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Subseries:

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Folder Title:
[Morbidity and Mortality Weekly Report from the Centers for Disease Control and Prevention] [loose]

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Clinton Presidential Records

Graphic/Offensive Material Marker

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**PLEASE READ BEFORE
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THE WHITE HOUSE
WASHINGTON

January 10, 1993

Raymond Amoury, M.D.
President
American Pediatric Association
13 Elm Street
Manchester, MA 01944

Dear Dr. Amoury:

The January 7, 1994 Morbidity and Mortality Weekly Report from the Centers for Disease Control and Prevention (CDC) contains an article (copy enclosed), which should be of interest to the medical profession and, in particular, to the primary care community. The article describes the results of an extensive survey commissioned by the CDC and the Health Resources and Services Agency (HRSA) to characterize the types of HIV prevention services provided by primary care physicians and to identify barriers to the provision of those services. Some of the results are disturbing.

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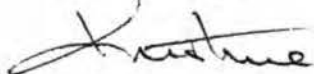
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Letter to Dr. Amoury
January 10, 1994
Page 2

I would like to propose a meeting in the near future with those who represent primary care specialties. It is my hope that we can sit together, review these results with the researchers, and develop strategies to overcome the dilemma posed by this survey's results.

Please call me at (202) 632-1090 if you have any questions.

Sincerely,

A handwritten signature in dark ink, appearing to read "Kristine", with a stylized flourish at the end.

Kristine M. Gebbie, R.N., M.N.
National AIDS Policy Coordinator

Enclosure

THE WHITE HOUSE
WASHINGTON

January 10, 1993

Jay Grosfeld, M.D.
President Elect
American Pediatric Association
13 Elm Street
Manchester, MA 01944

Dear Dr. Grosfeld:

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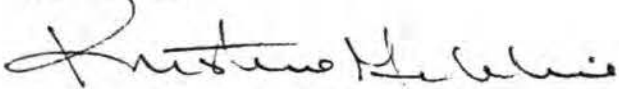
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National AIDS Policy Coordinator

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THE WHITE HOUSE
WASHINGTON

January 10, 1993

Richard S. Hollis, M.D.
President
American College of Obstetricians and
Gynecologists
409 12th St., S.W.
Washington, D.C. 20024

Dear Dr. Hollis:

The January 7, 1994 Morbidity and Mortality Weekly Report from the Centers for Disease Control and Prevention (CDC) contains an article (copy enclosed), which should be of interest to the medical profession and, in particular, to the primary care community. The article describes the results of an extensive survey commissioned by the CDC and the Health Resources and Services Agency (HRSA) to characterize the types of HIV prevention services provided by primary care physicians and to identify barriers to the provision of those services. Some of the results are disturbing.

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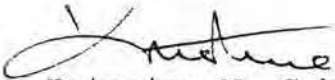
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National AIDS Policy Coordinator

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January 10, 1993

Ralph W. Hale, M.D.
Executive Director
American College of Obstetricians and
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409 12th St., S.W.
Washington, D.C. 20024

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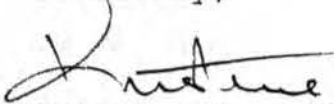
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National AIDS Policy Coordinator

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THE WHITE HOUSE
WASHINGTON

January 10, 1993

Leonard Lawrence, M.D.
President
National Medical Association
1012 10th St., N.W.
Washington, D.C. 20001

Dear Dr. Lawrence:

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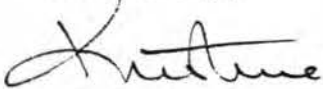
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National AIDS Policy Coordinator

Enclosure

THE WHITE HOUSE
WASHINGTON

January 10, 1993

Rosemary Davis
Executive Vice President
National Medical Association
1012 10th St., N.W.
Washington, D.C. 20001

Dear Ms. Davis:

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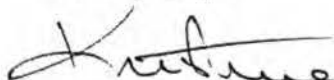
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National AIDS Policy Coordinator

Enclosure

THE WHITE HOUSE

WASHINGTON

January 10, 1993

William Coleman, M.D.
President
American Academy of Family Practitioners
508 Harley Street
Scottsboro, Alabama 35768

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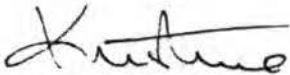
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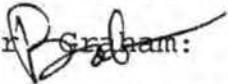
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THE WHITE HOUSE
WASHINGTON

January 10, 1993

Robert Graham, M.D.
Vice President
American Academy of Family Practitioners
888 Ward Parkway
Kansas City, MI 64114

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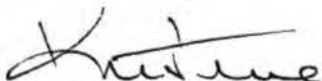
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National AIDS Policy Coordinator

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THE WHITE HOUSE
WASHINGTON

January 10, 1993

Paul F. Griner, M.D.
President
American College of Physicians
6th At Race
Philadelphia, PA 19106-1572

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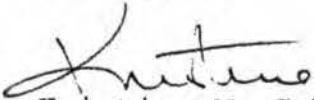
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THE WHITE HOUSE
WASHINGTON

January 10, 1993

Joseph T. Painter, M.D.
President
American Medical Association
515 North State Street
Chicago, IL 60610

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Enclosure

CDC HIV/AIDS CENTERS FOR DISEASE CONTROL PREVENTION

Centers for Disease Control
Office of HIV/AIDS
1600 Clifton Road, N.E., MS D-21
Building 26, Executive Park
Atlanta, Georgia 30333

FACSIMILE TRANSMISSION

TO: Ms. Kristine Gebbie
National AIDS Policy Coordinator

Address: The White House

Telephone: (202)632-1090

Fax: (202)632-1096

From:

Wanda K. Jones, Dr.P.H.
Assistant Director for
Science

Address: 26 Exec Pk, MS D-21

Telephone: (404) 639-0904

Fax No.: (404) 639-0910

Date:

1/5/94

No. of Pages

6

(excludes cover sheet)

Subject:

MMWR Draft - HIV Prevention Practices ---

Notes/Comments:

This is the latest draft of the upcoming MMWR article.

The draft is still subject to change before final printing tonight.

988

MMWR

January 7, 1994

Vaccination Coverage — Continued

Despite ongoing and substantial efforts to improve the vaccine delivery system in the United States, vaccination levels for 2-year-olds remain below 90%. In addition, coverage levels vary by and are substantially lower in some population groups, especially those underserved by the health-care system. The prevention of vaccine-preventable diseases in the United States will require that uniformly high vaccination levels for preschool-aged children be achieved and sustained in all communities.

Differences in vaccination levels among racial/ethnic groups may be influenced by social and cultural phenomena and require special interventions. For example, in Los Angeles, 42% of Hispanic preschool-aged children were fully vaccinated by aged 24 months, compared with 25% of black children, even though Hispanic parents reported lower mean annual family incomes (\$3218 vs \$4596) and lower mean years of education (8.6 years vs 12.5 years) (CDC, unpublished data, 1993). Although this report documents undervaccination as a national problem affecting children in all demographic groups, vaccination coverage is disproportionately lower among racial/ethnic minorities and persons living below the poverty level. Despite limitations in the sample size of the 1992 NHIS that precluded estimation of vaccination coverage of Hispanic populations, the increased incidence of measles among Hispanics before and during the measles resurgence suggests that overall vaccination coverage is also substantially lower in Hispanics than in white non-Hispanics (5-7). Emphasis should be placed on improving coverage of children in racial/ethnic minority groups and of those living in poverty.

References

1. Massey JT, Moore TF, Parsons VL, Tadros W. Design and estimation for the National Health Interview Survey, 1985-94. National Center for Health Statistics. Vital Health Stat 1989;2(110).
2. CDC. Measles—United States, first 26 weeks, 1993. MMWR 1993; 42(42):813-6.
3. Goldstein KP, Kviz FJ, Daum RS. Accuracy of immunization histories provided by adults accompanying preschool children to a pediatric emergency department. JAMA 1993;270:2190-4.
4. CDC. Standards for Pediatric Immunization Practices [Standard 9], 1993:15.
5. Orenstein WA, Atkinson W, Mason D, Bernier RH. Barriers to vaccinating preschool children. J Health Care Poor Underserved 1990;1:315-30.
6. CDC. Measles vaccination levels among selected groups of preschool-aged children—United States. MMWR 1991;40(2):35-9.
7. Gindler JS, Atkinson WL, Markowitz LE, Hutchinson SS. Epidemiology of measles in the United States in 1989 and 1990. Pediatr Infect Dis J 1992;11:841-6.

