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Persons Living with HIV/AIDS or AIDS, by Geographic Area and Ryan White CARE Act Eligible Metropolitan Area of Residence December 2004





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## Confidential information, referrals, and educational material on HIV infection and AIDS

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E-mail: cdcinfo@cdc.gov

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## Commentary

The Ryan White Comprehensive AIDS Resources Emergency (CARE) Act was enacted by Congress in 1990 and reauthorized with amendments in 1996 and 2000. The CARE Act of 2000 expired in September 2005, and reauthorization is under discussion by Congress. The CARE Act of 2000 specified the use of AIDS case counts for the distribution of funds under the CARE Act. However, concerns have been raised that such allocations are not equitable because the epidemic is not adequately reflected by data on AIDS cases alone and that areas with emerging HIV epidemics are underfunded because not all cases of HIV disease are included in calculating the funding formula. A related concern about basing allocations on AIDS cases alone is that jurisdictions are not compensated for providing early access to care and treatment. Therefore, interest is growing in using HIV as well as AIDS data to guide these funding decisions.

The current legislation, enacted in 2000, states that cases of HIV disease rather than cases of AIDS will be used in formula calculations for fiscal year 2007. If the act is reauthorized, Congress may consider changes to the current formula or may add language specifying how and when HIV data may be incorporated into the funding formula. Surveillance data on HIV infection provide a more complete picture of the epidemic and the need for prevention and care services than that provided by AIDS data alone. Most states and territories have adopted confidential name-based reporting of HIV infection, using the same method of reporting for both HIV and AIDS; however, some use code-based or name-to-code methods for reporting HIV cases. To achieve the goal of acquiring nationwide, high-quality HIV data, CDC recommends that all states and territories adopt confidential name-based public health disease surveillance systems to report HIV infections. As of June 2006, 44 states, Puerto Rico, the U.S. Virgin Islands, and the Pacific Islands of American Samoa, Guam, and the Northern Mariana Islands conduct name-based HIV infection surveillance.

The data in this report have not been used for purposes of funding allocations. These data are presented for *illustrative purposes only* and may be useful for comparing the potential effect of various methods of calculating the numbers of cases on the basis of AIDS

and HIV/AIDS data in all jurisdictions. This report provides data on persons living with HIV infection or AIDS at the end of 2004, by geographic area and Ryan White CARE Act eligible metropolitan area (EMA). The AIDS data tables present comparisons of 3 methods for calculating the number of persons living with AIDS. In Tables 1 and 2, columns 1 and 2 provide the estimated number and percentage distribution of AIDS cases in living persons according to the Ryan White CARE Act formula specified in the 2000 reauthorized legislation. It is important to note that the data presented for the Ryan White CARE Act formula calculations in Tables 1 and 2 were not used for the distribution of funds under the CARE Act and were calculated by using data reported during 10 consecutive 12-month periods from January through December 2004 (rather than 10 consecutive 12-month periods from July through June, as typical for CARE Act allocation purposes). Columns 3 and 4 are the numbers of persons with AIDS reported to CDC and assumed to be living (as of the most recent update, vital status reported as "alive"). Columns 5 and 6 are data adjusted for delays in the reporting of cases and deaths to produce point estimates of the number of people living with AIDS. (See the Technical Notes for computational details of each method.)

The HIV/AIDS data (Tables 3 and 4) present comparisons of 2 methods for calculating the number of persons living with HIV/AIDS. HIV/AIDS data include persons with a diagnosis of HIV infection, regardless of their AIDS status at diagnosis. For Tables 3 and 4, columns 1 and 2 are the number and the percentage distribution of persons with HIV/AIDS who were reported to CDC, who were assumed to be living (as of the most recent update, vital status reported as "alive"), and who resided in the 38 areas (36 states, Puerto Rico, and the U.S. Virgin Islands) with confidential name-based HIV infection reporting as of December 2004. Columns 3 and 4 are data adjusted for delays in the reporting of cases and deaths to produce point estimates of the number of people living with HIV/AIDS who resided in the 34 areas (33 states and the U.S. Virgin Islands) with mature HIV reporting systems (i.e., name-based HIV infection reporting since at least December 2000) to allow for

stabilization of data collection and for adjustment of the data for reporting delays.

