

## **Modeling Funding Changes in the Ryan White CARE Act Reauthorization**

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## Collection of Data

- We obtained as much information as possible on HIV and AIDS cases in States and EMAs by using officially published numbers in the CDC surveillance reports and Statehealthfacts.org.
- For States, we were able to obtain complete information through 2004. These numbers included cumulative AIDS cases, cumulative HIV (not AIDS) cases in states that have HIV names reporting, and cumulative AIDS deaths. From these numbers, one can calculate living cases (for example, Living HIV/AIDS Cases = Cumulative AIDS Cases + Cumulative HIV Cases – Cumulative AIDS Deaths). The CDC also provides living HIV and living AIDS cases numbers that are adjusted for reporting delays. It is not clear from the law if these adjusted numbers would be permissible or if the CDC would be required to calculate living cases using only the verified cumulative numbers.
- The information for EMAs was not as readily available. We were able to find reports of cumulative AIDS cases in metropolitan areas, as defined by current census MSA boundaries. We then made a series of estimates and adjustments:
  - We estimated AIDS deaths using information obtained in state-level data. Specifically, we calculated the ratio of Cases:Deaths in the state where an MSA's city is located, and then applied this ratio to the MSA's cumulative AIDS cases numbers to get estimated AIDS deaths.
  - We then calculated Living AIDS cases as Cumulative AIDS cases – our estimate of AIDS deaths.
  - To get HIV cases, we either applied the proxy (whenever it was used by the State where an MSA's city is located) or we estimated HIV cases by applying the ratio of Living AIDS Cases:HIV cases that was obtained using State-level data. With this information, we then could calculate an estimate of Living HIV/AIDS cases.
  - We then adjusted all calculations for differences in the boundaries of EMAs and current census MSAs. In its February report, the GAO provided a ratio of ELCs (estimated living cases of AIDS) in EMAs when using the current EMA boundaries and if adopting new MSA boundaries. We applied this ratio to adjust our case counts (based on MSA boundaries) so that they would correspond with numbers likely obtained using EMA boundaries.
- *NOTE: The most recently published information on HIV and AIDS cases for states and EMAs is from the CDC's 2004 surveillance report. Therefore, these numbers are used in the spreadsheet. If the proposed law were passed and implemented, the calculations for 2007 would likely use case information through Dec. 31, 2005 or Dec. 31, 2006. This would inevitably change some of the allocation outcomes.*
- We obtained 2006 funding information from HRSA press releases. (Note: these numbers differ from the funding levels that the GAO provided in its February report, as well as in the spreadsheet calculations that the GAO released in mid-May. It is not clear why the GAO numbers differ from the officially published HRSA numbers.)

- To provide a point of comparison, we set funding appropriations for total Title I and Title II money to be the same level as in 2006. For example, HRSA awarded a total of \$580 million to Title I grants in 2006. So, to begin our estimates of formula grants under the revised law, we assumed that 2/3 of \$580 million would be used to allocate formula money under Title I.
- For our spreadsheet, we held EMAs constant from 2006. This is an important assumption, as it deviates from what will really happen. There are arguments to be made for including emerging communities, which would be included in Title I allocations under the proposed law. However, we chose not to do so for several reasons:
  - The data for emerging communities was even less readily available than for EMAs.
  - There are complications in figuring out how to move the funding stream for emerging communities in Title II to the funding streams for Title I. A simple fix might be to add \$10 million to the Title I appropriation. However, the proposed law actually authorizes less money for Title I than was appropriated last year, so it is not clear that that correction would be valid.
- We modeled allocations for the first year of the new law, using 2006 actual allocations as the basis for caps and hold harmless provisions. This approximates what would happen in 2007 if funding appropriations were held constant.
- We also decided to provide a set of “adjusted” comparisons. Because we are not modeling supplemental grants in this spreadsheet, the new law can appear to have positive effects for many states (particularly in Title I) simply because a greater proportion of Title money is going to formula. To correct for this problem, we also ran a set of numbers that use “adjusted 2006” allocations as the base year. In these adjustments, we increased every EMA’s 2006 allocation as if 2/3 of Title I money had been given out to formulas. We also reduced every State’s ADAP formula allocation as if only 95% of the earmark had gone to formula grants. These adjusted numbers provide a better starting point for understanding how the new law would change the existing picture for formula grants.

