A State Program for Postpartum HIV Counseling and Testing

SUSAN HOLMAN, RN, MS
MARTIN D. SORIN, PhD
JONATHAN CROSSETTE, MPH
MALCOLM L. LaCHANCE-McCULLOUGH, MS, MA

The authors are with the New York State Department of Health's AIDS Institute. Ms. Holman is a Consultant to the Policy Unit and was Project Director for the Department's Obstetrical HIV Counseling/Testing/Care Initiative. Dr. Sorin is the Director of Prevention Surveys and Evaluation in the Division of HIV Prevention. Mr. Crossette is a Health Program Administrator with the Obstetrical Initiative. Mr. McCullough is an Evaluation Specialist in Prevention Surveys and Evaluation.

Requests for tearsheets and copies of forms to Susan Holman, RN, MS; State Department of Health, AIDS Institute, 5 Penn Plaza First Floor, New York, NY 10001.

Synopsis

The New York State Department of Health began its Obstetrical HIV Counseling/Testing/Care Initiative in 1989. The objective of the initiative was to expand the availability of and access to human immunodeficiency virus (HIV) infection counseling and voluntary testing in the postpartum setting. Programs have been initiated in 24 hospitals statewide. The initiative emphasizes cooperative arrangements within participating hospitals for referring patients to medical and social services. Participation by hospitals in the initiative is voluntary. Initial grants to hospitals for the initiative ranged from $50,000 to $80,000. The main obstacle in implementing the initiative has been a lack of such resources as administrative or clinical support, phlebotomy services, and office or clinical space.

During the period from August 1, 1990, through March 31, 1992, 16,436 women at risk for HIV infection were counseled in the postpartum setting at 24 hospitals participating in the initiative. Of them, 6,754 (41.1 percent) consented to HIV testing. Of the 6,754 tested, 3,000 women (44.5 percent) returned to receive test results and posttest counseling. Counseling and testing activities supported through the initiative identified 196 of 1,227 (16 percent) of the HIV-positive women who gave birth at participating hospitals and 196 of 892 (22 percent) seropositive women not previously identified. Combining testing data from the initiative with other data on seropositivity, the authors estimated that 43.3 percent of HIV-positive women delivering infants at participating hospitals were identified by voluntary testing.

Hospital performance in the program varied markedly. Further study is needed to determine how to improve the effectiveness of the effort to identify HIV-positive childbearing women at the less successful hospitals and to enhance the rates of patients returning for posttest counseling and community followup.

MANY WOMEN WHO ARE AT HIGH RISK for human immunodeficiency virus (HIV) infection never have received HIV-related information or been offered counseling and testing.

Statistics show that in March 1992, 29.9 percent of all women and children in the United States reported with acquired immunodeficiency syndrome (AIDS) were residents of New York State *(1, 2)*. In response to the need for increased recognition of and attention to the problem of HIV infection among women and children, the New York State Department of Health initiated coordinated projects directing resources to identifying and treating women and children with the disease.

As a means of addressing that group, the Department of Health's AIDS Institute began the Obstetrical HIV Counseling/Testing/Care Initiative in mid-1989 to expand the availability of and access to HIV counseling and testing for postpartum women. The initiative continues at 24 participating hospitals. The objectives of the initiative are to provide childbearing women with HIV counseling and voluntary testing; to link HIV-positive women with appropriate medical and social services; to facilitate community followup of those women who initially failed to return for test results, counseling, and care; and to monitor the activities of hospital programs through client-specific data collection and analysis.

We discuss the objectives and implementation of the initiative and report preliminary performance data

Profile of 16,436 Mothers Eligible for the Obstetrical HIV Counseling/Testing/Care Initiative, New York State Department of Health, August 3, 1990–March 31, 1992

Age (in years): mean, 27; range, 12–48

Race or ethnicity: black, 52.0 percent, Hispanic, 38.9 percent; white or other, 6.6 percent

Health insurance: Medicaid, 79.3 percent; self-pay or uninsured, 10.1 percent; other insurance or unknown, 10.6 percent

Housing: own accommodation, 51.1 percent; living with friends or relatives, 46.2 percent; shelter or hotel, 1.6 percent; correctional facility, 0.6 percent; other, 0.5 percent

Prenatal care: received some prenatal care, 91 percent; mean number of visits, 7.9; first visit in first trimester, 48.4 percent; first visit in second trimester, 39.1 percent; first visit in third trimester, 2.5 percent; unknown, 10.0 percent

from the participating hospitals. The data are discussed in relation to the success of the initiative in meeting its objectives.

