## RESEARCH LETTER

### Association Between Rates of HIV Testing and Elimination of Written Consents in San Francisco

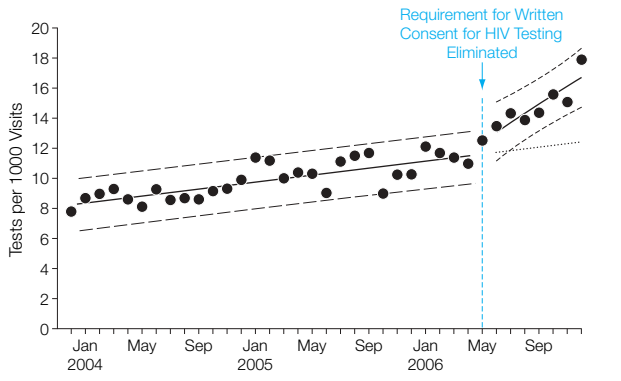
**To the Editor:** Twenty years after the licensing of the human immunodeficiency virus (HIV) antibody test, an estimated 252 000 to 312 000 US residents are unaware that they are infected with HIV.[1] To increase the number of infected persons who are aware of their status and can therefore benefit from treatment, the Centers for Disease Control and Prevention (CDC) has recommended making HIV testing a routine part of medical care.[2] The new CDC testing guidelines specifically advise against using a separate written consent form for HIV tests. Whether elimination of the requirement for written consent will increase testing is not known.

In May 2006, the San Francisco Department of Public Health Medical Care System, which includes an acute care hospital, a long-term care facility, and more than 15 primary health care centers, eliminated the requirement for written consent. We assessed the association between this policy change and the rate of HIV testing.

**Methods**. Before May 2006, clinicians were required to complete a separate HIV test laboratory requisition form and obtain written documentation of patient informed consent to order an HIV test. Incomplete forms were rejected by the laboratory. Beginning in mid-May 2006, patient consent forms were removed from medical settings and HIV antibody testing was added to the routine laboratory requisition form. Clinicians were required to document in the medical chart that patient consent was obtained (consistent with California state law), but a patient signature was not required. Department heads notified medical staff by electronic mail of the policy change. No efforts were made to publicize this policy change in the community. All data were obtained from the Health Records Electronic Data Set, University of California San Francisco Clinical and Translational Science Institute Clinical Research Center at the San Francisco General Hospital. Only data from patients aged 18 years or older were included.

An interrupted time-series analysis of the rate of HIV testing per 1000 patient-visits was used to determine the effect of the policy change on the frequency of HIV testing, while accounting for prior trends.[3] The month of policy change (May 2006) was excluded from the analysis. The expected vs observed slopes of the trend lines before (December 2003-April 2006) and after (June 2006-December 2006) the policy change were compared. Because error terms were often correlated, adjustment for first-order autocorrelation was made through autoregressive integrated moving average models. The monthly mean number of positive tests and rejected tests were compared before and after the change in policy by using *t* test and Mann-Whitney test, respectively. Two-sided $P<.05$ was considered statistically significant and all analyses were performed in Stata version 8.2 (StataCorp LP, College Station, Tex). The University of California San Francisco Committee on Human Research approved this study and waived patient consent requirements.

**Figure.** Mean Rate of HIV Tests per 1000 Patient-Visits in Persons Aged 18 Years or Older (December 2003-December 2006), San Francisco Department of Public Health Medical Care System




Requirement for written consent for human immunodeficiency virus (HIV) testing was eliminated in May 2006. The data points represent the number of HIV tests per 1000 patient-visits per month, solid lines represent the testing trend before and after the change in policy, and the dotted line represents the expected trend in HIV testing if the policy had not changed. Dashed lines indicate 95% confidence intervals for the HIV testing trend before and after the policy change. $P<.001$ for observed vs expected trend.