Effectiveness in Disease and Injury Prevention**HIV Prevention Practices of Primary-Care Physicians —
United States, 1992**

Encounters between patients and health-care providers are important opportunities for human immunodeficiency virus (HIV) prevention. In 1991, 15% of U.S. adults reported having been tested for HIV antibody; of these, 55% reported their most recent HIV test had been in a physician's office or a hospital (1). During 1992, CDC and the Health Resources and Services Administration (HRSA) commissioned a national survey to characterize the types of HIV prevention services provided by primary-care

HIV Prevention Practices — Continued

physicians and barriers to the provision of these services. This report summarizes the results of the survey.

In October 1992, a questionnaire was mailed to 4011* primary-care physicians who were randomly selected from the American Medical Association (AMA) Physician Masterfile, which comprises all physicians in the United States. The sample was stratified by location, race/ethnicity, and specialty. Two categories of location were defined on the basis of the prevalence of acquired immunodeficiency syndrome (AIDS) in metropolitan statistical areas (MSAs): 1) physicians practicing in the 20 MSAs with the highest prevalence and 2) those practicing in the remaining MSAs. Physicians were asked about their risk assessment of new patients; HIV counseling, testing, and treatment practices; and basic understanding and attitudes related to HIV infection and persons with HIV disease. The data were weighted to adjust for unequal probabilities of selection and for the variability of response rates among the strata.

Of the 3735 eligible† physicians, 2545 (68%) responded; of these, 802 were general/family practitioners; 360, pediatrician/adolescent medicine physicians; 683, obstetrician/gynecologists (OB/GYNs); and 700, general internal medicine physicians. Of the 2545 respondents, 76% were men. Two hundred eighty (15%) were aged <35 years; 1042 (41%), 35–44 years; and 1123 (44%), ≥44 years. A total of 1487 (60%) were based in private, single-specialty practices; 442 (18%), in private, multispecialty practices; 299 (12%), in hospitals, public clinics, and community health centers; and 287 (10%), from academia and other institutions. Twenty-four percent of the physicians were located in areas with high prevalences of AIDS.

Almost all (94%) respondents indicated they "usually" or "always" asked new adult (aged ≥19 years) patients about cigarette smoking; however, sexual history-taking was less frequently reported (Table 1): 49% asked about sexually transmitted diseases (STDs), 31% about condom use, 27% about sexual orientation, and 22% about number of sex partners. In comparison, 84% of all physicians asked new adolescent (aged 13–18 years) patients about cigarette smoking, 56% about STDs, 52% about condom use, 34% about number of sex partners, and 27% about sexual orientation. One fourth (25%) of all physicians believed their patients would be offended by questions about their sexual behaviors.

The percentage of physicians who indicated they would "likely" or "very likely" encourage HIV testing varied by patient risk category (Table 2) and ranged from homosexual men with multiple partners and injecting-drug users (95%) to sexually active adolescent patients (40%).

Most physicians (66%) indicated that if HIV testing were indicated for a patient, they would probably provide the test counseling themselves. Factors that either "moderately" or "strongly" influenced physicians to refer for counseling and testing rather than provide it themselves were that counseling was too time consuming (55%), information was insufficient to enable counseling (48%), and they preferred anonymous testing for their patients (42%). Most respondents indicated that their decision to refer was not influenced by inadequate reimbursement (88%) or discomfort with counseling (85%).

Ninety-two percent of physicians indicated that they would counsel an HIV-positive patient to reduce the risk for transmitting HIV. In addition, 76%–81% indicated they

*Represents 3% of the total primary-care physician population.

†Physicians who were not practicing in one of the primary-care specialties, were practicing out of the country, retired, or deceased were deemed ineligible.

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HIV Prevention Practices — Continued

MMWR

January 7, 1994

TABLE 1. Percentage* of primary-care physicians who would "usually" or "always" assess risks for new adult and adolescent patients, by risk behavior and physician specialty — United States, 1992

Risk behavior	General/Family practitioner		Pediatrician/Adolescent medicine physician		Obstetrician/Gynecologist		General internal medicine physician		Total	
	Adult (n=706)	Adolescent (n=723)	Adult (n=706)	Adolescent (n=327)	Adult (n=576)	Adolescent (n=853)	Adult (n=883)	Adolescent (n=432)	Adult (n=2188)	Adolescent (n=2195)
	% (95% CI) [†]	% (95% CI) [†]	% (95% CI) [†]	% (95% CI) [†]	% (95% CI) [†]	% (95% CI) [†]	% (95% CI) [†]	% (95% CI) [†]	% (95% CI) [†]	% (95% CI) [†]
Cigarette smoking	93 [‡] (±1.9)	81 (±2.9)	89 (±7.0)	75 (±4.1)	93 (±2.3)	92 (±2.6)	96 [‡] (±1.3)	89 (±2.7)	96 [‡] (±1.8)	84 (±1.8)
Alcohol use	79 [‡] (±2.9)	89 (±3.4)	74 (±9.8)	67 (±4.4)	80 (±3.8)	80 (±3.9)	92 (±1.9)	84 (±3.1)	84 [‡] (±1.8)	75 (±1.9)
Contraceptive use	53 (±3.6)	58 (±3.7)	65 (±10.8)	62 (±4.6)	37 (±1.7)	36 (±1.8)	48 (±3.6)	59 (±4.2)	61 (±2.1)	66 (±2.8)
STDs [§]	34 [‡] (±3.4)	43 (±3.6)	44 (±11.3)	49 (±4.7)	82 (±3.7)	85 (±3.4)	45 [‡] (±3.5)	54 (±4.3)	49 [‡] (±2.2)	56 (±2.1)
Other illicit drugs	36 [‡] (±3.4)	43 (±3.6)	64 (±10.8)	53 (±4.7)	59 (±4.7)	65 (±4.6)	54 [‡] (±3.5)	66 (±4.0)	49 [‡] (±2.2)	55 (±2.1)
Illicit IV drugs	37 (±3.5)	38 (±3.6)	57 (± 1.1)	46 (±4.7)	60 (±4.6)	65 (±4.8)	55 [‡] (±3.5)	63 (±4.1)	58 [‡] (±2.2)	51 (±2.1)
Condom use	21 [‡] (±2.9)	41 (±3.6)	50 [‡] (± 1.1)	56 (±4.7)	68 [‡] (±4.6)	75 (±4.2)	23 (±3.8)	45 (±4.3)	37 [‡] (±2.8)	62 (±2.1)
High-risk sex partner	22 [‡] (±2.9)	29 (±3.3)	21 [‡] (± 9.3)	32 (±4.4)	39 [‡] (±4.6)	46 (±4.8)	28 [‡] (±3.2)	40 (±4.2)	28 [‡] (±2.8)	36 (±2.1)
No. sex partners	16 [‡] (±2.6)	17 (±3.2)	24 [‡] (± 9.5)	30 (±4.4)	37 [‡] (±4.6)	52 (±4.8)	18 [‡] (±2.7)	33 (±4.0)	22 [‡] (±1.8)	34 (±2.8)
Sexual orientation	18 (±2.7)	18 (±2.6)	13 (± 7.8)	28 (±4.2)	36 [‡] (±4.6)	36 (±4.6)	33 (±3.3)	32 (±4.0)	27 (±1.9)	27 (±1.8)

* Percentages are based on the number of physicians who indicated that they see adult or adolescent patients in their practice.

[†] Confidence interval.

[‡] p<.001 (McNemar test comparing physicians' assessment of adults and adolescents).

[§] Sexually transmitted diseases.

TABLE 2. Percentage of primary-care physicians who would "likely" or "very likely" encourage HIV testing by patient's risk behavior, by physician specialty — United States, 1992

Risk behavior	General/Family practitioner			Pediatrician/Adolescent medicine physician			Obstetrician/Gynecologist			General internal medicine physician			Total		
	No.	(%)	(95% CI) ^a	No.	(%)	(95% CI) ^a	No.	(%)	(95% CI) ^a	No.	(%)	(95% CI) ^a	No.	(%)	(95% CI) ^a
Homosexual men/ multiple partners	748	(96)	(±1.5)	230	(94)	(±3.1)	74	(88)	(±7.4)	755	(95)	(±1.8)	1827	(95)	(±1.8)
Injecting drug use	740	(95)	(±1.6)	263	(91)	(±3.3)	380	(96)	(±2.0)	750	(96)	(±1.5)	2174	(95)	(±1.9)
Homosexual men	771	(82)	(±1.9)	238	(85)	(±4.5)	73	(88)	(±7.4)	700	(92)	(±1.9)	1839	(91)	(±1.3)
Current/Past STD ^b	784	(78)	(±3.0)	373	(63)	(±4.9)	431	(71)	(±4.3)	784	(79)	(±2.9)	2352	(74)	(±1.8)
Heterosexual men/ multiple partners	787	(86)	(±3.3)	340	(53)	(±5.3)	426	(70)	(±4.3)	768	(72)	(±3.2)	2322	(67)	(±1.9)
Other drug/ alcohol users	783	(52)	(±3.5)	355	(50)	(±5.2)	416	(86)	(±4.5)	768	(57)	(±3.5)	2321	(57)	(±2.8)
Sexually active adolescents	755	(38)	(±3.5)	433	(32)	(±4.4)	427	(40)	(±4.6)	637	(46)	(±3.8)	2263	(46)	(±2.8)

^a Confidence interval.