## Adjustable Options in the Spreadsheet

The spreadsheet is designed to allow a user to set a number of assumptions about the funding reallocations. These assumptions correspond to areas of the law where changes are likely to occur or where the intended meaning of the law has been subject to dispute.

**1. *Type of case: Living AIDS or Living HIV/AIDS.*** The proposed law circulating in May used Living HIV/AIDS Cases as the basis for appropriations. There is a possibility that the bill will be amended to use Living AIDS Cases as the basis for allocations in the first year (with a gradual transition to Living HIV/AIDS Cases). The spreadsheet allows one to model appropriations using either case count.

**2. *Calculation of Living AIDS or Living HIV/AIDS Cases:*** May versions of the proposed bill defined living HIV/AIDS cases as “the number of living cases of HIV/AIDS (reported to and confirmed by the Director of the Center for Disease Control and Prevention) through December 31 of the most recent calendar year.”

Some key informants have interpreted this to be a calculation of [Cumulative HIV (not AIDS) Cases + Cumulative AIDS Cases – Cumulative AIDS Deaths]. Others have preferred to use Living AIDS Case and Living HIV Case numbers that are provided by the CDC. This dispute centers on the applicability of the living case numbers provided by the CDC, as they make adjustments for reporting delays. It is not clear if such adjustments are permissible under the new law. We have tended to prefer the count using the cumulative numbers. The spreadsheet allows one to model the calculations using either method of calculation.

**3a. *Selection of Proxy States:*** May versions of the proposed law contained a provision to allow the use of a proxy for HIV case count (Living AIDS Cases \* 0.9) if a state did not yet have a mature HIV names reporting system and if the state had adopted a law to move to names reporting. Concerns have been raised about how states would gain access to the proxy.

The spreadsheet offers options for the assignment of the proxy when using Living HIV/AIDS Cases as the basis for allocations. Specifically, it allows one to determine allocations by assigning the proxy according to the maturity of the HIV names reporting system (a “mature” system is one that has been in place for over five years) or it allows one to assign the proxy according to whether or not it gives a state the highest Living HIV/AIDS case count. Whenever a state or EMA uses the proxy, the spreadsheet caps the allocations at 110% of 2006 levels. This is based on a provision in the May versions of the bill.

**3b. *Assign 110% Cap to States:*** The proxy would not be applicable in a scenario that uses Living AIDS Cases to allocate funding. However, there is a possibility that a revised a law would subject all states to a 110% cap based on their 2006 allocations. When using Living AIDS Cases, the “Selection of Proxy States” button changes to “Apply 110% Cap to all States?” If selected, this option caps all allocations at 110% of the 2006 award.

**4. *Use of the proxy by States that do not have an HIV-names reporting law:*** According to May versions of the bill, the proxy for HIV cases can only be used if a state has in place by

October 1, 2006, a law to convert to HIV names reporting and to begin such reporting by April 1, 2008. There are seven states, plus DC, that do not have such laws on their books at this time. When using Living HIV/AIDS cases, the spreadsheet allows one to allocate funds assuming that these states will not be able to use the proxy (and thus must rely only on their Living AIDS Case count) or allows one to allocate assuming that all areas will make the necessary statutory changes. *NOTE: This button has no effect if allocating by Living AIDS Cases.*

**5. Tier Assignment:** Communities funded under Title I would be assigned to tiers based on the number of new AIDS cases in the past five years. The Tiers have separate funding streams. UCSF obtained data on reported AIDS cases in the past five years (2000-2005) using information from CDC surveillance reports and supplements. Our calculations indicated that New Orleans and Phoenix would go to Tier 1. However, the GAO assigned them as Tier 2 in its data runs from May. Because our EMA information required so many estimations and adjustments, it is entirely possible that our calculations have misplaced these two cities. This button allows a user to assign New Orleans and Phoenix to Tier 1 based on our calculations or to Tier 2 based on the GAO's classification.

**6. Definition of the Locality Factor:** The proposed law originally provided a weighted distribution for Title II base funding:

- 75% according to the proportion of all Living HIV/AIDS cases in a state
- 20% according to proportion of Living HIV/AIDS cases outside Title I Tier 1 and Title I Tier 2 EMAs.
- 5% according to "Locality factor," which equaled the proportion of Living HIV/AIDS cases in states with no Title I Tier 1 and/or Title I Tier 2 Awards

The bill passed out of Senate HELP committee in mid-May changed the formula as follows:

- 75% according to proportion of all Living HIV/AIDS cases in a state
- 20% according to proportion of Living HIV/AIDS cases outside Title I Tier 1 and Title I Tier 2 EMA.
- 5% according to "Locality factor," which now equaled the proportion of Living HIV/AIDS cases outside Title I Tier 1 and Title I Tier 2 EMA.