**Results**. The monthly rate of HIV testing increased steadily after the change in policy (from 13.5 HIV tests per 1000 patient-visits in June 2006 to 17.9 HIV tests per 1000 patient-visits in December 2006) (FIGURE). At the end of the study period, the mean monthly rate of HIV tests per 1000 patient-visits was 4.5 more than expected (95% confidence interval [CI], 3.2-5.8; $P<.001$). The mean number of positive tests per month increased from 20.6 (95% CI, 17.3-23.8) before the change in policy to 30.6 (95% CI, 25.7-35.5) after the change in policy ($P=.006$). No tests were rejected because of incomplete documentation after the policy change (median number of rejected tests per month, 16 [interquartile range, 11-22] before vs 0 after; $P<.001$).

**Comment**. These findings are consistent with increases in HIV testing associated with an administrative policy change that simplified consent for HIV testing. Because these data are observational, other events may have contributed to this temporal increase of HIV testing. The XVI International AIDS Conference in mid-August 2006 and the release of the revised CDC recommendations for HIV testing in September 2006 may have heightened clinician and patient awareness and affected clinicians' testing practices. However, the increase in testing appears to have begun before those events and maintained a steady increase thereafter, so that these events are unlikely to explain the increase in HIV testing. Nevertheless, as an ecological study, these results are hypothesis generating, and further studies are required for confirmation.

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**Author Contributions:** Dr Zetola had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.
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**1.** Glynn MK, Rhodes P. Estimated HIV prevalence in the United States at the end of 2003 [abstract T1-B1101]. Presented at: The 2005 National HIV Prevention Conference, Atlanta, Ga; June 14, 2005.
**2.** Branson BM, Handsfield HH, Lampe MA, et al. Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings. *MMWR Recomm Rep*. 2006;55(RR-14):1-17.
**3.** Wagner AK, Soumerai SB, Zhang F, Ross-Degnan D. Segmented regression analysis of interrupted time series studies in medication use research. *J Clin Pharm Ther*. 2002;27:299-309.

## CORRECTION

**Incorrect Data:** In the Original Contribution entitled "Statin Therapy and Risks for Death and Hospitalization in Chronic Heart Failure" published in the November 1, 2006, issue of *JAMA* (2006;296:2105-2111), incorrect data were presented in Table 1 and Table 3. On page 2107, the following **TABLE 1** should appear. On page 2109, in Table 3, the data for "Hemoglobin, median (interquartile range), g/dL" should be "(n=11 805) 13.3 (12.0-14.5)" for the statin therapy group, "(n=11 121) 13.1 (11.7-14.3)" for the no statin therapy group, and "<.001" for the *P* value.

**Table 1.** Baseline Demographic Characteristics of 24 598 Adults With Diagnosed Heart Failure and Eligible to Receive Lipid-Lowering Therapy

| | No. (%) of Participants* | |
|---|---|---|
| | Statin Therapy (n = 12 648) | No Statin Therapy (n = 11 950) |
| Age, mean (SD), y | 69.6 (10.3) | 72.9 (11.4) |
| Age group, y | | |
| 20-49 | 467 (3.7) | 405 (3.4) |
| 50-59 | 1959 (15.5) | 1414 (11.8) |
| 60-69 | 3759 (29.7) | 2492 (20.9) |
| 70-79 | 4513 (35.7) | 4109 (34.4) |
| ≥80 | 1950 (15.4) | 3530 (29.5) |
| Women | 4834 (38.2) | 4874 (40.8) |
| Race/ethnicity | | |
| White | 9013 (71.3) | 8706 (72.9) |
| Black | 1225 (9.7) | 1184 (9.9) |
| Hispanic/Latino | 664 (5.2) | 507 (4.2) |
| Asian American/Pacific Islander | 904 (7.1) | 685 (5.7) |
| Mixed race, other | 676 (5.3) | 619 (5.2) |
| Unknown | 166 (1.3) | 249 (2.1) |
| Low education level† | 1655 (13.1) | 1575 (13.2) |
| Low income level‡ | 1775 (14) | 1755 (14.7) |

*Unless otherwise indicated. *P*<.001 for all comparisons between statin therapy group and no statin therapy group.
†Defined as less than a 12th-grade education.
‡Defined as living in a block where annual household income is less than $35 000 per year.