^b Sexually transmitted disease.

TABLE 3. Percentage* of primary-care physicians who would provide obstetric/gynecologic services for all adult female patients and for all adult female patients with HIV infection, by percentage and physician specialty — United States, 1992

Service	General/Family practitioner (n=575)				Pediatrician/Adolescent medicine physician (n=74)				Obstetrician/Gynecologist (n=575)				General internal medicine physician (n=277)				Total (n=1541)			
	All	(95% CI) ^a	HIV	(95% CI) ^a	All	(95% CI) ^a	HIV	(95% CI) ^a	All	(95% CI) ^a	HIV	(95% CI) ^a	All	(95% CI) ^a	HIV	(95% CI) ^a	Total	(95% CI) ^a	HIV	(95% CI) ^a
Contraceptive	91 ^b	(±2.5)	76	(±3.7)	55	(±1.2)	50	(±1.2)	99 ^b	(±1.1)	86	(±3.3)	88 ^b	(±6.0)	51	(±5.1)	85 ^b	(±2.8)	73	(±2.5)
Post pregnancy	81 ^b	(±4.3)	50	(±4.4)	5	(±5.6)	5	(±5.6)	93 ^b	(±2.5)	76	(±4.2)	16	(±4.4)	12	(±4.0)	59 ^b	(±2.7)	48	(±2.8)
Emergency gynecology	22	(±3.6)	20	(±3.5)	4	(±4.9)	4	(±4.9)	95 ^b	(±2.0)	85	(±3.5)	6	(±2.7)	5	(±2.7)	42 ^b	(±2.7)	37	(±2.7)
Elective gynecology	20 ^b	(±3.8)	19	(±3.5)	12	(±8.0)	12	(±8.0)	95 ^b	(±2.2)	72	(±4.3)	7	(±3.0)	5	(±2.6)	44 ^b	(±2.8)	33	(±2.8)
Prenatal	40 ^b	(±4.3)	22	(±3.6)	5	(±5.2)	5	(±5.1)	89 ^b	(±3.0)	58	(±4.8)	5	(±2.6)	3	(±1.9)	47 ^b	(±2.8)	29	(±2.5)
Delivery	35 ^b	(±4.2)	20	(±3.5)	9	(±5.6)	9	(±7.0)	87 ^b	(±6.7)	59	(±4.8)	3	(±3.2)	1	(±1.3)	44 ^b	(±2.8)	28	(±2.5)
Sterilization on request	12	(±2.9)	10	(±2.7)	0	—	0	—	93 ^b	(±2.4)	81	(±3.8)	1	(±1.0)	0	—	38 ^b	(±2.7)	31	(±2.6)
Pregnancy ter- mination	3	(±1.4)	3	(±1.5)	<1	(±1.5)	<1	(±1.1)	27	(±4.3)	25	(±4.2)	0	—	0	—	16	(±1.7)	9	(±1.8)

* Percentages are based on the number of physicians who indicate that they provide obstetric/gynecologic services.

^a Confidence interval.

^b p<.001 (McNemar test comparing services physicians would provide to all women and to women with HIV).

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would counsel the patient to notify sex partners, refer the patient to the local health department for assistance with the notification, or both.

Of physicians in OB/GYN practices, 85% indicated they would provide prenatal care and 47% would provide contraceptive services to all women, regardless of their HIV status (Table 3). In comparison, 73% would provide prenatal care and 29% would provide contraceptive services to women with HIV.

Physicians who reported they would refer patients with HIV for medical services indicated the primary reasons for referring were their lack of experience with HIV (83%) and the availability of other providers with more expertise in treating HIV infection (94%). Overall, 68% of physicians indicated they believed they had an obligation to take care of someone infected with HIV, and 87% indicated that professional training could help "increase their comfort in caring for AIDS patients."

Reported by: J. Loft, PhD, W. Marder, PhD, Abt Associates, Inc., Chicago, L. Bresolin, PhD, R. Rinaldi, PhD, American Medical Association, Div of Medicine, Bureau of Health Professions, Health Resources and Svcs Administration, National AIDS Information and Education Program, Office of HIV/AIDS; Women's Health and Fertility Br, Div of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion; Div of Sexually Transmitted Diseases and Human Immunodeficiency Virus Prevention, and Behavioral Studies Section, Behavioral and Prevention Research Br, Div of Sexually Transmitted Diseases and HIV Prevention, National Center for Prevention Svcs, CDC.

Editorial Note: Although primary-care physicians may contribute to the prevention of HIV transmission by counseling patients who are at risk, the findings in this report underscore the substantial number of physicians who are missing opportunities to counsel during encounters with patients. To more effectively use these encounters as a means of prevention, physicians first must be knowledgeable about HIV infection and its transmission (3). In addition, they should be sensitized to the importance of assessing patients' risk for HIV infection and prepared to counsel patients, based on their risk (2). Therefore, medical schools and professional organizations should continue to emphasize HIV/AIDS prevention and treatment as priorities in training new and practicing physicians.

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The findings in this report can assist in the development of HIV prevention policy and programs. For example, the reluctance of some physicians to assess the risky sex practices of patients underscores the importance for public health agencies to assist physicians in improving risk assessment and risk-reduction counseling efforts for their patients and patients' partners. These findings may be used by HRSA to improve training strategies and programs for health-care professionals and AMA and other professional organizations to develop training objectives for primary-care physicians.

Finally, the findings in this report can assist in efforts to achieve the national health objectives for the year 2000 regarding HIV prevention (4). These objectives include increasing to at least 80% the proportion of persons with HIV infection who have been tested (objective 18.8); increasing to at least 75% the proportion of primary-care and mental health-care providers who provide age-appropriate counseling on the prevention of HIV and other STDs (objective 18.9); and increasing to at least 50% the proportion of primary-care clinics who screen, diagnose, treat, counsel, and provide (or refer for) partner notification services for HIV infection and bacterial STDs (objective 18.13).

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HIV Prevention Practices — Continued**References**

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Epidemiologic Notes and Reports**Occupational Pesticide Poisoning in Apple Orchards —
Washington, 1993**

During July–December 1993, the Washington Department of Health (WDOH) received and conducted follow-up investigations of 26 reports of occupational illness related to exposure to mevinphos (Phosdrin®), an organophosphate (OP) insecticide. The reports involved illnesses during June 13–August 18, 1993, in persons working in 19 different apple orchards; all involved use of mevinphos to control apple aphids. This report summarizes the results of these investigations by WDOH.

All the affected workers were men ranging in age from 19 to 72 years (median: 35 years). Eighteen (69%) were Hispanic; eight (31%) were non-Hispanic whites. Twenty-three (88%) of the workers were exposed during mixing and loading or application of mevinphos. The other three (12%) were exposed to mevinphos residues (two while working in close proximity to a recently treated orchard and one after reentering an orchard within 24 hours after it was sprayed).

Of the 23 workers exposed during mevinphos preparation or application, 22 had worked on ground applications and used an airblast[†] system; one worked on an aerial application. All 23 sought medical attention in emergency departments. Twenty-one workers had systemic manifestations characteristic of OP poisoning, including nausea (81%), vomiting (62%), dizziness (43%), visual disturbances (43%), weakness (38%), abdominal pain (29%), headache (24%), sweating (24%), and excessive salivation (5%). Two persons had conjunctivitis only, which was attributed to direct ocular exposure to mevinphos.

Of the seven workers who were hospitalized, four required intensive care. Plasma and/or red blood cell cholinesterase activity was depressed to at least 25% below the lower limit of normal in 14 (88%) of the 16 workers tested; in addition, for one worker the level of activity was depressed 97%, and for three, 75%–90%. Atropine was administered to all seven hospitalized workers and to four of the 14 workers with systemic illness who were treated in the emergency department and released. Eighteen (86%)

*Use of trade names is for identification only and does not imply endorsement by the Public Health Service or the U.S. Department of Health and Human Services.

[†]This application technique involves the use of a tractor-drawn sprayer with oscillating nozzles that are oriented in a flat plane and direct the spray mixture into the canopy of the trees for complete coverage.