The data in this report demonstrate that the number of persons living with HIV/AIDS or AIDS varies by the method used to calculate the number of cases in living persons. In general, numbers that have been adjusted for delays in reporting of cases and deaths (method 3) are somewhat higher than numbers based on reported case information without adjustments (method 2) or numbers based on 120 months of reported cases with a standard set of national survival weights (method 1). Each method has limitations that should be considered. The numbers of AIDS cases in living persons calculated according to the Ryan White CARE Act formula do not include cases reported before the 120-month period and therefore may be undercounts of the number of persons living with HIV in a jurisdiction. National survival weights adjust for potential differences in the reporting of death information across jurisdictions but do not reflect area-specific differences in length of survival.

The number of persons reported as living with HIV/AIDS or AIDS (method 2) is based on data and the vital status reported as of the most recent update of cases reported from state and local health departments to CDC. Because there are no adjustments for reporting delays, method 2 may overcount the number of cases in living persons because of delays in the reporting of vital status information to health departments and may undercount the cases diagnosed during this period that have not yet been reported to health departments.

In method 3, the numbers of cases in living persons are adjusted for delays in reporting and deaths by using a maximum likelihood statistical procedure (see Technical Notes). The point estimates from this method are derived from data reported 6 months after the calculated point prevalence (cases in living persons as of December 2004; based on case data reported through June 2005). To calculate reliable estimates requires the use of additional months of reported data. Additionally, for HIV/AIDS cases, these adjustments should be done only for areas that have had HIV infection reporting for a sufficient length of time (i.e., at least 4 or 5 years) to allow for stabilization of data collection and reliable adjustment for delays in the reporting of cases and deaths. Therefore, data for areas that implemented confidential name-based HIV infection reporting after 2000 could not be presented by using this method.

Compared with AIDS data alone, HIV/AIDS data provide a more complete picture of the persons in need of HIV care services and the total burden of HIV. As more states implement confidential name-based HIV case reporting, national data will become more representative of persons reported as living with HIV/AIDS in the United States.

Table 1. Persons living with AIDS, by area of residence, as of December 2004: comparison of 3 methods

	Ryan White Act form		Repor	ted <sup>b</sup>	Estima	nted <sup>C</sup>
Area of residence	No.	w %	No.	%	No.	" "
Alabama	3,379	1.0	3,575	0.9	3,352	0.8
Alaska	243	0.1	289	0.1	300	0.1
Arizona	4,018	1.2	4,082	1.0	4,068	1.0
Arkansas	1,412	0.4	2,005	0.5	2,036	0.5
California	39,930	11.8	52,513	13.1	56,988	13.7
Colorado	2,507	0.7	3,618	0.9	3,741	0.9
Connecticut	5,403	1.6	6,647	1.7	6,472	1.6
Delaware	1,484	0.4	1,618	0.4	1,639	0.4
District of Columbia	6,589	2.0	8,767	2.2	9,036	2.2
Florida	37,844	11.2	44,105	11.0	45,140	10.9
Georgia	11,418	3.4	13,283	3.3	14,245	3.4
Hawaii	900	0.3	1,223	0.3	1,271	0.3
Idaho	199	0.1	269	0.1	277	0.1
Illinois	12,064	3.6	13,928	3.5	15,418	3.7
Indiana	3,084	0.9	3,647	0.9	3,731	0.9
lowa	598	0.2	733	0.2	749	0.2
Kansas	902	0.3	1,129	0.3	1,147	0.3
Kentucky	1,959	0.6	2,248	0.6	2,354	0.6
Louisiana	6,869	2.0	7,452	1.9	7,472	1.8
Maine	360	0.1	494	0.1	501	0.1
Maryland	12,014	3.6	12,746	3.2	13,045	3.1
Massachusetts	6,419	1.9	7,983	2.0	8,254	2.0
Michigan	5,192	1.5	5,487	1.4	5,697	1.4
Minnesota	1,433	0.4	2,015	0.5	2,059	0.5
Mississippi	2,996	0.9	3,080	0.8	3,078	0.7
Missouri	3,315	1.0	4,937	1.2	5,021	1.2
Montana	125	0.0	174	0.0	175	0.0
Nebraska	529	0.2	621	0.2	638	0.2
Nevada	2,184	0.6	2,631	0.7	2,649	0.6
New Hampshire	333	0.1	530	0.1	535	0.1
New Jersey	15,075	4.5	16,945	4.2	17,408	4.2
New Mexico	959	0.3	1,130	0.3	1,161	0.3
New York	58,598	17.4	67,476	16.9	70,133	16.9
North Carolina	6,433	1.9	6,883	1.7	7,245	1.7