Development Phase

Participating hospitals were selected for high levels of HIV-seroprevalence among newborns or because they were part of the State's system of Designated AIDS Centers. Each hospital received from $50,000 to $80,000 for their first 6 to 12 months of activity, based on their numbers of deliveries and observed seroprevalence rates.

Program evaluation tools were designed for use in collecting patient-specific information to determine how effectively staff members identified and approached patients, to show rates of acceptance for HIV counseling and testing, to determine reasons why patients were not counseled or tested, and to see what services women typically had access to or used. Because of limited program resources, program eligibility criteria selected those women most at risk for HIV infection and those with the greatest need for services.

Criteria. Program guidelines required women to meet one of the following prioritized eligibility criteria:

- known HIV-positive status
- no prenatal care
- illicit drug use during most recent pregnancy
- sexually transmitted disease during most recent pregnancy
- sex partner of a substance abuser or bisexual man
- fewer than five prenatal visits
- patient or clinician requested referral

Low birth weight subsequently was shown to be statistically associated with HIV seropositivity in New York City *(3)*. Because of its relationship to the use of illicit drugs during pregnancy, low birth weight was added to the list and ranked after illicit drug use during pregnancy.

Implementation Phase

Some hospitals began participation before August 1990; 20 of the 24 funded hospitals statewide began their programs between August 1990 and August 1991. The programs of the 19 hospitals in New York City included the mothers of 67 percent of the HIV-positive infants born in the city in 1991. Overall, 62 percent of HIV-infected mothers giving birth in New York State delivered at the 24 participating hospitals. Characteristics of the programs of 23 of the 24 hospitals participating in the initiative are shown in table 1. The twenty-fourth hospital was excluded from the analysis because of its recent start date.

Modified strategies. Several hospitals have modified their strategies and activities to improve services and expand the scope of their coverage. They implemented universal counseling in postpartum and other settings, maximized use of their limited staffs for counseling and community outreach by integrating the activities of separate grant-funded programs, and enrolled paraprofessional staff members who had been hired originally to do community followup in other counseling roles.

Communication. Communication among staff members of the AIDS Institute and participating hospitals was formalized with quarterly meetings. A newsletter was distributed between meetings. After a hospital program was started, periodic site visits were begun within 3 to 4 months to assist with particular issues of the site and to monitor program progress and activities.

Operational Phase

The AIDS Institute focuses on providing program

Table 1. Characteristics of activities of 23 hospitals participating in the Obstetrical HIV Counseling/Testing/Care Initiative of the New York State Department of Health, August 3, 1990–March 31, 1992