THE WHITE HOUSE

WASHINGTON

January 10, 1993

James S. Todd, M.D.
Executive Vice President
American Medical Association
515 North State Street
Chicago, IL 60610

Dear Dr. Todd:

The January 7, 1994 Morbidity and Mortality Weekly Report from the Centers for Disease Control and Prevention (CDC) contains an article (copy enclosed), which should be of interest to the medical profession and, in particular, to the primary care community. The article describes the results of an extensive survey commissioned by the CDC and the Health Resources and Services Agency (HRSA) to characterize the types of HIV prevention services provided by primary care physicians and to identify barriers to the provision of those services. Some of the results are disturbing.

Almost all (94 percent) respondents indicated that they "usually" or "always" asked new adult (older than 18) patients about cigarette smoking; however, sexual history taking was much less frequent. Fewer than 50 percent asked about sexually transmitted diseases, 31 percent about condom use, 27 percent about sexual orientation, and 22 percent about numbers of sex partners. Percentages were a little better for adolescent age groups but were still surprisingly low. One fourth (25 percent) of all physicians believed that their patients would be offended by questions about their sexual behavior.

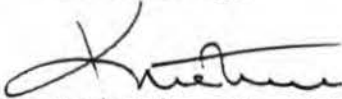
I believe that the moments a physician spends with each patient are a most important window of opportunity for prevention messages both direct and indirect. The survey results confirm that a substantial number of physicians are missing these opportunities. Given the rapid increase in the spread of HIV infection and the number of deaths that are occurring from this disease, I believe we must do everything in our power to take full advantage of the influence physicians have with their patients to help slow this epidemic.

Letter to Dr. Todd
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I would like to propose a meeting in the near future with those who represent primary care specialties. It is my hope that we can sit together, review these results with the researchers, and develop strategies to overcome the dilemma posed by this survey's results.

Please call me at (202) 632-1090 if you have any questions.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Kristine', with a stylized flourish at the end.

Kristine M. Gebbie, R.N., M.N.
National AIDS Policy Coordinator

Enclosure



HIV / AIDS PREVENTION

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Office of HIV/AIDS
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FACSIMILE TRANSMISSION

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Date:

1/5/94

No. of Pages

6

(excludes cover sheet)

Subject:

MMWR Draft - HIV Prevention Practices ---

Notes/Comments:

This is the latest draft of the upcoming MMWR article.

The draft is still subject to change before final printing tonight.

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Vaccination Coverage — Continued

Despite ongoing and substantial efforts to improve the vaccine delivery system in the United States, vaccination levels for 2-year-olds remain below 90%. In addition, coverage levels vary by and are substantially lower in some population groups, especially those underserved by the health-care system. The prevention of vaccine-preventable diseases in the United States will require that uniformly high vaccination levels for preschool-aged children be achieved and sustained in all communities.

Differences in vaccination levels among racial/ethnic groups may be influenced by social and cultural phenomena and require special interventions. For example, in Los Angeles, 42% of Hispanic preschool-aged children were fully vaccinated by aged 24 months, compared with 25% of black children, even though Hispanic parents reported lower mean annual family incomes (\$3218 vs \$4596) and lower mean years of education (8.6 years vs 12.5 years) (CDC, unpublished data, 1993). Although this report documents underimmunization as a national problem affecting children in all demographic groups, vaccination coverage is disproportionately lower among racial/ethnic minorities and persons living below the poverty level. Despite limitations in the sample size of the 1992 NHIS that precluded estimation of vaccination coverage of Hispanic populations, the increased incidence of measles among Hispanics before and during the measles resurgence suggests that overall vaccination coverage is also substantially lower in Hispanics than in white non-Hispanics (5-7). Emphasis should be placed on improving coverage of children in racial/ethnic minority groups and of those living in poverty.

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Effectiveness in Disease and Injury Prevention**HIV Prevention Practices of Primary-Care Physicians —
United States, 1992**

Encounters between patients and health-care providers are important opportunities for human immunodeficiency virus (HIV) prevention. In 1991, 15% of U.S. adults reported having been tested for HIV antibody; of these, 55% reported their most recent HIV test had been in a physician's office or a hospital (1). During 1992, CDC and the Health Resources and Services Administration (HRSA) commissioned a national survey to characterize the types of HIV prevention services provided by primary-care

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physicians and barriers to the provision of these services. This report summarizes the results of the survey.

In October 1992, a questionnaire was mailed to 4011* primary-care physicians who were randomly selected from the American Medical Association (AMA) Physician Masterfile, which comprises all physicians in the United States. The sample was stratified by location, race/ethnicity, and specialty. Two categories of location were defined on the basis of the prevalence of acquired immunodeficiency syndrome (AIDS) in metropolitan statistical areas (MSAs): 1) physicians practicing in the 20 MSAs with the highest prevalence and 2) those practicing in the remaining MSAs. Physicians were asked about their risk assessment of new patients; HIV counseling, testing, and treatment practices; and basic understanding and attitudes related to HIV infection and persons with HIV disease. The data were weighted to adjust for unequal probabilities of selection and for the variability of response rates among the strata.

Of the 3735 eligible† physicians, 2545 (68%) responded; of these, 802 were general/family practitioners; 360, pediatrician/adolescent medicine physicians; 683, obstetrician/gynecologists (OB/GYNs); and 700, general internal medicine physicians. Of the 2545 respondents, 76% were men. Two hundred eighty (15%) were aged <35 years; 1042 (41%), 35–44 years; and 1123 (44%), ≥44 years. A total of 1487 (60%) were based in private, single-specialty practices; 442 (18%), in private, multispecialty practices; 299 (12%), in hospitals, public clinics, and community health centers; and 267 (10%), from academia and other institutions. Twenty-four percent of the physicians were located in areas with high prevalences of AIDS.

Almost all (94%) respondents indicated they "usually" or "always" asked new adult (aged ≥19 years) patients about cigarette smoking; however, sexual history-taking was less frequently reported (Table 1): 49% asked about sexually transmitted diseases (STDs), 31% about condom use, 27% about sexual orientation, and 22% about number of sex partners. In comparison, 84% of all physicians asked new adolescent (aged 13–18 years) patients about cigarette smoking, 56% about STDs, 52% about condom use, 34% about number of sex partners, and 27% about sexual orientation. One fourth (25%) of all physicians believed their patients would be offended by questions about their sexual behaviors.

The percentage of physicians who indicated they would "likely" or "very likely" encourage HIV testing varied by patient risk category (Table 2) and ranged from homosexual men with multiple partners and injecting-drug users (95%) to sexually active adolescent patients (40%).

Most physicians (66%) indicated that if HIV testing were indicated for a patient, they would probably provide the test counseling themselves. Factors that either "moderately" or "strongly" influenced physicians to refer for counseling and testing rather than provide it themselves were that counseling was too time consuming (55%), information was insufficient to enable counseling (48%), and they preferred anonymous testing for their patients (42%). Most respondents indicated that their decision to refer was not influenced by inadequate reimbursement (88%) or discomfort with counseling (85%).

Ninety-two percent of physicians indicated that they would counsel an HIV-positive patient to reduce the risk for transmitting HIV. In addition, 76%–81% indicated they

*Represents 3% of the total primary-care physician population.

†Physicians who were not practicing in one of the primary-care specialties, were practicing out of the country, retired, or deceased were deemed ineligible.

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TABLE 1. Percentage* of primary-care physicians who would "usually" or "always" assess risks for new adult and adolescent patients, by risk behavior and physician specialty — United States, 1992