Table 1. Persons living with AIDS, by area of residence, as of December 2004: comparison of 3 methods *(cont)* 

	Ryan White	CARE				
	Act form	Act formula <sup>a</sup>		rted <sup>b</sup>	Estim	ated <sup>c</sup>
Area of residence	No.	%	No.	%	No.	%
North Dakota	51	0.0	63	0.0	66	0.0
Ohio	5,071	1.5	6,497	1.6	6,722	1.6
Oklahoma	1,628	0.5	1,922	0.5	1,943	0.5
Oregon	1,880	0.6	2,499	0.6	2,541	0.6
Pennsylvania	12,729	3.8	14,620	3.7	15,308	3.7
Puerto Rico	9,890	2.9	10,255	2.6	10,079	2.4
Rhode Island	856	0.3	1,143	0.3	1,165	0.3
South Carolina	5,537	1.6	6,446	1.6	6,554	1.6
South Dakota	99	0.0	111	0.0	112	0.0
Tennessee	5,310	1.6	5,863	1.5	5,753	1.4
Texas	24,098	7.1	29,624	7.4	29,891	7.2
Utah	835	0.2	1,120	0.3	1,121	0.3
Vermont	152	0.0	229	0.1	233	0.1
Virgin Islands, U.S.	271	0.1	294	0.1	296	0.1
Virginia	6,573	1.9	7,506	1.9	7,916	1.9
Washington	3,632	1.1	5,042	1.3	5,136	1.2
West Virginia	617	0.2	661	0.2	662	0.2
Wisconsin	1,446	0.4	1,929	0.5	1,942	0.5
Wyoming	78	0.0	102	0.0	102	0.0
Total <sup>d</sup>	337,519	100.0	400,189	100.0	414,580	100.0

<sup>&</sup>lt;sup>a</sup> Includes persons reported to CDC from January 1995 through December 2004.

b Includes persons reported to CDC from the beginning of the epidemic through December 2004 whose vital status was "alive" as of December 2004. Excludes persons whose vital status was unknown.

<sup>&</sup>lt;sup>C</sup> These numbers do not represent reported case counts. Rather, these numbers are point estimates of persons living with AIDS, which result from adjustments of reported case counts. The reported case counts are adjusted for reporting delays. Includes cases diagnosed and deaths that occurred from the beginning of the epidemic through December 2004 and that were reported through June 2005.

d Because column totals were calculated independently of values for the subpopulations, the values in each column may not sum to the column total.

Table 2. Persons living with AIDS, by Ryan White CARE Act eligible metropolitan area of residence, as of December 2004: comparison of 3 methods

