIDS. If all the increase in HIV/AIDS cases occurred in MSAs, the total numbers of persons in California’s Registry would increase by the amounts shown in Table B-1, under the lower and upper bound scenarios. Note that the numbers of cases nationally also increases by the additional cases in California.

Table B-1- numbers of HIV cases in California and Nationally in 2007

	CDC est.	California % of total	CDC + 2,800	CDC+ 20,000
CA -Total HIV	97,803	12.03	100,603	117,803
CA - AIDS cases	64,779		67,579	64,779
CA -HIV non-AIDS cases	33,024		35,824	53,024
CA MSA-Total HIV	87,079	13.20	89,879	107,079
CA MSA- AIDS	57,080		59,880	57,080
CA MSA HIV non-AIDS	29,999		32,799	49,999
CA –non MSA cases	10,724	7.0		
National MSA Total	659,812			
National non-MSA Total	153,008			
National Total	812,820		815,620	832,820

Source: CDC HIV Surveillance Report, 2008. Vol. 20. Published June 2010.

Appendix C – Increasing funding for Part A.

According to CDC data for MSAs, CA accounts for 13.20% of all MSA cases, so the first part of Ryan White funding for CA MSAs should be 8.80% (2/3 of 13.20) of total national funding for Part A, or \$58.35 million, since California received \$101.45 million, this implies that California received \$43.10 million in supplemental funding. Assume that supplemental funding remains constant.

If the number of new cases registered is the lower bound number of 2,800, California MSA’s will represent 13.56% of all HIV/AIDS cases in MSAs. The formula factor will then be two-thirds of 13.56%, or 9.04%. California’s Part A budget determined by formula will then be 9.04% of \$663.08 million or \$59.94 million. Including supplemental funding of \$43.10 million, the total Part A funding coming to California will be \$103.04 million, an increase of \$1.59 million over current funding levels.

If California's registered HIV cases increase by 20,000, rising to 107,079, California will then account for 15.96 % of HIV cases in metropolitan areas nationally, assuming no change in other areas. California's Part A funding will then be 10.64% ($2/3 \times 15.96$) of the total plus Supplemental. Assuming that the Part A budget remains relatively constant, as it has in recent years, this implies that California EMAs and TGAs will receive 10.64% of \$663 million (\$70.56 million), plus supplemental of \$43.10 million, for a total of \$113.66 million. This represents an increase of \$12.21 million.

Appendix D - Increasing funding for Part B

The CDC June 2010 data show 64,779 AIDS cases and 33,024 HIV non-AIDS (2010 Surveillance) in California. Thus, CA had 12.03% of the national total of 812,820 known HIV and AIDS cases. This share accounts for 75% of the HRSA allocation. If the numbers of registered HIV cases increased by 2800, California's share would rise to 12.33%. If California registered an additional 20,000 cases, its share would increase to 14.15%. It is impossible to know how the new HIV cases would be distributed between urban and rural areas, so we assume that MSA and non-MSA areas increase their registered cases proportionately. California will not receive the 5% of the HRSA allocation reserved for states with no EMAs or TGAs, so increases in California's share will affect only 95% of the budget.

Adding 2800 cases to California's Registry would move California's share of HIV/AIDS cases up to 12.33% from 12.03%, an increase of 2.49%. California's funding would increase by 95% of 2.49% or 2.37%. Applying this percentage to the current Part B funding of \$130.95 million will result in a Part B increase of \$3.10 million.

An increase of 20,000 registered cases would increase California's share to 14.15%, an increase of 17.6% over the current share of 12.03%. This would increase Part B funding by 95% of 17.6%, or 16.74%, or by \$21.92 million.