Risk behavior	General/Family practitioner		Pediatrician/Adolescent medicine physician		Obstetrician/Gynecologist		General internal medicine physician		Total			
	Adult (n=766)	Adolescent (n=723)	Adult (n=78)	Adolescent (n=327)	Adult (n=576)	Adolescent (n=653)	Adult (n=889)	Adolescent (n=492)	Adult (n=2188)	Adolescent (n=2185)		
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)		
Cigarette smoking	93 ^b (±1.9)	81 (±2.9)	89 (±7.0)	75 (±4.1)	93 (±2.3)	92 (±2.0)	96 ^b (±1.3)	89 (±2.7)	94 ^b (±1.8)	84 (±1.8)		
Alcohol use	79 ^b (±2.9)	69 (±3.4)	74 (±9.8)	67 (±4.4)	80 (±3.6)	80 (±3.9)	92 (±1.9)	84 (±3.1)	84 ^b (±1.6)	75 (±1.3)		
Contraceptive use	53 (±3.0)	68 (±3.7)	65 (±10.8)	62 (±4.6)	97 (±1.7)	96 (±1.8)	48 (±3.6)	59 (±4.2)	61 (±2.1)	66 (±2.8)		
STDs ^c	34 ^b (±3.4)	43 (±3.8)	44 (±11.3)	49 (±4.7)	82 (±3.7)	85 (±3.4)	45 ^b (±3.5)	54 (±4.3)	49 ^b (±2.2)	56 (±2.1)		
Other illicit drugs	36 ^b (±3.4)	43 (±3.6)	64 (±10.8)	53 (±4.7)	59 (±4.7)	65 (±4.6)	54 ^b (±3.5)	66 (±4.0)	49 ^b (±2.2)	55 (±2.1)		
Inject IV drugs	37 (±3.5)	38 (±3.8)	57 (± 1.1)	46 (±4.7)	60 (±4.6)	65 (±4.6)	55 ^b (±3.5)	63 (±4.1)	58 ^b (±2.2)	51 (±2.1)		
Condom use	21 ^b (±2.9)	41 (±3.6)	50 ^b (± 1.1)	56 (±4.7)	68 ^b (±4.6)	75 (±4.2)	23 (±3.0)	45 (±4.3)	31 ^b (±2.8)	52 (±2.1)		
High-risk sex partner	22 ^b (±2.9)	29 (±3.3)	21 ^b (± 9.3)	32 (±4.4)	39 ^b (±4.6)	46 (±4.8)	28 ^b (±3.2)	40 (±4.2)	28 ^b (±2.8)	36 (±2.1)		
No. sex partners	16 ^b (±2.6)	17 (±3.2)	24 ^b (± 9.5)	30 (±4.4)	37 ^b (±4.6)	52 (±4.8)	18 ^b (±2.7)	33 (±4.0)	22 ^b (±1.8)	34 (±2.8)		
Sexual orientation	18 (±2.7)	18 (±2.8)	13 (± 7.6)	28 (±4.2)	36 ^b (±4.6)	36 (±4.6)	33 (±3.3)	32 (±4.0)	27 (±1.9)	27 (±1.9)		

* Percentages are based on the number of physicians who indicated that they see adult or adolescent patients in their practice.

^b Confidence interval.

^c p<.001 (McNemar test comparing physicians' assessment of adults and adolescents).

^d Sexually transmitted diseases.

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TABLE 2. Percentage of primary-care physicians who would "likely" or "very likely" encourage HIV testing by patient's risk behavior, by physician specialty — United States, 1992

Risk behavior	General/Family practitioner			Pediatrician/Adolescent medicine physician			Obstetrician/Gynecologist			General Internal medicine physician			Total		
	No.	(%)	(95% CI)	No.	(%)	(95% CI)	No.	(%)	(95% CI)	No.	(%)	(95% CI)	No.	(%)	(95% CI)
Homosexual men/ multiple partners	768	(96)	(±1.5)	230	(94)	(±3.1)	74	(88)	(±7.4)	755	(95)	(±1.6)	1827	(95)	(±1.8)
Injecting drug use	760	(95)	(±1.8)	283	(91)	(±3.3)	380	(96)	(±2.0)	750	(96)	(±1.5)	2174	(95)	(±1.9)
Homosexual men	771	(82)	(±1.9)	238	(85)	(±4.5)	73	(88)	(±7.4)	709	(92)	(±1.9)	1839	(91)	(±1.3)
Current/Past STD [†]	764	(76)	(±3.0)	373	(63)	(±4.9)	431	(71)	(±4.3)	764	(79)	(±2.9)	2352	(74)	(±1.8)
Heterosexual men/ multiple partners	767	(66)	(±3.3)	340	(53)	(±5.3)	426	(70)	(±4.3)	760	(72)	(±3.2)	2322	(67)	(±1.9)
Other drug/ alcohol users	783	(52)	(±3.5)	355	(50)	(±5.2)	416	(86)	(±4.5)	768	(57)	(±3.5)	2321	(57)	(±2.8)
Sexually active adolescents	755	(38)	(±3.5)	433	(32)	(±4.4)	427	(40)	(±4.6)	637	(46)	(±3.9)	2253	(46)	(±2.8)

* Confidence interval.
[†] Sexually transmitted disease.

TABLE 3. Percentage* of primary-care physicians who would provide obstetric/gynecologic services for all adult female patients and for all adult female patients with HIV infection, by percentage and physician specialty — United States, 1992

Service	General/Family practitioner (n=515)				Pediatrician/Adolescent medicine physician (n=74)				Obstetrician/Gynecologist (n=575)				General Internal medicine physician (n=277)				Total (n=1541)			
	All	(95% CI)	All	(95% CI)	All	(95% CI)	All	(95% CI)	All	(95% CI)	All	(95% CI)	All	(95% CI)	All	(95% CI)	Total	(95% CI)	All	(95% CI)
Contraceptive	91 [‡]	(±2.5)	76	(±3.7)	66	(±1.2)	50	(±1.2)	99 [‡]	(±1.1)	86	(±3.3)	80 [‡]	(±3.0)	51	(±3.1)	85 [‡]	(±2.8)	73	(±2.5)
Post pregnancy	61 [‡]	(±4.3)	50	(±4.4)	5	(±5.6)	5	(±5.6)	93 [‡]	(±2.5)	76	(±4.2)	16	(±4.4)	12	(±4.0)	99 [‡]	(±2.7)	48	(±2.8)
Emergency gynecology	22	(±3.6)	20	(±3.5)	4	(±4.9)	4	(±4.9)	95 [‡]	(±2.0)	85	(±3.5)	6	(±2.7)	5	(±2.7)	42 [‡]	(±2.7)	37	(±2.7)
Elective gynecology	26 [‡]	(±3.6)	19	(±3.5)	12	(±8.0)	12	(±8.0)	95 [‡]	(±2.2)	72	(±4.3)	7	(±3.0)	5	(±2.6)	44 [‡]	(±2.8)	33	(±2.8)
Prenatal	40 [‡]	(±4.2)	22	(±3.6)	5	(±5.2)	5	(±5.1)	89 [‡]	(±3.8)	58	(±4.8)	5	(±2.6)	3	(±1.9)	47 [‡]	(±2.8)	29	(±2.5)
Delivery	35 [‡]	(±4.2)	20	(±3.5)	9	(±5.6)	9	(±7.0)	87 [‡]	(±3.7)	59	(±4.8)	3	(±3.2)	1	(±1.3)	44 [‡]	(±2.8)	28	(±2.5)
Sterilization on request	12	(±2.9)	10	(±2.7)	0	—	0	—	93 [‡]	(±2.4)	81	(±3.8)	1	(±1.0)	0	—	38 [‡]	(±2.7)	31	(±2.6)
Pregnancy ter- mination	3	(±1.4)	3	(±1.5)	<1	(±1.5)	<1	(±1.1)	27	(±4.3)	25	(±4.2)	0	—	0	—	16	(±1.7)	9	(±1.8)

* Percentages are based on the number of physicians who indicate that they provide obstetric/gynecologic services.
[‡] Confidence interval.
[§] p<.001 (McNemar test comparing services physicians would provide to all women and to women with HIV).

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January 7, 1994

HIV Prevention Practices — Continued

would counsel the patient to notify sex partners, refer the patient to the local health department for assistance with the notification, or both.

Of physicians in OB/GYN practices, 85% indicated they would provide prenatal care and 47% would provide contraceptive services to all women, regardless of their HIV status (Table 3). In comparison, 73% would provide prenatal care and 29% would provide contraceptive services to women with HIV.

Physicians who reported they would refer patients with HIV for medical services indicated the primary reasons for referring were their lack of experience with HIV (83%) and the availability of other providers with more expertise in treating HIV infection (94%). Overall, 68% of physicians indicated they believed they had an obligation to take care of someone infected with HIV, and 87% indicated that professional training could help "increase their comfort in caring for AIDS patients."

Reported by: J. Loft, PhD, W. Marder, PhD, Abt Associates, Inc., Chicago, L. Bresolin, PhD, R. Rinaldi, PhD, American Medical Association, Div of Medicine, Bureau of Health Professions, Health Resources and Svcs Administration, National AIDS Information and Education Program, Office of HIV/AIDS; Women's Health and Fertility Br, Div of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion; Div of Sexually Transmitted Diseases and Human Immunodeficiency Virus Prevention, and Behavioral Studies Section, Behavioral and Prevention Research Br, Div of Sexually Transmitted Diseases and HIV Prevention, National Center for Prevention Svcs, CDC.

Editorial Note: Although primary-care physicians may contribute to the prevention of HIV transmission by counseling patients who are at risk, the findings in this report underscore the substantial number of physicians who are missing opportunities to counsel during encounters with patients. To more effectively use these encounters as a means of prevention, physicians first must be knowledgeable about HIV infection and its transmission (3). In addition, they should be sensitized to the importance of assessing patients' risk for HIV infection and prepared to counsel patients, based on their risk (2). Therefore, medical schools and professional organizations should continue to emphasize HIV/AIDS prevention and treatment as priorities in training new and practicing physicians.