	Ryan White					
	Act form	ula <sup>a</sup>	Repo	Reported <sup>b</sup>		ated <sup>c</sup>
Eligible metropolitan area	No.	%	No.	%	No.	%
Atlanta, Georgia	7,504	3.2	8,855	3.1	9,557	3.2
Austin–San Marcos, Texas	1,534	0.6	2,008	0.7	2,032	0.7
Baltimore, Maryland	8,136	3.4	8,142	2.9	8,301	2.8
Bergen-Passaic, New Jersey	1,852	8.0	2,155	8.0	2,192	0.7
Boston-Brockton-Nashua, Massachusetts-New Hampshire (NECMA)	5,617	2.4	7,173	2.5	7,412	2.5
Caguas, Puerto Rico	725	0.3	721	0.3	691	0.2
Chicago, Illinois	10,324	4.4	11,807	4.2	13,141	4.4
Cleveland-Lorain-Elyria, Ohio	1,482	0.6	2,000	0.7	2,046	0.7
Dallas, Texas	5,282	2.2	7,062	2.5	7,114	2.4
Denver, Colorado	1,853	0.8	2,711	1.0	2,803	0.9
Detroit, Michigan	3,622	1.5	3,721	1.3	3,870	1.3
Dutchess County, New York	553	0.2	655	0.2	705	0.2
Fort Lauderdale, Florida	5,991	2.5	6,917	2.4	7,055	2.4
Fort Worth–Arlington, Texas	1,382	0.6	1,854	0.7	1,871	0.6
Hartford, Connecticut (NECMA)	1,911	0.8	2,295	0.8	2,233	0.8
Houston, Texas	8,157	3.4	9,546	3.4	9,608	3.3
Jacksonville, Florida	2,148	0.9	2,663	0.9	2,726	0.9
Jersey City, New Jersey	2,181	0.9	2,469	0.9	2,537	0.9
Kansas City, Missouri–Kansas	1,228	0.5	1,981	0.7	2,009	0.7
Las Vegas, Nevada–Arizona	1,915	0.8	2,248	8.0	2,257	8.0
Los Angeles-Long Beach, California	15,131	6.4	19,296	6.8	20,665	7.0
Miami, Florida	9,823	4.2	12,038	4.2	12,276	4.2
Middlesex–Somerset–Hunterdon, New Jersey	1,117	0.5	1,366	0.5	1,409	0.5
Minneapolis-St Paul, Minnesota-Wisconsin	1,266	0.5	1,788	0.6	1,829	0.6
Nassau-Suffolk, New York	2,623	1.1	3,062	1.1	3,180	1.1
New Haven–Bridgeport–Danbury–Waterbury, Connecticut (NECMA)	3,000	1.3	3,782	1.3	3,685	1.2
New Orleans, Louisiana	3,164	1.3	3,661	1.3	3,665	1.2
New York, New York	48,155	20.4	55,636	19.6	57,664	19.5
Newark, New Jersey	6,066	2.6	6,500	2.3	6,725	2.3
Norfolk–Virginia Beach–Newport News, Virginia	1,996	0.8	2,081	0.7	2,246	0.8
Oakland, California	2,615	1.1	3,532	1.2	3,666	1.2
Orange County, California	2,036	0.9	3,058	1.1	3,140	1.1
Orlando, Florida	3,450	1.5	3,791	1.3	3,921	1.3
Philadelphia, Pennsylvania–New Jersey	9,649	4.1	11,030	3.9	11,557	3.9

Table 2. Persons living with AIDS, by Ryan White CARE Act eligible metropolitan area of residence, as of December 2004: comparison of 3 methods (cont)

	Ryan White	CARE				
	Act form		Repo	Reported <sup>b</sup>		ated <sup>c</sup>
Eligible metropolitan area	No.	%	No.	%	No.	%
Phoenix-Mesa, Arizona	2,910	1.2	2,945	1.0	2,910	1.0
Ponce, Puerto Rico	1,032	0.4	1,271	0.4	1,250	0.4
Portland-Vancouver, Oregon-Washington	1,447	0.6	1,987	0.7	2,013	0.7
Riverside-San Bernardino, California	2,871	1.2	3,946	1.4	4,121	1.4
Sacramento, California	1,066	0.5	1,384	0.5	1,455	0.5
St Louis, Missouri-Illinois	1,876	0.8	2,619	0.9	2,675	0.9
San Antonio, Texas	1,584	0.7	2,131	0.8	2,164	0.7
San Diego, California	4,007	1.7	5,463	1.9	5,658	1.9
San Francisco, California	6,265	2.6	7,873	2.8	10,065	3.4
San Jose, California	992	0.4	1,521	0.5	1,544	0.5
San Juan–Bayamon, Puerto Rico	6,149	2.6	6,297	2.2	6,198	2.1
Santa Rosa, California	445	0.2	734	0.3	747	0.3
Seattle-Bellevue-Everett, Washington	2,408	1.0	3,459	1.2	3,526	1.2
Tampa–St Petersburg–Clearwater, Florida	3,947	1.7	4,571	1.6	4,708	1.6
Vineland–Millville–Bridgeton, New Jersey	384	0.2	413	0.1	418	0.1
Washington, DC-Maryland-Virginia-West Virginia	11,890	5.0	15,213	5.4	15,756	5.3
West Palm Beach–Boca Raton, Florida	3,757	1.6	4,310	1.5	4,387	1.5
Total <sup>d</sup>	236,516	100.0	283,741	100.0	295,381	100.0

Note. NECMA indicates New England County Metropolitan Area.

<sup>&</sup>lt;sup>a</sup> Includes persons reported to CDC from January 1995 through December 2004.

<sup>&</sup>lt;sup>b</sup> Includes persons reported to CDC from the beginning of the epidemic through December 2004 whose vital status was "alive" as of December 2004. Excludes persons whose vital status was unknown.

<sup>&</sup>lt;sup>C</sup> These numbers do not represent reported case counts. Rather, these numbers are point estimates of persons living with AIDS, which result from adjustments of reported case counts. The reported case counts are adjusted for reporting delays. Includes cases diagnosed and deaths that occurred from the beginning of the epidemic through December 2004 and that were reported through June 2005.