Site	Start date	Area	Number of deliveries	Newborn HIV-sero-prevalence rate	Adminis-tration	Special features	Number eligible	Number counseled		Number tested		Number posttest counseled	
								Number	Percent	Number	Percent	Number	Percent
A	08/90	Upstate	4,896	0.29	H	C	349	320	91.7	84	26.3	56	66.7
B	08/90	NYC	9,613	0.98	SH	C,P,T,U	2,630	1,612	61.3	660	40.9	253	38.6
C	08/90	NYC	5,415	2.95	SW,H	C,HV,U,W	3,276	3,243	99.0	1,799	55.5	755	41.9
D	08/90	NYC	4,743	0.44	H	C,P,HV,W	1,481	409	27.6	361	88.3	274	75.9
E	08/90	NYC	6,847	0.73	O	C,P,U	1,376	685	49.8	396	57.8	300	75.8
F	08/90	NYC	8,894	0.91	O,H	C,HV	333	258	77.5	57	22.1	41	71.9
G	10/90	NYC	6,331	0.46	O	...	468	151	32.3	71	47.0	63	88.7
H	09/90	Metro	4,495	0.49	H	P	136	56	41.2	26	46.4	5	20.8
I	01/91	NYC	2,868	3.97	CA,H	W	3,005	560	18.6	225	40.2	54	24.0
J	01/91	NYC	6,063	1.19	O	C,HV	443	416	93.9	130	31.3	49	37.7
K	09/90	Upstate	6,462	0.53	...	HV	1,650	469	28.4	171	36.5	89	52.4
L	03/91	NYC	2,243	2.63	CA,O	U	798	569	71.3	332	58.3	99	29.8
M	03/91	NYC	2,790	1.47	CA,O	U	1,295	1,208	93.3	436	36.1	141	32.4
N	02/91	NYC	4,554	1.38	CA,SH	...	716	687	96.9	229	33.3	97	42.4
O	02/91	NYC	2,685	2.16	CA,SH	T	1,665	1,168	70.2	596	51.0	218	36.8
P	06/91	NYC	1,821	4.34	CA,O	T	583	526	90.2	29	5.5	21	77.8
Q	04/91	NYC	3,558	1.83	CA	T,U	352	176	50.0	64	36.4	1	2.5
R	06/91	NYC	2,151	0.51	O	...	79	63	79.8	26	41.3	16	61.5
S	04/91	Metro	1,544	1.62	H,O	...	692	527	76.2	157	29.8	75	48.1
T	05/91	NYC	3,054	1.41	CA,O	U	1,053	929	88.2	282	30.4	106	37.6
U	09/91	Metro	1,913	0.84	H	P,U	749	479	64.0	231	48.2	151	65.4
V	09/91	NYC	2,508	2.55	CA,O	U	2,381	1,313	55.1	298	22.7	110	36.9
W	11/91	NYC	812	1.35	CA,H	T,U	661	612	92.6	94	15.4	26	27.7
Total	...		96,260	1.27	...	...	26,171	16,436	62.8	6,754	41.1	3,000	44.5

NOTE: Number of eligibles are as reported on logs by the screening counselors. Numbers of deliveries that are less than the number eligible are a result of site data error.

Administration refers to supervisory responsibility. Keys are H = HIV/AIDS program, SH = specialized HIV/AIDS program, such as pediatric-maternal demonstration project, SW = social work department, O = obstetrical department, and CA = central administration.

Special features keys are C = on-staff community followup workers, HV = posttest counseling of HIV-negative women at home, P = counselors trained to do phlebotomy, T = on-site, federally-sponsored pediatric HIV transmission study, U = universal counseling, and W = evening or weekend coverage.

technical assistance, coordinating with other programs, and evaluating programs. When program performance deficiencies are seen, staff members of the AIDS Institute meet with hospital executive and program staffs to examine weaknesses and suggest strategies for improvement.

Data Collection Methodology

Staff members of participating hospitals collect data on patients in postpartum settings who are identified as at risk for HIV infection and approach them for counseling. Forms prepared on each patient provide information that is collected and reported quarterly and cumulatively for each site, and program-wide. We report data from August 1, 1990, through March 31, 1992. Chi square tests were used for all comparisons to test for significant differences between nominally scaled variables.

Forms. Three forms, keyed to specific steps in HIV counseling, are used to collect anonymously reported data on each patient. The forms are *(a)* the project patient log, *(b)* the patient assessment and in-hospital HIV pretest counseling form, and *(c)* the posttest counseling and referral form for those patients tested. An instruction manual explains use of the forms. Copies of the forms and the manual are available from the AIDS Institute.

Counseling and Testing Activity Data

By March 1992, staff members were seeing patients at 23 of the 24 hospitals participating in the initiative statewide. There were 96,260 births in the 23 hospitals during the reporting period. Of the 26,171 women among them found eligible for the program during the reporting period, 16,436 (62.8 percent) were counseled before any testing. Of them, 6,754 (41.1 percent) consented to be tested. Of those tested, 3,000 (44.5 percent) returned for posttest counseling.