The findings in this report can assist in the development of HIV prevention policy and programs. For example, the reluctance of some physicians to assess the risky sex practices of patients underscores the importance for public health agencies to assist physicians in improving risk assessment and risk-reduction counseling efforts for their patients and patients' partners. These findings may be used by HRSA to improve training strategies and programs for health-care professionals and AMA and other professional organizations to develop training objectives for primary-care physicians.

Finally, the findings in this report can assist in efforts to achieve the national health objectives for the year 2000 regarding HIV prevention (4). These objectives include increasing to at least 80% the proportion of persons with HIV infection who have been tested (objective 18.8); increasing to at least 75% the proportion of primary-care and mental health-care providers who provide age-appropriate counseling on the prevention of HIV and other STDs (objective 18.9); and increasing to at least 50% the proportion of primary-care clinics who screen, diagnose, treat, counsel, and provide (or refer for) partner notification services for HIV infection and bacterial STDs (objective 18.13).

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HIV Prevention Practices — Continued**References**

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Epidemiologic Notes and Reports**Occupational Pesticide Poisoning in Apple Orchards —
Washington, 1993**

During July–December 1993, the Washington Department of Health (WDOH) received and conducted follow-up investigations of 26 reports of occupational illness related to exposure to mevinphos (Phosdrin®), an organophosphate (OP) insecticide. The reports involved illnesses during June 13–August 18, 1993, in persons working in 19 different apple orchards; all involved use of mevinphos to control apple aphids. This report summarizes the results of these investigations by WDOH.

All the affected workers were men ranging in age from 19 to 72 years (median: 35 years). Eighteen (69%) were Hispanic; eight (31%) were non-Hispanic whites. Twenty-three (88%) of the workers were exposed during mixing and loading or application of mevinphos. The other three (12%) were exposed to mevinphos residues (two while working in close proximity to a recently treated orchard and one after reentering an orchard within 24 hours after it was sprayed).

Of the 23 workers exposed during mevinphos preparation or application, 22 had worked on ground applications and used an airblast† system; one worked on an aerial application. All 23 sought medical attention in emergency departments. Twenty-one workers had systemic manifestations characteristic of OP poisoning, including nausea (81%), vomiting (62%), dizziness (43%), visual disturbances (43%), weakness (38%), abdominal pain (29%), headache (24%), sweating (24%), and excessive salivation (5%). Two persons had conjunctivitis only, which was attributed to direct ocular exposure to mevinphos.

Of the seven workers who were hospitalized, four required intensive care. Plasma and/or red blood cell cholinesterase activity was depressed to at least 25% below the lower limit of normal in 14 (88%) of the 16 workers tested; in addition, for one worker the level of activity was depressed 97%, and for three, 75%–90%. Atropine was administered to all seven hospitalized workers and to four of the 14 workers with systemic illness who were treated in the emergency department and released. Eighteen (86%)

* Use of trade names is for identification only and does not imply endorsement by the Public Health Service or the U.S. Department of Health and Human Services.

† This application technique involves the use of a tractor-drawn sprayer with oscillating nozzles that are oriented in a flat plane and direct the spray mixture into the canopy of the trees for complete coverage.



August 3, 1993

Dear Colleague:

On August 6, the Centers for Disease Control and Prevention (CDC) will be releasing a *Morbidity and Mortality Weekly Report (MMWR)* containing an article about condom effectiveness. This article is co-authored by CDC, the Food and Drug Administration (FDA), and the National Institutes of Health (NIH), and updates the 1988 *MMWR* article on the same subject.

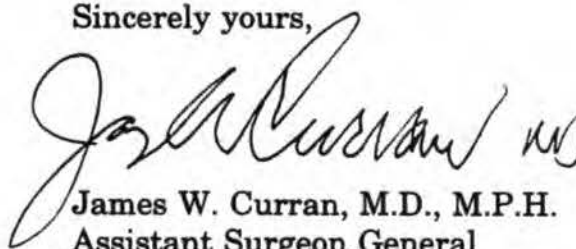
There has been a great deal of media attention lately on the topic of condom effectiveness in preventing the transmission of HIV. For this reason, CDC is anticipating an increased level of interest in this particular *MMWR* article.

As advocates of public health, we have a responsibility to promote HIV prevention through factual disclosure of information using the best science available. The joint efforts of CDC, FDA, and NIH have provided compelling evidence that further substantiates our earlier findings and recommendations about condom effectiveness.

Enclosed is an information kit designed to update you about recent scientific findings on condom effectiveness. This material and information may help in your efforts to inform the public and prevent new sexually transmitted diseases and human immunodeficiency virus infections in your state and local communities.

A referral list is included in the information kit. If you need additional information or clarification, please do not hesitate to contact the CDC programs listed.

Sincerely yours,



James W. Curran, M.D., M.P.H.
Assistant Surgeon General
Associate Director for HIV/AIDS

Enclosure

Facts about

Condoms and Their Use in Preventing HIV Infection and Other STDs

With more than 1 million Americans infected with HIV, most of them through sexual transmission, and an estimated 12 million other sexually transmitted diseases occurring each year in the United States, effective strategies for preventing these diseases are critical.

The proper and consistent use of latex condoms when engaging in sexual intercourse—vaginal, anal, or oral—can greatly reduce a person's risk of acquiring or transmitting STDs, including HIV infection. In fact, *recent studies provide compelling evidence that latex condoms are highly effective in protecting against HIV infection when used properly for every act of intercourse.*

Latex condoms are highly effective when used consistently and correctly—new studies provide additional evidence that condoms work

The protection that proper use of latex condoms provides against HIV transmission is most evident from studies of couples in which one member is infected with HIV and the other is not, i.e., "discordant couples." In a study of discordant couples in Europe, among 123 couples who reported *consistent* condom use, *none* of the uninfected partners became infected. In contrast, among the 122 couples who used condoms *inconsistently*, 12 of the uninfected partners became infected.

As these studies indicate, condoms must be used *consistently* and *correctly* to provide maximum protection. *Consistent use* means using a condom from start to finish with each act of intercourse. *Correct condom use* should include the following steps:

- Use a new condom for each act of intercourse.
- Put on the condom as soon as erection occurs and before any sexual contact (vaginal, anal, or oral).
- Hold the tip of the condom and unroll it onto the erect penis, leaving space at the tip of the condom, yet ensuring that no air is trapped in the condom's tip.
- Adequate lubrication is important, but use only water-based lubricants, such as glycerine or lubricating jellies (which can be purchased at any pharmacy). Oil-based lubricants, such as petroleum jelly, cold cream, hand lotion, or baby oil, can weaken the condom.
- Withdraw from the partner immediately after ejaculation, holding the condom firmly to keep it from slipping off.

Myths About Condoms

There continues to be misinformation and misunderstanding about condom effectiveness. The Centers for Disease Control and Prevention (CDC) provides the following updated information to address some common myths about condoms. This information is based on findings from recent epidemiologic, laboratory, and clinical studies.

► *Myth #1: Condoms don't work*

Some persons have expressed concern about studies that report failure rates among couples using condoms for pregnancy prevention. Analysis of these studies indicates that the large range of efficacy rates is related to incorrect or inconsistent use. The fact is: latex condoms are highly effective for pregnancy prevention, but only when they are used properly. Research indicates that only 30 to 60 percent of men who claim to use condoms for contraception actually use them for every act of intercourse. Further, even people who use condoms every time may not use them correctly. Incorrect use contributes to the possibility that the condom could leak from the base or break.

► *Myth #2: HIV can pass through condoms*

A commonly held misperception is that latex condoms contain "holes" that allow passage of HIV. Although this may be true for natural membrane condoms, laboratory studies show that intact latex condoms provide a continuous barrier to microorganisms, including HIV, as well as sperm.

► *Myth #3: Condoms frequently break*

Another area of concern expressed by some is about the quality of latex condoms. Condoms are classified as medical devices and are regulated by the FDA. Every latex condom manufactured in the United States is tested for defects before it is packaged. During the manufacturing process, condoms are double-dipped in latex and undergo stringent quality control procedures. Several studies clearly show that condom breakage rates in this country are less than 2 percent. Most of the breakage is due to incorrect usage rather than poor condom quality. Using oil-based lubricants can weaken latex, causing the condom to break. In addition, condoms can be weakened by exposure to heat or sunlight or by age, or they can be torn by teeth or fingernails.