This effectively equals:

- 75% according to proportion of all Living HIV/AIDS cases in a state
- 25% according to proportion of Living HIV/AIDS cases outside Title I Tier 1 and Title I Tier 2 EMA.

The spreadsheet can allocate using either definition of the locality factor.

**7. Hold harmless level:** May versions of the bill applied a 90% hold harmless provision when setting allocations for the initial year under the new law. That is, allocations for 2007 could not be less than 90% of 2006 awards. There is a possibility that an amended bill may contain a 95% hold harmless provision for the first year. The spreadsheet allows a user to set hold harmless at either level. Users should also be aware that some of the spreadsheet's summary tables provide

comparisons without the application of the hold harmless provisions, allowing one to understand how funding would shift without such provisions.

**8. *Title II Hold Harmless Calculation:*** Many versions of the proposed law contained a hold harmless provision for Title II Base grant awards for the first three years. It is not clear from where this hold harmless money will be taken. In Title I, hold harmless awards reduce supplemental portions of the Title. However, Title II traditionally did not have such portions from which to take. The new act creates some supplemental grants in Title II so it is possible for the hold harmless to reduce these awards. The spreadsheet allows one to allocate funds assuming that the application of hold harmless increases overall formula funding for the base Title II grants (i.e., by reducing supplemental funds in the Title) or assuming that the application of hold harmless will decrease the base awards of other states.

**9. *Weights for ADAP formula:*** ADAP formula grants traditionally have been distributed based on a state's proportion of estimated living AIDS cases for the past ten years. The proposed law appears to update the definition of a "case" (so that it would be Living HIV/AIDS case or Living AIDS case) but not to change the allocation formula, itself. However, the Title II portion of the law is complex and it is possible that we have misinterpreted the bill's language. So, the spreadsheet allows one to allocate ADAP according only to the proportion of living cases (HIV/AIDS or AIDS) in a state or to allocate these funds using "weighted cases" as is done for the Title II base grant.

**10. *Include ADAP in Title II Hold Harmless:*** Among the key informants with whom we spoke, there was disagreement about whether or not ADAP funds are included in Title II hold harmless provisions. It appears that these funds were subject to hold harmless in the data runs provided by the GAO in May. We have provided a button that allows one to allocate funds with or without hold harmless applied to ADAP.

When hold harmless is applied to ADAP, the adjustments are done in multi-step process. First, the Title II base grant is adjusted so that it meets hold harmless provisions based on the 2006 base allocation only. We then determine what the minimum combined Base + ADAP allocation should be given the Base + ADAP allocations for 2006. By subtracting our Base grant allocation from this comparison, we obtain the amount of money by which the ADAP grant must be adjusted to meet the hold harmless provision. Whenever ADAP hold harmless is applied, it reduces the ADAP awards of other states.

### Title I Allocation Procedures

- Under new law, Title I appropriates more money to formula. Two-thirds now will go to formula, whereas ½ used to go to formula. Therefore, there is an overall growth in the amount of money going into the Title I formula estimates. One must remember that this growth in formula money under Title I will reduce the total amount of supplemental money available.
- To enable a relative comparison of monies appropriated to formula under Title I, we created an “adjusted Title I” appropriation for 2006, in which we assumed that each state received the same proportion of Title I formula funding for 2006, but that the total amount of formula money distributed in 2006 was at least two-thirds of the total Title I money (as opposed to at least 50%).
- May versions of the proposed law created three tiers. Tier 1 approximately corresponds to current EMAs with an AIDS case count greater than 2,000 diagnosed within the previous five years. Tier II are communities with an AIDS case count between 1,000 and 1,999 diagnosed within the previous five years. Tier III consists of communities with 500 to 999 AIDS cases diagnosed in the previous five years. Under a special grandfather provision, all Tier III communities that were funded as EMAs in 2006 are treated as Tier II for the initial year of the law.
- Jurisdictions move “up” when they qualify, but move “down” only after three consecutive years of not qualifying. “Moving down” includes being eliminated from Title I funding.
- There has been some discussion of the funding moving among tiers when a jurisdiction moves into Tier I or Tier II, but that the allocation to Tier III will be a static \$5 Million. This was not applicable for our spreadsheet, which only allocates money for the first year, but it is something that must be considered for future years.
- The proposed law creates separate funding streams for the Tiers. An examination of the authorized amounts in the May version of the law revealed that:

$$\frac{\text{Tier 2 Funding}}{\text{Tier 1} + \text{Tier 2 Funding}} = 22.75\%$$