Counseling and testing activities supported through the initiative identified 196 of 1,227 (16 percent) of the HIV-positive women who gave birth at participating hospitals. Those 196 women were 22 percent of

Table 2. HIV counseling and testing of 26,171 mothers, by reported eligibility criteria, at 23 hospitals participating in the

Eligibility criterion	Highest ranking criterion[1]		Pretest counseled		Tested	
	Number	Percent	Number	Percent	Number	Percent
Known HIV positive	279	1.1	...	...	...	...
No prenatal care	2,183	8.3	1,658	75.9	789	47.6
Drug use	1,421	5.4	1,087	76.3	537	49.4
Low birth weight[4]	1,035	3.9	484	46.8	166	34.3
STD	2,076	7.9	1,447	69.7	643	44.4
Sex partner at risk	327	1.2	245	74.9	136	55.5
Less than 5 prenatal visits	2,124	8.1	1,522	71.7	587	38.6
Patient or clinician request	16,058	61.5	9,765	61.0	3,806	38.9
Other	668	2.6	228	34.1	90	39.4
Total	26,171	100.0	16,436	62.8	6,754	41.1

[1]Identifies the highest ranking eligibility criterion reported for each patient.
[2]Excludes 13 patients with inconclusive test results.
[3]Includes women posttest counseled at initial and followup appointments. Final return rates were 56.1 percent for HIV seropositives and 44.5 percent for HIV

Table 3. Testing and referral of 196 HIV-seropositive mothers identified at 23 participating hospitals in the Obstetrical Department of Health, August 3, 1990–March 31, 1992

Site	Women identified as HIV positive by initiative		HIV-positive women receiving posttest counseling		Newly identified HIV-positive women referred to services	
	Number	Percent	Number	Percent	Number	Percent
A	0	0.0	0	0.0	0	0.0
B	16	2.4	13	81.3	13	100.0
C	54	3.0	41	75.9	40	97.6
D	4	1.1	4	100.0	4	100.0
E	15	3.8	10	66.7	10	100.0
F	4	7.0	3	75.0	3	100.0
G	2	2.8	2	100.0	2	100.0
H	0	0.0	0	0.0	0	0.0
I	22	9.8	7	31.8	7	100.0
J	5	3.8	3	60.0	3	100.0
K	3	1.8	2	66.7	2	100.0
L	13	3.9	6	46.2	5	83.3
M	12	2.8	4	33.3	4	100.0
N	9	3.9	6	66.7	3	50.0
0	12	2.0	7	58.3	5	71.4
P	0	0.0	0	0.0	0	0.0
Q	3	7.5	0	0.0	0	0.0
R	1	3.8	0	0.0	0	0.0
S	3	1.9	3	100.0	3	100.0
T	4	1.4	1	25.0	1	100.0
U	3	1.3	2	66.7	2	100.0
V	9	3.0	3	33.3	3	100.0
W	2	2.1	0	0.0	0	0.0
Total	196	2.9	[3]117	59.7	110	94.9

[1]Data from each site was either from the Obstetrical Initiative or the State-funded prenatal care program, whichever was more complete.
[2]Percentages equal the number of women who were identified as HIV positive through program testing and the number of women reported aware of their HIV-positive status at admission, compared to the number of women known through blinded studies to be HIV positive.

the 892 seropositive women not previously identified, and 110 (56.1 percent) received posttest counseling.

The cumulative HIV seroprevalence was 1.27 percent, or a rate of 12.7 HIV-positive women for every 1,000 births. A profile of the 16,436 mothers reported eligible for HIV counseling and testing under the initiative is shown in the box on page 522.

Prenatal HIV counseling and testing. Of women who received prenatal care, 28.5 percent had received HIV counseling before coming to the hospital to deliver. Of those who had two or more prenatal care visits, 58.5 percent had received HIV counseling ($P < 0.01$). The hospital where they gave birth was the source of prenatal care for 59.2 percent of them.

Obstetrical HIV Counseling/Testing/Care Initiative, New York State Department of Health, August 3, 1990–March 31, 1992

Test results HIV positive		Posttest counseled at initial appointment[2]			Posttest counseled after all followup[3]		
Number	Percent	Number	Percent	Number of HIV positives	Number	Percent	Number of HIV positives
...	...	...	...	...	...	...	...
75	9.8	118	14.9	8	234	29.7	32
37	7.1	119	22.2	11	203	37.8	23
5	3.1	46	27.7	3	85	51.2	5
12	1.9	158	24.6	3	286	44.5	9
4	2.7	36	26.5	0	78	57.4	2
10	1.7	131	22.5	2	243	41.4	6
52	1.3	920	24.1	13	1,796	47.2	32
1	1.1	34	37.7	0	75	83.3	1
196	2.9	1,562	23.1	40	3,000	44.5	110

seronegatives.