<sup>&</sup>lt;sup>d</sup> Because column totals were calculated independently of values for the subpopulations, the values in each column may not sum to the column total.

Table 3. Persons living with HIV/AIDS, by area of residence, as of December 2004—areas with confidential name-based HIV infection reporting

	Report	t <b>ed</b> <sup>a</sup>	Estima	ted <sup>b</sup>	
Area of residence	No.	%	No.	%	
Alabama (January 1998)	8,753	1.8	8,598	1.9	
Alaska (February 1999)	441	0.1	541	0.1	
Arizona (January 1987)	8,916	1.8	9,455	2.1	
Arkansas (July 1989)	4,113	8.0	4,196	0.9	
Colorado (November 1985)	9,270	1.9	9,406	2.0	
Connecticut (July 1992) <sup>c</sup>	6,789	1.4	_	_	
Florida (July 1997) <sup>d</sup>	76,501	15.4	78,417	17.0	
Georgia (December 2003)	15,744	3.2	_	_	
Idaho (June 1986)	567	0.1	605	0.1	
Indiana (July 1988)	7,209	1.5	7,404	1.6	
lowa (July 1998)	1,181	0.2	1,254	0.3	
Kansas (July 1999)	2,126	0.4	2,254	0.5	
Kentucky (October 2004)	2,832	0.6	_	_	
Louisiana (February 1993)	14,774	3.0	14,965	3.2	
Michigan (April 1992)	10,917	2.2	11,513	2.5	
Minnesota (October 1985)	4,883	1.0	5,104	1.1	
Mississippi (August 1988)	7,181	1.4	7,140	1.5	
Missouri (October 1987)	9,523	1.9	9,660	2.1	
Nebraska (September 1995)	1,160	0.2	1,244	0.3	
Nevada (February 1992)	5,476	1.1	5,756	1.2	
New Jersey (January 1992)	31,608	6.4	32,796	7.1	
New Mexico (January 1998)	1,856	0.4	2,024	0.4	
New York (June 2000)	105,229	21.2	108,354	23.5	
North Carolina (February 1990)	17,611	3.6	17,996	3.9	
North Dakota (January 1988)	139	0.0	146	0.0	
Ohio (June 1990)	13,782	2.8	14,564	3.2	
Oklahoma (June 1988)	4,062	8.0	4,209	0.9	
Pennsylvania (October 2002) <sup>e</sup>	10,517	2.1	_	_	
Puerto Rico (January 2003)	13,115	2.6	_	_	
South Carolina (February 1986)	12,881	2.6	13,068	2.8	
South Dakota (January 1988)	291	0.1	283	0.1	
Tennessee (January 1992)	12,280	2.5	12,239	2.7	
Texas (January 1999) <sup>f</sup>	50,154	10.1	52,781	11.5	
Utah (April 1989)	1,829	0.4	1,876	0.4	
Virgin Islands, U.S. (December 1998)	524	0.1	531	0.1	
Virginia (July 1989)	16,068	3.2	16,868	3.7	

Table 3. Persons living with HIV/AIDS, by area of residence, as of December 2004—areas with confidential name-based HIV infection reporting *(cont)* 

	Repor	Reported <sup>a</sup>		Reported <sup>a</sup> Estimated <sup>b</sup>		Estimated <sup>b</sup>	
Area of residence	No.	%	No.	%			
West Virginia (January 1989)	1,249	0.3	1,289	0.3			
Wisconsin (November 1985)	4,106	8.0	4,158	0.9			
Wyoming (June 1989)	163	0.0	180	0.0			
Total <sup>g</sup>	495,820	100.0	460,875	100.0			

*Note*. Data include persons with a diagnosis of HIV infection regardless of AIDS status at diagnosis (i.e., includes persons with a diagnosis of HIV infection only, a diagnosis of HIV infection and a later diagnosis of AIDS, or concurrent diagnoses of HIV infection and AIDS).

<sup>&</sup>lt;sup>a</sup> Includes persons reported to CDC through June 2005 whose vital status was "alive" as of December 2004. Excludes persons whose vital status was unknown. Data presented for areas with confidential name-based HIV infection reporting as of December 2004.

b These numbers do not represent reported case counts. Rather, these numbers are point estimates of persons living with HIV/AIDS, which result from adjustments of reported case counts. The reported case counts are adjusted for reporting delays. Includes cases diagnosed and deaths that occurred through December 2004 and that were reported through June 2005.

