



# Technical Snapshot: Identification of HIV-Seropositive Individuals Through Claims Data

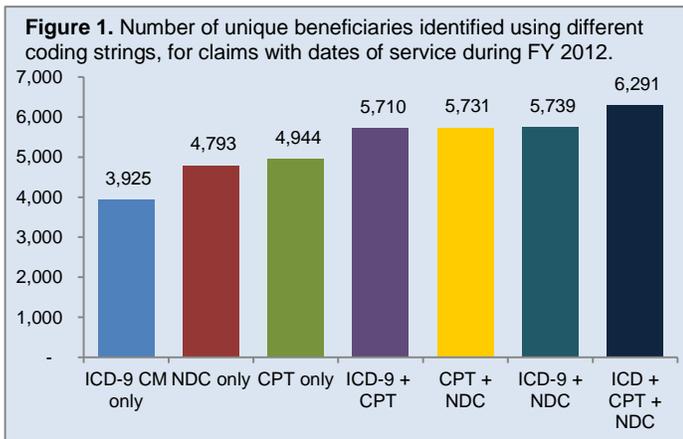
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This technical snapshot describes ways in which Medicaid claims data can be used to determine HIV serostatus, which can assist Medicaid staff in analysis of programs and policies designed to improve access and quality of care for HIV+ beneficiaries in the District’s Medicaid program. Key takeaways include:

- HIV serostatus can be indicated by diagnosis data, procedural data, or drug utilization
- Using multiple approaches provides more complete and more accurate information about Medicaid beneficiaries
- The District’s Medicaid and Alliance programs experience HIV/AIDS prevalence comparable to the District as a whole, just under 3 percent

The District, like many U.S. cities, experiences a high prevalence of HIV/AIDS. As such, the District’s Medicaid program experiences a similarly high prevalence among enrolled beneficiaries. To evaluate programs serving individuals living with HIV/AIDS and to develop data-driven policies designed to improve these programs, the Medicaid agency often analyzes claims data, and uses these data to examine the services accessed by individuals with HIV/AIDS. However, the Medicaid

program does not collect any surveillance data, and so relies on a number of other data points within claims data to learn more about individuals with HIV/AIDS.



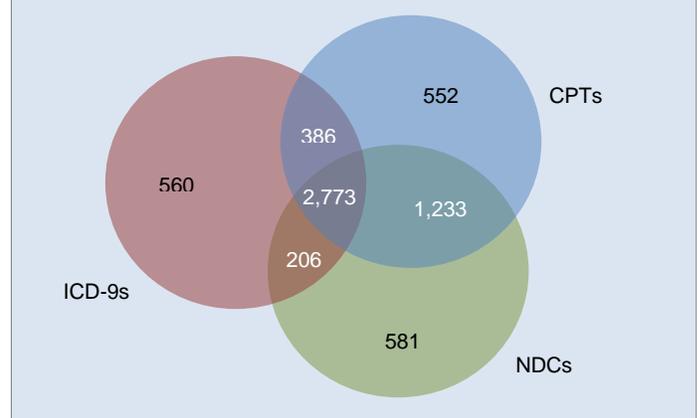
HIV serostatus may be determined through HIV/AIDS diagnosis codes (ICD-9-CM codes) included on adjudicated claims, or through services provided that are specifically provided only to individuals who are seropositive - that is, services unique to the treatment of HIV or AIDS and associated symptoms or conditions. Working in collaboration with the District’s Department of Health HIV/AIDS, Hepatitis, STDs, and Tuberculosis Administration (HAHSTA), staff in the Department of Health Care Finance employed multiple code “strings” in extracting claims data from MMIS to more comprehensively identify individuals who are HIV

seropositive. Claims with dates of service within District fiscal year 2012 (FY 2012) were extracted using filters for ICD-9-CM codes, national drug codes (NDCs), and procedure codes (CPT codes) for laboratory and other procedures specific to HIV/AIDS care.

These combined strings – or a code “net” – identified a combined total of 6,291 individuals with adjudicated and paid claims for dates of service during District fiscal year 2012 across all DHCF programs. However, single code strings showed wide variability in the number of individuals identified (ranging from only 3,925 individuals for diagnosis codes, up to 4,944 for CPTs), and no single code string – nor any pairwise combination of two strings – identified the full complement of individuals identified by using all three code sets. No other triangulation or validation techniques (e.g., eliminating individuals identified through a single claim) were employed for this analysis. Using this raw count in conjunction with average total DHCF enrollment (Medicaid and Alliance) during FY12 yields an overall HIV prevalence estimate of approximately 2.7%, a rate comparable to other estimates for the District.

This analysis shows important implications for the ways in which the District identifies and analyzes Medicaid populations by health status and health conditions. Prior analyses employing only ICD-9-CM codes to identify seropositive individuals could potentially fail to identify almost 40 percent of the individuals identified through a more comprehensive, multi-code approach. Additional analyses may illuminate the effects of other extraction options, such as inclusion of denied claims, or validation techniques, such as eliminating individuals with only a single outpatient claim indicating their serostatus.

Figure 2. Overlap between beneficiaries identified in various coding approaches, for claims with dates of services during FY 2012.



**Data Sources:** Data extracted from MMIS May 2013. Code strings included two ICD-9-CM codes, 231 NDCs, and 12 CPT codes. Data for all services, including those initially paid and adjudicated by Medicaid managed care organizations, were extracted by date of service; all denied or zero-dollar claims were excluded for this analysis. Individuals ineligible for DHCF-financed programs (600-series program codes or 070 program code) were excluded from this analysis. For code strings or for more information about this snapshot, please contact the DC Department of Health Care Finance at 202-442-5988.