[4]Low birth weight criterion was added to the data set in June 1991.

NOTE: HIV = human immunodeficiency virus. STD = sexually transmitted disease.

HIV Counseling/Testing/Care Initiative, New York State

Number reported aware of own HIV-positive status at admission[1]	Number known to be HIV-seropositive from newborn seropositivity studies	Percent of all HIV-positive women identified [2]
7	14	50.0
29	94	47.9
20	161	46.0
4	21	38.1
18	50	66.0
38	81	51.9
9	29	37.9
5	22	22.7
27	114	43.0
14	72	26.4
18	34	61.8
25	59	64.4
9	41	51.2
10	58	37.9
8	79	10.1
32	65	53.8
3	11	36.4
10	25	52.0
21	43	58.1
3	16	37.5
7	64	25.0
4	11	54.5
335	1,227	43.3

[3]Includes 110 women who were tested through the Obstetrical Initiative and an additional 7 women who received posttest counseling only.

Prioritized eligibility. Characteristics of those receiving HIV counseling and testing are shown in table 2, categorized according to highest ranking program eligibility criterion. Most women (61.5 percent) were eligible because of a request from a patient or a clinician, reflecting a universal counseling policy at some participating hospitals.

Racial and ethnic differences. Racial and ethnic differences were seen according to eligibility criteria. Black women were more likely than others to have had a sexually transmitted disease (STD) during that pregnancy. Hispanic patients were less likely to have used illicit drugs during that pregnancy. Low birth weight infants were more likely to have been born to white women, who were most likely to have reported having a sexual partner who was a drug user or bisexual. White women were more likely to have had fewer than five prenatal care visits ($P < 0.01$).

Drug use. Of the 26,171 women eligible for the initiative, 1,993 reported drug use during the pregnancy, an eligibility criterion. A positive urine toxicology screen, a measure of recent drug use, was subsequently recorded for 1,688 women. About two-thirds of women eligible under the drug use criterion also had positive toxicology findings.

Pretest counseling and HIV testing. Of the 26,171 women identified as eligible during the reporting period, 16,436 (62.8 percent) were counseled prior to any testing. Rates of patients accepting counseling varied widely among hospitals. The pretest counseling session lasted an average of 29 minutes.

Acceptance of testing. Hispanic women who were counseled were more likely to accept testing than others ($P < 0.01$). Highest rates of testing were among women with partners at risk for HIV, who reported drug use, or who lacked prenatal care. Lower rates were recorded for those who had low birth weight babies, those with a patient's or clinician's request for service, and those with fewer than five prenatal care visits (table 2).

Figure 1. HIV counseling and testing activities, Obstetrical HIV Counseling/Testing/Care Initiative, New York State Department of Health, August 3, 1990–March 31, 1992

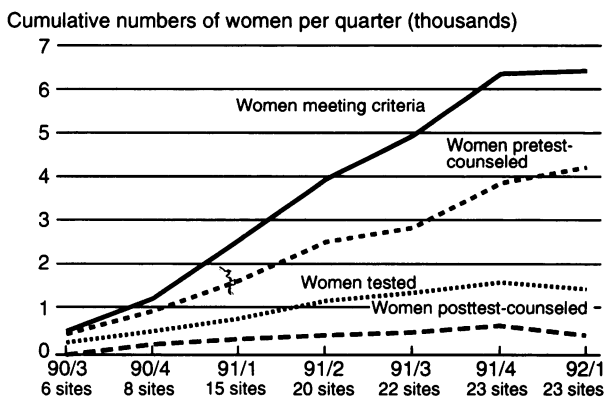


Figure 2. HIV–positive women identified and referred, Obstetrical HIV Counseling/Testing/Care Initiative, New York State Department of Health, August 3, 1990–March 31, 1992