<sup>&</sup>lt;sup>c</sup> Connecticut has confidential name-based HIV infection reporting for pediatric cases only.

<sup>&</sup>lt;sup>d</sup> Florida (since July 1997) has had confidential name-based HIV infection reporting for new diagnoses only.

e Pennsylvania (October 2002) implemented confidential name-based infection reporting in only the areas outside the city of Philadelphia.

f Texas (February 1994 through December 1998) reported pediatric HIV infection cases only.

<sup>&</sup>lt;sup>9</sup> Because column totals were calculated independently of values for the subpopulations, the values in each column may not sum to the column total.

Table 4. Persons living with HIV/AIDS, by Ryan White CARE Act eligible metropolitan area of residence, as of December 2004—areas with confidential name-based HIV infection reporting

	Repor	ted <sup>a</sup>	Estimated <sup>b</sup>		
Eligible metropolitan area	No.	%	No.	%	
Atlanta, Georgia	8,880	3.0	_	_	
Austin–San Marcos, Texas	3,243	1.1	3,425	1.2	
Bergen-Passaic, New Jersey	3,866	1.3	3,996	1.4	
Caguas, Puerto Rico	729	0.2	_	_	
Cleveland–Lorain–Elyria, Ohio	3,796	1.3	3,951	1.4	
Dallas, Texas	12,051	4.1	12,755	4.5	
Denver, Colorado	7,174	2.4	7,274	2.6	
Detroit, Michigan	7,176	2.4	7,552	2.7	
Dutchess County, New York	1,019	0.3	1,037	0.4	
Fort Lauderdale, Florida	12,600	4.3	12,993	4.6	
Fort Worth–Arlington, Texas	3,234	1.1	3,409	1.2	
Hartford, Connecticut (NECMA)	2,293	0.8	_	_	
Houston, Texas	16,312	5.5	16,940	6.0	
Jacksonville, Florida	4,444	1.5	4,541	1.6	
Jersey City, New Jersey	4,364	1.5	4,578	1.6	
Kansas City, Missouri–Kansas	3,711	1.3	3,780	1.3	
Las Vegas, Nevada–Arizona	4,661	1.6	4,803	1.7	
Miami, Florida	21,692	7.3	22,017	7.8	
Middlesex–Somerset–Hunterdon, New Jersey	2,443	0.8	2,533	0.9	
Minneapolis-St Paul, Minnesota-Wisconsin	4,273	1.4	4,421	1.6	
Nassau–Suffolk, New York	4,462	1.5	4,613	1.6	
New Haven–Bridgeport–Danbury–Waterbury, Connecticut (NECMA)	3,784	1.3	_	_	
New Orleans, Louisiana	7,145	2.4	7,194	2.6	
New York, New York	85,396	28.9	87,952	31.2	
Newark, New Jersey	12,421	4.2	12,928	4.6	
Norfolk–Virginia Beach–Newport News, Virginia	5,011	1.7	5,303	1.9	
Orlando, Florida	6,910	2.3	7,160	2.5	
Phoenix-Mesa, Arizona	6,555	2.2	6,979	2.5	
Ponce, Puerto Rico	1,285	0.4	_	_	
St Louis, Missouri–Illinois <sup>c</sup>	4,537	1.5	4,633	1.6	
San Antonio, Texas	3,377	1.1	3,585	1.3	
San Juan–Bayamon, Puerto Rico	6,349	2.1	_	_	
Tampa–St Petersburg–Clearwater, Florida	7,810	2.6	8,090	2.9	
Vineland–Millville–Bridgeton, New Jersey	775	0.3	823	0.3	

Table 4. Persons living with HIV/AIDS, by Ryan White CARE Act eligible metropolitan area of residence, as of December 2004—areas with confidential name-based HIV infection reporting (cont)

	Reported <sup>a</sup>		<b>Estimated</b> <sup>b</sup>		
Eligible metropolitan area	No.	%	No.	%	
Washington, DC–Maryland–Virginia–West Virginia <sup>c</sup>	5,086	1.7	5,340	1.9	
West Palm Beach–Boca Raton, Florida	6,843	2.3	6,979	2.5	

Total <sup>d</sup>	295,707	100.0	281,585	100.0	

Note. Data include persons with a diagnosis of HIV infection regardless of AIDS status at diagnosis (i.e., includes persons with a diagnosis of HIV infection only, a diagnosis of HIV infection and a later AIDS diagnosis, or concurrent diagnoses of HIV infection and AIDS). NECMA indicates New England County Metropolitan Area.

