

Anonymous HIV Testing: The Impact of Availability on Demand in Arizona

ABSTRACT

The purpose of this study was to evaluate the impact of anonymous testing availability on human immunodeficiency virus (HIV) test demand in Arizona. Testing patterns before and after the introduction of anonymous testing were compared. Client knowledge of new test policy and delay in testing until an anonymous option was available were assessed. Test numbers among men who have sex with men showed a statistically significant increase after introduction of an anonymous testing option. Arizona continues to maintain anonymous testing availability. Public health agencies should consider how test policy may influence people's HIV test decisions. (*Am J Public Health*. 1994;84:2008-2010)

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Introduction

Named reporting of persons testing positive for the human immunodeficiency virus (HIV) remains a subject of continuing public policy debate.¹ While all 50 states require named reporting of acquired immunodeficiency syndrome (AIDS) cases as defined by the Centers for Disease Control and Prevention (CDC), only 26 states require named reporting of individuals who are HIV positive.² Opponents of named HIV infection reporting contend that such reporting discourages individuals from seeking HIV testing because of fears of confidentiality breaches and resultant discrimination.³ Proponents contend that named HIV infection reporting provides valuable information for tracking the epidemic, targeting health education programs, allocating health care resources, and delivering clinical and risk reduction services directly to persons with HIV infection.⁴⁻⁶

Little has been reported in the literature about the relative impact of confidential and anonymous testing policies on HIV prevention and surveillance efforts. In 1988, the Oregon State Health Division conducted a policy trial and found that men having sex with men were drawn selectively to anonymous testing.⁷ Data collection was discontinued after less than 4 months, however, because testing demand increased after the release of new CDC recommendations on testing of multiply transfused individuals. The purpose of the present study was to evaluate the impact of anonymous testing availability in Arizona on test demand over an extended period of time.

Methods

Publicly funded anonymous HIV counseling and testing services became available in Arizona in June 1985. In January 1987, named reporting of persons diagnosed with HIV infection became mandatory for county health departments, hospitals, clinics, physicians, blood banks, and laboratories. In June 1988, the Arizona Department of Health Services

received a formal request to amend administrative rules to allow anonymous testing through county health departments. In March 1989, the department implemented an 18-month emergency rule to allow anonymous testing at county health departments, and information was gathered from all persons seeking HIV testing at seven such health departments: Maricopa, Pima, Yuma, Yavapai, Pinal, Coconino, and Cochise. These counties constitute 90% of the Arizona population.

In addition to client demographics, HIV counselors gathered data on exposure category, reason for testing, previous testing history, and anonymous/confidential test choice. Clients were asked whether they were aware of the anonymous testing change and whether they had delayed testing until an anonymous option was available. For clients choosing to receive HIV testing, test results were linked to these data by client identification number. No personal identifiers were introduced into testing as a result of questionnaire completion. The Arizona State Health Laboratory performed HIV antibody testing using enzyme immunoassay and Western blot test kits approved by the Food and Drug Administration.

Prior to October 1988, county test sites were in the process of hiring HIV staff, developing test protocols, and advertising testing availability; as a result, only test numbers after October 1988 reflect public test demand accurately. Only monthly aggregate data were available from test sites prior to implementation of the policy change; this information did not provide sufficient data points to conduct parametric statistical analyses. Therefore, a nonparametric statistical analysis (Mann-

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Whitney-Wilcoxon test) was used to compare the preanonymous testing period (October 1988 to March 1989) with the four sequential 5-month periods after anonymous testing became available.

To conduct the Mann-Whitney-Wilcoxon analysis, test demand by month was ranked ordinally (1st through 10th) for the 5-month periods prior to and after the policy change. Subsequent 5-month periods were compared with the original 5-month period prior to the policy change and stratified by risk exposure categories including men who have sex with men, injection drug users, and "other." Other exposure risks included heterosexual contact, sexual contact with persons at risk of HIV infection, and receipt of blood products. Data were analyzed by client awareness of policy change, client delay of testing until an anonymous option became available, and HIV antibody test result.

Results

From October 1988 through February 1989, the 5 months before anonymous testing was available, 2761 tests were performed at the seven county health departments. In four 5-month periods immediately following the policy change, 3434, 3264, 3034, and 3090 tests were performed, respectively (Table 1). This represented a mean overall increase of 16.1% in HIV test demand. Only the first 5-month period of testing immediately following the policy change demonstrated a statistically significant increase in overall test demand when compared with the 5 months preceding the policy change ($P < .05$). When stratified by exposure, a significant increase in test demand was observed among men having sex with men over the entire 20-month period of anonymous testing ($P < .05$). Among injection drug users, an increase in test demand ($P < .05$) was observed during the first 5-month period after the policy change but not thereafter. Other statistically significant increases in test demand by exposure category were not observed. Ninety-three percent (11 924) of all persons tested throughout the 20-month study period selected anonymous testing. This testing choice was consistent over time and across exposure categories.

Men who have sex with men were more likely to be aware of the policy change. Of 3179 of these men tested in the 20 months following the policy change, 80.4% (2556) were aware of the policy change, a significantly higher percentage

TABLE 1—HIV Test Demand before and after Policy Change in Arizona

Exposure Category	No. Tested				
	Period 1 ^a (October 1988– February 1989)	Period 2 (March 1989– July 1989)	Period 3 (August 1989– December 1989)	Period 4 (January 1990– May 1990)	Period 5 (June 1990– October 1990)
Men who have sex with men	536	765*	835*	763*	816*
Injection drug users	414	523*	354	345	306
Other	1811	2146	2075	1926	1968
Total	2761	3434*	3264	3034	3090

^aPrior to March 1989 anonymous testing availability.