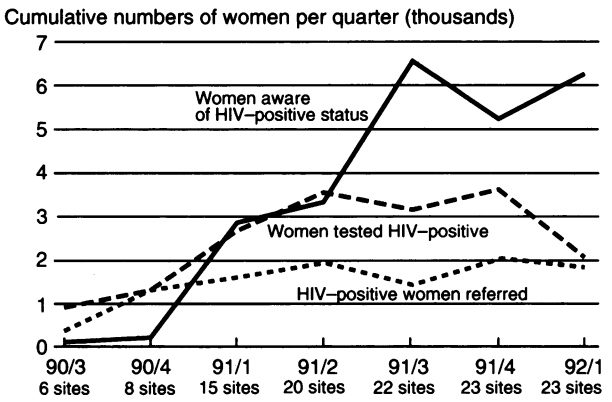
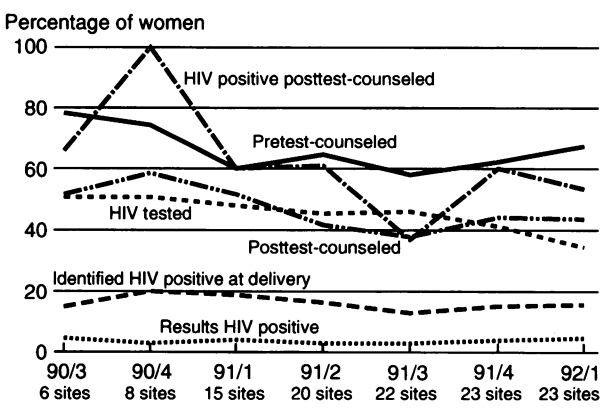


Figure 3. Activity rates, Obstetrical HIV Counseling/Testing/Care initiative, New York State Department of Health, August 3, 1990–March 31, 1992



Rates of HIV infection. Rates of HIV infection according to prioritized eligibility criteria are listed in table 2. Among drug users, the highest rates of seropositivity were recorded for users of methadone, opiates, or cocaine or crack cocaine.

Counseling and testing activities supported through the initiative identified 196 of 1,227 (16 percent) of the HIV-positive women who gave birth at participating hospitals. Those 196 women were 22 percent of the of 892 seropositive women not previously identified. By combining testing data from the initiative with other data on seropositivity, we estimated that 43.3 percent of HIV-positive women who delivered at participating hospitals were identified by voluntary testing. Rates for individual hospitals ranged from 10.1 to 66 percent. Table 3 shows the testing and referral of the 196 women identified by the initiative as seropositive.

Posttest counseling and followup. Of those tested, 3,000 women returned for results after followup (table 2). The average lengths of posttest counseling sessions were 24 minutes for HIV-negative women and 66 minutes for HIV-positive women. While additional posttest counseling sessions were held for only 2 percent of HIV-negative women, they were held for 32.4 percent of seropositive women ($P < 0.01$). Black and Hispanic women were less likely than white women to keep their initial appointment ($P < 0.01$). After followup efforts, those with no prenatal care and those who were illicit drug users were least likely to return for posttest counseling. Aggressive outreach methods were used much more often when the patient was HIV-positive (table 4) and effectively produced a higher rate of return among seropositive women.

Patient referrals. In all, 3,677 referrals to services were made for patients who returned for their test results (table 5). Of the medical referrals, pediatric primary care appointments were most likely to be kept.

Trends in Activities and Rates

As the number of participating hospital sites increased during the first seven quarters of program operations, the numbers of women who met the eligibility criteria and were pretest counseled increased (fig. 1). While the number of hospitals remained fairly constant from the fifth to the seventh quarter, the number of eligible women rose, reflecting increased screening for eligibility.

Table 4. Outreach methods used to follow 4,925 women who missed their first counseling session after HIV testing at 23 participating hospitals in the Obstetrical HIV Counseling/Testing/Care Initiative, New York State Department of Health, August 3, 1990—March 31, 1992

Method	Outreach efforts for 144 HIV-positive women		Outreach efforts for 4,781 HIV-negative women		Outreach efforts for 4,925 women in both groups	
	Number	Percent	Number	Percent	Number	Percent
Telephone calls	83	57.6	2,658	55.6	2,741	55.7
Mailings	120	83.3	4,340	90.8	4,460	90.6
Telegrams	16	11.1	71	1.5	87	1.8
Home visits	41	28.5	235	4.9	276	5.6
Use of contact persons	32	22.2	157	3.3	189	3.8
Contact by other means	13	9.0	355	7.4	368	7.5
Patient-initiated new appointments	9	6.3	336	7.0	345	7.0
Other methods	12	8.3	61	1.3	73	1.5
Not known	0	0.0	18	0.4	18	0.4
Total efforts	326	...	8,231	...	8,557	...