<sup>&</sup>lt;sup>a</sup> Includes persons reported to CDC through June 2005 whose vital status was "alive" as of December 2004. Excludes persons whose vital status was unknown. Data presented for eligible metropolitan areas with confidential name-based HIV infection reporting as of December 2004.

<sup>&</sup>lt;sup>b</sup> These numbers do not represent reported case counts. Rather, these numbers are point estimates of persons living with HIV/AIDS, which result from adjustments of reported case counts. The reported case counts are adjusted for reporting delays. Includes cases diagnosed and deaths that occurred through December 2004 and that were reported through June 2005.

<sup>&</sup>lt;sup>C</sup> Data do not include cases from jurisdictions that had not implemented confidential name-based HIV infection as of December 2004 (Illinois; Washington, DC; and Maryland).

d Because column totals were calculated independently of values for the subpopulations, the values in each column may not sum to the column total.

## **Technical Notes**

The following are details of the 3 methods for calculating the number of persons living with HIV/AIDS or AIDS.

## Method 1—Ryan White CARE Act Formula

The legislative authority for the method for calculating the number of persons living with AIDS under Title I is Section 2603(a)(3)(c) of the Ryan White CARE Act. The legislative authority for the Title II estimation of the number of persons living with AIDS is Section 2618(2)(d). The same set of survival weights is used for Title I and Title II. The survival weights are updated by CDC according to methods specified in the Ryan White CARE Act. The weights calculated for this report are

Year 1—.41

Year 2—.54

Year 3—.62

Year 4—.66

Year 5—.72

Year 6—.76

Year 7—.79

Year 8—.84

Year 9—.88

Year 10—.92

The estimates from the Ryan White CARE Act formula for this report are based on AIDS cases reported to CDC through December 2004. AIDS cases reported during the preceding 120 months are aggregated into ten 12-month periods, and 10 "survival" weights are applied to the 10 AIDS case counts. For example, the first year count is multiplied by .41, the second year is multiplied by .54, and so on for all 10 counts. The summary count (total of these 10 weighted counts), which results from this computational formula, is the estimated number of persons living with AIDS in the state or EMA as of December 2004.

# Method 2—Reported Number of Persons Living with HIV/AIDS or AIDS

For each state or EMA, we calculated the number of persons whose vital status was "alive" in the HIV/AIDS reporting system as of December 31, 2004. Persons whose state or EMA of residence was unknown were excluded. This total count is the estimated number of people living with AIDS in the state

or EMA as of December 2004. This method was also used to calculate the number of persons reported as living with HIV/AIDS (Tables 3 and 4).

## Method 3—Estimated Number of Persons Living with HIV/AIDS or AIDS

Estimated AIDS data are adjusted for reporting delays by a maximum likelihood statistical procedure: differences in reporting delays due to geographic area of residence, race/ethnicity, age, sex, vital status, and transmission categories are taken into account, but it is assumed that delays in reporting information in these categories have not changed over time. Two maximum likelihood procedures [1, 2] are performed: (1) for delays in reporting AIDS cases and (2) for delays in reporting AIDS deaths. On the basis of the results of these procedures, each AIDS case is assigned an AIDS incidence adjustment weight and an AIDS death adjustment weight. The point estimate of the number of persons living with AIDS is derived by subtracting the estimated cumulative number of deaths of persons with AIDS from the estimated cumulative number of persons with a diagnosis of AIDS. The estimates from this method are based on AIDS cases diagnosed and deaths that occurred through December 2004 and that were reported to CDC through June 30, 2005. The estimated numbers of AIDS cases and AIDS deaths are adjusted for reporting delays, but not for incomplete reporting.

This method was also used to calculate the estimated numbers of persons living with HIV/AIDS (Tables 3 and 4).

#### References

- 1. Green TA. Using surveillance data to monitor trends in the AIDS epidemic. *Stat Med* 1998:17:143–154.
- 2. Castillo-Chavez C, ed. *Mathematical and Statistical Approaches to AIDS Epidemiology*. New York: Springer-Verlag; 1989:58–88. Lecture Notes in Biomathematics 83.