Preventing HIV Infection and Other STDs

Recommended Prevention Strategies

Abstaining from sexual activity is the most effective HIV prevention strategy. However, for individuals who choose to be sexually active, the following are highly effective:

- Engaging in sexual activities that do not involve vaginal, anal, or oral intercourse
- Having intercourse only with one uninfected partner
- Using latex condoms correctly from start to finish with each act of intercourse

Other HIV Prevention Strategies

► *Condoms for Women*

The FDA recently approved a female condom, which will soon be available in the United States. A limited study of this condom as a contraceptive indicates a failure rate of about 26 percent in 1 year. Although laboratory studies indicate that the device serves as a mechanical barrier to viruses, further clinical research is necessary to determine its effectiveness in preventing transmission of HIV.

► *Spermicides*

The role of spermicides in preventing HIV infection is uncertain. Condoms lubricated with spermicides are not likely to be more effective than condoms used with other water-based lubricants. Spermicides added to the tip of the condom are also not likely to add protection against HIV.

Making Responsible Choices

In summary, sexually transmitted diseases, including HIV infection, are preventable, and individuals have several responsible prevention strategies to choose from. But the effectiveness of each one depends largely on the individual. Those who practice abstinence as a prevention strategy will find it effective only if they always abstain. Similarly, those who choose any of the other recommended prevention strategies, including condoms, will find them highly effective if used correctly and consistently.

For further information, contact:

CDC National AIDS Hotline: 1-800-342-AIDS
Spanish: 1-800-344-7432
Deaf: 1-800-243-7889

CDC National AIDS Clearinghouse
P.O. Box 6003
Rockville, MD 20849-6003

Commentary: Condoms and HIV/STD Prevention—Clarifying the Message

ABSTRACT

In the United States and throughout the world, the majority of human immunodeficiency virus (HIV) infections are sexually transmitted. An estimated 12 million other sexually transmitted diseases occur annually in the United States. Avoiding sexual intercourse altogether or restricting sex to partners known to be uninfected will prevent infection; this needs to be promoted as the most effective strategy. Studies show that correct and consistent use of latex condoms is highly effective in preventing sexually transmitted HIV infection and other sexually transmitted diseases. The effectiveness of condoms depends on individual behavior leading to correct and consistent use. Further studies are needed to maximize the use and effectiveness of condoms for those who choose to be sexually active as well as to develop and evaluate other methods, particularly those more under the control of women. In the interim, our prevention message should be clear: When used correctly and consistently, condoms are highly effective; when used otherwise, they are not. (*Am J Public Health*. 1993;83:501-503)

William L. Roper, MD, MPH, Herbert B. Peterson, MD, and James W. Curran, MD, MPH

More than 1 million Americans have been infected with the human immunodeficiency virus (HIV), and more than 250 000 have already been reported with acquired immunodeficiency syndrome (AIDS). In the United States and throughout the world, the majority of HIV infections are sexually transmitted. Furthermore, an estimated 12 million other sexually transmitted diseases occur each year in the United States, resulting in mortality and serious morbidity for many thousands of adults and children.

How can we reduce the sexual transmission of HIV and other diseases? Avoiding sexual intercourse altogether or restricting sex to partners known to be uninfected will prevent infection, and this needs to be widely and consistently promoted as the most effective strategy. However, many people at risk for HIV infection and other sexually transmitted diseases do not adopt these behaviors. Studies of sexually active persons show that correct and consistent use of latex condoms is highly effective in preventing HIV infection and other sexually transmitted diseases, including gonorrhea, chlamydia, genital ulcers, and herpes simplex virus infection.¹

Two issues generally surface in the debate over advocating condom use in the prevention of HIV infection: One concerns the concepts of efficacy and effectiveness, the other the fear that making condoms available will encourage early sexual activity among adolescents and extramarital sex among adults. We deal with each argument in turn.

Condoms are not 100% efficacious and a high degree of individual compliance is required for condoms to be effective in use. Critics of the role of condoms in prevention cite worst-case-scenario estimates of condom efficacy and focus on results from studies that include persons who are inconsistent condom users. The problems associated with insisting on providing information only about perfectly effective prevention techniques have been recently reviewed.² Assertions that minimize the potential efficacy of condoms may be self-fulfilling prophecies, because condoms may be used less consistently by those who

do not believe them to be effective. However, Fineberg has developed a mathematical model that predicts that consistent condom use could prevent nearly half of the sexually transmitted HIV infections in persons with one sexual partner and over half of HIV infections in persons with multiple partners.³ Such a reduction could help interrupt the propagation of the epidemic. Therefore, promoting more widespread understanding of condoms' efficacy and advocating their consistent use by those who choose to be sexually active is crucial to protecting people from HIV infection and to slowing the spread of the HIV and sexually transmitted disease epidemics.

The effectiveness of consistent condom use is evident from recent epidemiologic studies of couples in which one partner has HIV infection. In three such prospective studies, consistent condom use provided a 70% to 100% reduction in the risk of transmitting HIV infection.⁴⁻⁶ One of these studies⁶ makes the critical distinction between the benefits of consistent and inconsistent condom use. In that study, from the European Study Group on Heterosexual Transmission of HIV, 563 couples from nine European Community countries were evaluated. Overall, 12% of the male partners and 20% of the female partners of HIV-infected persons became infected. However, among the 24 couples who consistently used condoms, none of the partners became infected. By contrast, among the 44 couples who reported inconsistent use of condoms, six female partners became infected. For condoms to provide a high degree of protection against HIV infection, they must be used correctly and consistently; inconsistent condom use provides an unacceptably low rate of protection.

The importance of compliance is illuminated by an analogy with pregnancy

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Editor's Note. See related editorial by Hein (p 492) in this issue.

prevention programs. Although typical pregnancy rates for couples who use condoms are as high as 10% to 15%,^{7,8} rates are estimated to be as low as 2% for couples who use condoms correctly and consistently.⁷ This discrepancy makes clear that any condom strategy must rely on the continuing behavior of the condom user. It is necessary, therefore, to integrate consistent condom use into our HIV prevention strategies.

Despite the widespread understanding that HIV infection is transmitted sexually, most sexually active Americans at risk for acquiring HIV infection have intercourse without using condoms. For example, in San Francisco, only 6% of heterosexual males with multiple sex partners reported always using condoms; a much higher proportion (48%) of gay and bisexual men reported always using condoms.⁹ In another study, only about 20% of sexually active American women reported that their male partners used condoms.¹⁰ But even among these couples, condom use was inconsistent: only one in five who reported condom use said that they were used at last intercourse.¹⁰

The factors that contribute to the low use of condoms and the ready acceptance of risk of HIV infection or other sexually transmitted diseases are complex and not completely understood. Among heterosexual men and women and gay and bisexual men in San Francisco,⁹ sexual communication between partners and enjoyment of intercourse with condoms were the only statistically significant correlates of condom use. Although in that study Black and Hispanic women were less likely to report condom use by their partners than were White women,⁹ national data suggest that there are no significant differences in reports of condom use by partners of Black women, non-Hispanic White women, and Hispanic women once social and demographic variables are accounted for.¹⁰ This suggests that poverty and culture are important determinants of condom use.

After social and demographic factors are controlled for, women with multiple partners are less likely than those with one partner to report consistent condom use, perhaps because of the burden of negotiating condom use with many partners.¹⁰ Also, decisions regarding condom use may be complicated by strategies for pregnancy prevention. In Philadelphia¹¹ and Baltimore,¹² women who had undergone surgical sterilization were less likely than nonsterilized women to report condom use. It is possible that if the woman is

protected against pregnancy, the motivation of the woman or the man to use a condom may be reduced.

We turn now to the second issue often raised against advocacy of the condom. Many persons assert that those who promote condom use to prevent HIV infection appear to be condoning sexual intercourse outside of marriage among adolescents as well as among adults. Some information relevant to this possibility is now at hand. For example, recent data from Switzerland suggest that a public education campaign promoting condom use can be effective without increasing the proportion of adolescents who are sexually active.^{13,14} From January 1987 to October 1991, self-reported consistent condom use among persons aged 17 to 30 years increased from 8% to 52% in association with the campaign.¹³ By contrast, the proportion of adolescents (aged 16 to 19 years) who had sexual intercourse did not increase over that 3-year period.¹⁴

A clear message about condoms may in fact have been obscured by controversy over providing condoms for adolescents in schools while at the same time trying to discourage these same young people from initiating sexual activity. Sexual activity among adolescent women and men in the United States has increased steadily since the 1970s.¹⁵⁻¹⁷ The AIDS epidemic has brought new dimensions of complexity and urgency to the debate over adolescent sexual activity. Some have urged abstinence as the only solution; others champion condom use as the most practical public health approach.

There must be a common ground. We should all be able to agree that premature initiation of sexual activity carries health risks. Therefore, we must exercise leadership in encouraging young people to postpone sexual activity. Adolescents are bombarded with messages encouraging them to "do it." We need to strive for a climate supportive of young people who are not having sex and so help to create a new health-oriented social norm for adolescents and teenagers about sexuality.