* $P < .05$ (comparing number tested by exposure category with Period 1; Mann-Whitney-Wilcoxon test).

than that of injection drug users (53.5%; 815 of 1528) or all others seeking testing (62.8%; 5100 of 8115) ($P < .05$). Also, the proportion of such men who delayed testing until an anonymous test option became available (22.3%) (Table 2) was significantly higher than that among injection drug users (10%; 188 of 1873) or others seeking testing (9.8%; 814 of 8300) ($P < .05$).

The HIV infection rates among exposure groups were as follows: injection drug users, 5.3% ($n = 414$) before the policy change and 3.3% ($n = 1648$) after; men who have sex with men, 18.6% ($n = 536$) before and 15.3% ($n = 3179$) after; and others, 1.2% ($n = 1811$) before and 1.3% ($n = 8767$) after. The rate of HIV infection among men who have sex with men who reported deferred testing was 18.4% (131 of 711); the rate was 14.5% (353 of 2426) among such men claiming not to have had deferred testing ($P = .02$). Similar comparisons of HIV infection rate by deferred testing among injection drug users and others tested did not show any significant differences.

Discussion

Overall demand for test services increased significantly in the first 5 months following implementation of an anonymous testing option, but not in any 5-month period thereafter; this may reflect additional HIV test demand secondary to the reintroduction of an anonymous test option (which had not been available in Arizona since January 1987) and associated media publicity. Overall increased test demand was not sustained, which may suggest that persons attracted to testing by either an anonymous option

or media attention availed themselves of testing soon after the policy change. This was supported by the decreasing percentage of persons over time who reported a delay because they were awaiting anonymous testing.

Among men who have sex with men, availability of an anonymous test option fostered a selective increase in test demand that was sustained during the entire 20-month study period. The increase appeared to have been attributable largely to the policy change: 22% of such men tested claimed to have delayed testing until an anonymous option was available. If this group is excluded from the analysis, no significant increases in testing were observed among men who have sex with men, suggesting a direct effect of testing policy change on increased test demand among these men. Secular trends may confound test demand; nationally, overall publicly funded HIV testing increased during the study period.^{8,9} In addition, specific events may have influenced test demand (e.g., the March 1990 Food and Drug Administration approval of zidovudine for persons with HIV and CD₄⁺ cell counts below 500 mm³). This analysis cannot exclude the impact of changes during the study period that may have influenced test demand. Simultaneous analysis of regional testing patterns would be useful in future studies to evaluate possible secular effects on test demand.

Several limitations of the study data are notable. Because only 5 months of test demand data were available prior to the renewed availability of anonymous testing, trend analysis was limited to a nonparametric method. In addition, persons desiring anonymous testing prior to the policy change could have already

TABLE 2—Percentage of Clients Who Delayed HIV Testing until Availability of Anonymous Testing, Arizona

Exposure Category	Period 2 (March 1989–July 1989)		Period 3 (August 1989–December 1989)		Period 4 (January 1990–May 1990)		Period 5 (June 1990–October 1990)	
	No. Tested	Delayed, % ^a	No. Tested	Delayed, % ^a	No. Tested	Delayed, % ^a	No. Tested	Delayed, % ^a
Men who have sex with men	765	27.2	835	23.6	763	21.2	816	17.0
Injection drug users	523	15.4	354	14.1	345	9.0	306	8.5
Other	2146	11.8	2075	9.0	1926	10.2	1968	9.1
Total	3434	15.8	3264	11.7	3034	13.0	3090	11.1

^aPercentage delayed as a proportion of exposure category.

received testing by using a pseudonym at an Arizona test site or by traveling to a state offering anonymous testing (e.g., California or New Mexico). This could have decreased the impact of the policy change on test demand. On the other hand, a person could have taken an HIV test more than once during the study period, artificially inflating the impact of the policy change. Testing history data collected were not detailed enough to confidently exclude such persons. In future analyses, detailed information on testing history will help investigators better attribute test trends.

These data suggest that public health professionals should be aware that an exclusively confidential testing policy may discourage persons at elevated risk of HIV infection from seeking testing, and availability of anonymous testing may overcome this deterrent. Jurisdictions that retain exclusively confidential testing should strive to increase the acceptance of named HIV reporting by the HIV-affected community. This can be done by emphasizing that named reporting facilitates service provision to newly diagnosed persons and by stressing the usefulness of an unduplicated HIV case count, especially as it relates to acquiring additional resources for HIV care. In doing so, public health agencies need to stress existing statutory, regulatory, and policy protection of HIV-related information.

Jurisdictions with an exclusively anonymous testing policy should be aware that universal anonymous testing does not provide the ability to contact persons not

returning for posttest counseling and test results. Nor does anonymous testing ensure that individuals testing HIV positive in the private sector receive comprehensive and high-quality risk reduction, partner notification, and referral services.

Among men who have sex with men, the significantly higher rate of HIV infection observed for those who awaited availability of an anonymous test option is of particular concern. The previous named reporting policy and fear of discrimination could well have discouraged such men at elevated risk for HIV infection from seeking testing. The sustained increase in HIV test use among these men following the implementation of an anonymous option led the Arizona Department of Health Services to establish a permanent administrative rule authorizing the availability of anonymous testing through county health departments. The issues surrounding named and anonymous HIV testing are complex and likely to remain controversial. Public health jurisdictions must be willing to continuously assess the effectiveness of testing policy. This is particularly important as other reporting dilemmas continue to emerge (e.g., CD₄⁺ cell count reporting¹⁰). In this regard, community trials can provide information useful in developing data-driven policies that represent the best public health practices. □

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