During that time, the gap between the number of eligible women and the number who received pretest counseling widened as sites were added, but pretest counseling numbers rose steadily. In the seventh quarter, 4,190 women received pretest counseling. The number of HIV tests performed increased, but did not keep pace with the increase in pretest counseling. In fact, testing declined from a sixth quarter total of 1,530 women to a seventh quarter total of 1,361. There was a corresponding reversal of the upward trend in the number of women who were posttest counseled.

A sharp increase in the number of women already aware they were infected with HIV (fig. 2) is seen as a consequence of site visits to improve reporting of those data. As hospitals were added to the initiative, more HIV-infected women were identified. After the fourth quarter, as fewer hospitals began participation, increases in the number of women identified as HIV-positive became smaller. The number of infected women referred for services each quarter also reached a plateau after the fourth quarter.

The trends in rates for activities as a percentage of patients at all sites are seen in figure 3. The rate of pretest counseling and testing has declined gradually as new sites were added, yet the rate of seropositivity among those tested remained fairly stable.

Although rates of HIV testing of women outside the initiative increased because of efforts by prenatal testing programs, participating hospitals continued to identify about one in every five of those infected mothers who previously were unaware of their HIV-positive status. The return rate for posttest counseling dropped steadily, but the rate for HIV-positive women returning for posttest counseling was greater than the overall return rate in all but the fifth quarter.

Program Implementation

Variables. The time needed for a site to move from work plan development to providing services was as short as 3 months, but in some cases took 1 year or longer. The number of patients who received services varied widely; that was a function, to an extent, of the counseling resources (staff member availability) and of service demand.

Several participating hospitals expanded their programs to provide universal counseling in the postpartum setting, a move that was encouraged, but not required by the AIDS Institute. Existing institutional cultures, practices, and staffing, as well as the availability of other programs that provide HIV services to women, contributed to variations among sites, as did the commitment to community followup for women who failed to return for HIV posttest counseling.

Local administrative and clinical leadership highly influenced programs. In general, whatever the administrative aegis, programs lacking adequate leadership or support took longer to implement and were less productive.

Barriers. Commonly encountered difficulties in implementing the program were in the areas of staffing and operational problems. Some hospitals experienced difficulty in hiring qualified staff; others experienced staff turnover that caused interruptions in service. Operational barriers included a lack of phlebotomy services for patients who agreed to HIV testing and lack of work space for program staff. The phlebotomy service problem was addressed either by training counselors to perform the services, coordinating more closely with the phlebotomy team or

Table 5. Appointments made and kept for referrals to services for 3,677 women after HIV testing at 23 participating hospitals in the Obstetrical HIV Counseling/Testing/Care Initiative, New York State Department of Health, August 3, 1990–March 31, 1992

Services	Appointments made		Appointments kept	
	Number	Percent	Number	Percent
Medical office or group practice	130	3.5	93	71.5
Primary care	149	4.1	69	46.3
Medical-HIV	237	6.4	109	46.0
Gynecology or family planning	1,382	37.6	932	67.4
Substance abuse treatment	80	2.2	48	60.0
Social services	150	4.1	90	60.0
Mental health facility	22	0.6	11	50.0
Pediatric primary care	1,153	31.4	930	80.1
Pediatric HIV service	233	6.3	138	59.2
Other appointments	94	2.6	44	46.8
Community health center	13	0.4	6	46.1
Community services program	7	0.2	2	28.6
New York City Department of Health, maternal-family planning services	2	0.1	1	50.0
New York City Human Resources Agency	1	0.03	1	100.0
Infant Health Assistance Program	1	0.03	0	0.0
Health maintenance organization	1	0.03	1	100.0
Other	22	0.6	9	40.9
Total	3,677	100.1	2,484	67.6

NOTE: Multiple referrals were made for individual women. A total of 3,677 referrals were made for 1,408 HIV-negative women and 100 HIV-positive women.

physicians who drew blood, or using serums left from mandatory syphilis testing. Lack of sufficient work space for program staff members was a difficult problem, especially in overcrowded municipal hospitals.

