Costs and Benefits of Enhanced HIV Surveillance in California

Executive Summary: It would be cost-beneficial to California to expand HIV surveillance efforts to add persons already in care to the HIV names-based Registry. It is estimated that each additional case registered would add $1675-$1707 to Ryan White allocations, but cost of only $992 to register. An additional $4.7 million would flow to the state as a result of adding 2800 cases to the Registry.

Background: Ryan White Comprehensive AIDS Resources Emergency (CARE) Act (RWCA) funding is provided to states to cover HIV medical care, treatment, and ancillary services for under-and un-insured persons with HIV and AIDS.

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.

Methods: 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.

The California State Office of AIDS (SOA) has estimated that there are approximately 69,000 people living with AIDS in California in 2010. 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 2,800 and 20,000 people who have tested positive for HIV, do not have AIDS, and are not in the names-based Registry.

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. Table 2 shows how California's share of HIV/AIDS cases would change, both in MSAs and statewide, if the numbers of names-reported HIV cases increased by 2,800 or 20,000 assuming all new cases are in MSAs.

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 funding comes from supplemental grants. California received $90.5 million in Part A funding in FY2008 out of a total Part A funding of $593.5 million, or 15.3%, 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.

Funding provided by the California HIV Research Program

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.
** assumes all new cases are in MSAs*

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

	National FY09(1)	California FY09(est2)	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

Findings: Our estimates indicate that if 2,800 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.

Discussion and Recommendations: 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 2,800 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 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 in the first year 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.

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	

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