For our spreadsheet, we held constant EMAs. As such, there were no communities funded as Tier 3 (and so we did not consider the funding stream for that Tier). The 2006 EMAs were all assigned to Tier 1 or 2 for funding purposes. For initial allocations, we distributed 22.75% of the available formula money to Tier 2 communities and 77.25% of the available formula money to Tier 1 communities. (NOTE: Because hold harmless provisions in Title I increase the total amount of money going to formula, these percentages will differ if looking at the final allocation amounts for Title I.)

- Our allocation procedure worked as follows:
  - (1) Apportion formula funding within each tier according to Living HIV/AIDS (or Living AIDS) cases;
  - (2) Reduce formula award of EMAs if subject to a 110% cap
  - (3) Add saved money back into the other EMAs in proportion to total cases in those EMAs
  - (4) Apply Hold Harmless to Tier 1 communities. (Tier 2 communities do not benefit from hold harmless.)

In adjusting the initial allocation, funding for the Tiers was always treated as separate streams. For example, if a Tier 1 community was subject to a cap, then the money saved could only be redistributed among other Tier 1 communities.

*NOTE: For some of these adjustments, one technically needs to do multiple iterations to ensure that no rule is violated. For example, after applying a cap on some EMAs, one would need to make sure that the money saved and redistributed did not push another EMA up over an applicable cap. We did not do multiple iterations. An inspection of this limitation reveals only minor violations under certain scenarios.*

## Title II—Base Grant Allocation Procedures

- Formula would distribute funds according to a case count weighted as follows: 75% based on all Living HIV/AIDS (or AIDS) cases in a state; 20% based on living cases not residing in a Tier 1 or Tier 2 EMA; and 5% based on the locality factor.
- Allocation works as follows:
  - (1) Money appropriated to states by weighted case count
  - (2) States that have less than the minimum (\$200,000 if <90 Living AIDS cases; \$500,000 if 90+ Living AIDS cases; \$50,000 for territories) have their award increased;
  - (3) Money taken to provide minimums is then subtracted from other states' allocations proportional to their weighted case totals;
  - (4) States that have a 110% cap then have awards reduced;
  - (5) Money saved from reduction is then added back to other states (excluding states getting only minimum) proportional to their weighted case count;
  - (6) Hold harmless is applied
  - (7) If option is selected, states not getting hold harmless adjustments and not getting minimum have their awards reduced to pay for hold harmless. The reduction is made based on their weighted cases.

*NOTE: For some of these adjustments, one technically needs to do multiple iterations to ensure that no rule is violated. For example, after applying a cap on some states, one would need to make sure that the money saved and redistributed did not push another state up over an applicable cap. We did not do multiple iterations. An inspection of this limitation reveals only minor violations under certain scenarios.*

## **Title II—ADAP Grants Allocation Procedures**

- Under new law, at least 5% of total ADAP money is used for supplemental awards. This is a change from the 3% minimum under the old law (in other words, the total proportion of ADAP money going to formula grants is going to go down). The spreadsheet allocates 95% of the total 2006 ADAP monies. To provide a comparison, we also adjusted 2006 actual allocations to be only 95% of the total ADAP money.
- Money appropriated proportionally according to living HIV/AIDS (or AIDS) cases in state or based on weighted case averages used in Title II base grant allocations (the exact allocation rule is determined by one of the options in the spreadsheet).
- Allocations work as follows:
  - (1) Money appropriated to states proportional to cases;
  - (2) States subject to a 110% cap then have their awards reduced;
  - (3) Money saved from reduction is then added back to other states proportional to cases;
  - (4) If selected, state grants are increased to meet hold harmless provision.
  - (5) Awards from other states are then reduced proportional to cases so that total ADAP formula money is held constant.

*NOTE: For some of these adjustments, one technically needs to do multiple iterations to ensure that no rule is violated. For example, after applying a cap on some states, one would need to make sure that the money saved and redistributed did not push another state up over an applicable cap. We did not do multiple iterations. An inspection of this limitation reveals only minor violations under certain scenarios.*