Meeting the Objectives

Most initiative objectives were met successfully during the study period.

1. To provide childbearing women, especially those with limited access to the health care system and those at high risk of HIV infection, with access to HIV counseling and voluntary testing in selected hospital postpartum inpatient settings throughout New York State

The objective was met. From August 1990 through March 1992, more than 16,000 of more than 26,000 women who were determined eligible were counseled at 23 hospitals. A system of prioritized eligibility criteria was used effectively in both reaching intended groups and identifying HIV-positive women. The rates of HIV testing among hospital programs varied widely and ranged from a low of 5.5 percent to high of 88.3 percent. Other programs reported in the literature show varying rates of HIV testing acceptance *(4–9)*, which may be related to differences in availability and acceptance of prenatal HIV testing, differing patient populations, and subtle influences, such as institutional attitudes toward HIV testing. Individual counselor attitudes can be a significant factor, a finding also noted in the literature *(9)*.

2. To link to appropriate services those women who are newly diagnosed or previously known to be HIV positive prior to delivery but who were not engaged in HIV-related medical and social services

The objective was met partially. Some women refused services of any kind. Return rates for posttest counseling were greater among newly identified HIV-positive women, who may have been subject to more aggressive followup efforts by counselors. Low rates of compliance may have been related to women's denial after HIV-positive diagnoses, or may have been a function of lifestyle issues that limit women's abilities to participate in ongoing care. Longer program followup may show increased compliance. Further study of factors related to compliance in the initiative's population is warranted.

3. To provide better access to needed health and human services for HIV-positive women and their children through active links with services at each hospital and through negotiations with State and local social service agencies to develop a system of improved access to services

The objective was met partially. While HIV-positive women were less likely to keep their appointments, the overall rate of reported compliance among all women was nearly 68 percent. Moreover, both HIV-positive and HIV-negative women tended to keep their children's pediatric appointments more frequently than they kept their own appointments. The findings support anecdotal observations of HIV health care professionals.

4. To work with participating hospitals to establish a system of community followup of women who are tested for HIV but who initially fail to return for test results and care

The objective was not met on a program-wide basis. Home visits were relatively infrequent. Only 276 home visits were made for a total of almost 5,000 HIV-positive and HIV-negative women who initially failed to return for their test results. The community followup component of each hospital's program is being examined to determine the reasons for its success or failure.

5. To monitor the activities of the hospital programs and develop an increased understanding of the needs of women served in this initiative through client-specific data collection and analysis

The objective was met. Program-wide, a minimum of 43 percent of HIV-positive childbearing women were identified through voluntary prenatal and postpartum counseling and testing activities. That rate could be improved by integrating universal counseling into routine prenatal care, since 40 percent of the women who had prenatal care had not been counseled for HIV before being approached in the postpartum setting.

The wide variation among hospitals of 10 to 66 percent in identifying HIV-positive childbearing women indicated the potential for many hospitals to improve their performance. Programs with higher rates of acceptance are being examined to characterize the attributes that facilitate improved performance.

Summary

The Obstetrical HIV Counseling/Testing/Care Initiative is a major statewide effort to provide voluntary counseling and testing services for postpartum women who are identified as at risk for HIV infection. HIV counseling, regardless of testing decisions, provides an opportunity for primary prevention through risk reduction education. That is particularly important for postpartum women who otherwise may have little contact with the health care system.

Although the novel program design was found effective in reaching women and providing followup services, there was considerable variation in program effectiveness among hospitals. It is clear from this program's experience that HIV testing itself is neither an endpoint nor a guarantee of follow-through for posttest counseling and treatment. The community followup component of the program has not been fully utilized and requires further assessment. Ongoing program evaluation will provide additional information on the effectiveness of the approach to augment voluntary HIV counseling and testing for women of childbearing age.

The program design can be adapted to the circumstances of other hospitals and may be useful in other States with high HIV seroprevalence among women.

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