As we proceed toward this objective, we must be mindful that many will continue to engage in sexual activity. It is essential that these youngsters receive the message that they must practice safer sex and use condoms. The message that those who initiate or continue sexual activity must reduce their risk through correct and consistent condom use needs to be delivered as strongly and persuasively as the message "Don't do it." Protection of the

individual and the public health will depend on our ability to effectively combine these messages.

Scientific studies are urgently needed to further understanding of how to maximize the use and effectiveness of condoms, to clarify the effectiveness of other barrier methods, and to develop and evaluate other preventive methods. In particular, studies should address the male, female, and couple determinants of consistent condom use, including the crucial role of peers and the need for a better understanding of economic and cultural variables. Because the male condom must be used by the man, a woman at risk must, in part, rely on her male partner(s) to protect her. Therefore, to enhance the ability of women to reduce their risks, further evaluation of mechanical and chemical barriers—including female condoms—is needed, as is the development of new methods over which women have greater control.¹⁸⁻²¹ Finally, studies should evaluate how condom use is related to the use of other methods to prevent unintended pregnancy so as to address the overall reproductive health needs of both partners.

For adolescents and adults alike who have multiple sex partners, partners who engage in high-risk behaviors, or partners whose infection status is unknown, the risk of HIV infection or other sexually transmitted diseases can be dramatically reduced by correct and consistent condom use. Our prevention message should be clear on this point: When used correctly and consistently, condoms are highly effective; when used otherwise, they are not. □

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Man-To-Woman Sexual Transmission of HIV: Longitudinal Study of 343 Steady Partners of Infected Men

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Summary: To study incidence and risk factors of heterosexually transmitted HIV infection, we followed a cohort of 343 seronegative women, stable, monogamous partners of infected men whose only risk of acquiring HIV was sexual exposure to the infected partner. Nineteen seroconversions occurred in 529.6 person years (py) of observation, yielding an incidence rate of 3.6 per 100 py. The incidence rate was 7.2 per 100 py among women who did not always use or never used condoms and 1.1 among those who always used them [relative risk (RR) 6.6, 95% confidence interval (CI) 1.9–21.9]. Anal sex was associated with a risk increase in only those women not always using condoms (RR 1.4, 95% CI 0.4–4.8). No seroconversions were observed among 22 women using oral contraceptives. One of the women using intrauterine devices seroconverted. In couples who did not always use condoms, seroconversions occurred more frequently in partners of men with symptomatic diseases, with a low CD4⁺ cell number (<400 per mm³) or with a detectable p24 antigen. In couples not always using condoms and where the man had a low CD4⁺ cell count, the joint presence of blood viral antigens and AIDS symptoms conditioned a fivefold increased risk of seroconversion of the woman (RR 5.4, CI 1.4–20.3). At multivariate analysis, women with longer relationships (≥1 year) showed a lower risk of seroconversion (RR 0.3, CI 0.1–0.8), and those partners of men positive for p24 antigen in serum had an increased risk of seroconversion (RR = 4.0, CI 0.1–0.8). **Key Words:** Heterosexually transmitted HIV—Seroconversion—Risk factors.

Several cross-sectional studies on heterosexual HIV transmission have been conducted on steady partners of infected men (1–11) and on prostitutes

or women with multiple partners (12–18). These surveys consistently showed a protective role of condom use (9,11–15) and a risk associated with anal sex (11,19), but they also reported different prevalence rates (15–50%) and inconsistencies in other potential risk factors. Most studies failed to show any relationship between infection and duration or frequency of sexual exposure (9,11,20). It

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remained unclear whether sexually transmitted diseases (STDs) or genital infections, signs of HIV infection or factors that enhance the transmission of the virus, are indicators of high-risk sexual behavior (11,16,21,22). Different results were reported on the infectiousness of the infected partner, since only few studies found a direct relationship between stage of HIV disease and risk of transmission (3,23).

In cross-sectional studies it is generally impossible to quantify the duration of exposure of the unaffected partner. In fact, the duration of infectivity of the index case is generally unknown, and the date of transmission from the index case to his/her partner cannot be retrospectively assessed. The risk of transmission and the role of potential cofactors can be better detected by longitudinal studies on stable, monogamous couples discordant for HIV. In these couples the duration of exposure is a controlled factor, and the possibility of biases related to the presence of multiple partners is lessened. However, these couples are expected to have a low rate of seroconversion because of personal and media counseling (24), and a large group must be followed up to provide reliable estimates.

We have previously reported the results of a cross-sectional study of 364 women whose only exposure to HIV was sexual intercourse with an HIV-infected man (25). We have continued to follow those couples who were discordant for HIV infection to determine the incidence and risk factors for man-to-woman sexual transmission.

METHODS

The couples were recruited in 16 participating centers: eight hospital departments of infectious diseases, five intravenous drug user outpatient clinics, and three centers for HIV surveillance. All of the HIV-infected subjects attending the centers (who were or had previously been intravenous drug users or recipients of blood or blood derivatives as well as men reporting homosexual contacts) were asked about their steady heterosexual partners. Each partner who was not already known to be HIV-infected was invited for an interview and screening tests. The presence of serum antibodies against HIV was assessed by immunoenzymatic methods using commercially available kits. Positive sera were tested again with a second immunoenzymatic test and confirmed by Western blot. Seroconversion was defined as the development of a positive ELISA test and Western blot according to international criteria. Information on intravenous drug use, sexual intercourse with other subjects at risk, blood transfusions or blood-derivative therapies, and prostitution was collected in order to exclude subjects with risk factors other than sexual exposure to their infected partner.

Between February 1, 1987, and May 30, 1991, 368 women seronegative at the first visit were asked to return to the center

at least every 6 months for interview and to repeat the HIV antibody test. Of these women, 343 (98.2%) came for at least one follow-up visit and were included in this study.

At each visit a structured interview was administered to the woman by the attending physician. The questionnaire elicited information about history of STDs, frequency and type of sexual intercourse, and contraceptive methods used since the last follow-up visit. The last available questionnaire and the man's concurrent status were used for the analysis.

Ethical Considerations

Men and women were separately advised on risk and prevention of sexual HIV transmission by the same physician. The use of condoms was strongly and repeatedly recommended. Since the results of the cross-sectional study suggested an increased risk of HIV infection for women using intrauterine devices (IUDs), it was suggested that they have the device removed.

Analysis

Incidence of seroconversion was evaluated by the person-year method, and seroconversion rates were derived (26). The time of seroconversion was conventionally considered as the midpoint between the first seropositive and the last seronegative test. Relative risks (RR) were estimated as incidence rate ratios, and confidence intervals (CI) of the relative risks were calculated with Wolff's method (27,28).

For the study of risk factors, frequency of intercourse was divided into two categories: twice a week or less and more than twice a week. The type of sexual intercourse was dichotomized as ever or never anal. Condom use was grouped into three frequency categories: always, not always, and never. A history of STDs was never reported. The only reported genital disease was vaginitis (diagnosed by a physician or described as vaginal discharges). The last available information on the infected partner (CD4⁺ cell count, disease stage, p24 antigen serum positivity) was collected from the standard medical records used by all centers. Men were classified according to disease stage into symptomatic (CDC group IV) and asymptomatic (CDC groups II and III).

Condom use prevents the contact of infected semen with genital mucosa and is expected to act as an effective modifier of other risk factors. For this reason two analyses were carried out, separately for women always using seropositives (consistent use) and not always or never using condoms (not consistent use).

A multivariate analysis using Cox's proportional hazard model was carried out, including all the variables considered as potential risk factors for transmission, to estimate the independent contribution of each variable to the risk of infection.

RESULTS

The general and clinical characteristics of the 343 couples included in the study are shown in Table 1. The couples had a mean duration of their relationship of ~4 years, and the women were mainly between 20 and 30 years old (Table 1). Most men acquired the infection through intravenous drug use

TABLE 1. General and clinical characteristics of the women and of the infected men

Mean duration (months) of the relationship at enrollment (range)	44.3 (1-134)
Mean age (years) of the women (range)	25.5 (15-51)
Mean CD4 ⁺ cell number per mm ³ of the men (range)	134 (10-1,346)
Men with AIDS	47 (13.7%)
Men treated with zidovudine	92 (26.8%)
Man's method of infection	
intravenous drug use	270 (78.7%)
other	73 (21.3%)
Mean follow-up time (months) to seroconversion of the women (range)	14.1 (2-36)

(78.7%). Forty-seven men (13.7%) had a symptomatic infection, four became symptomatic during follow-up, 92 (26.8%) were treated with zidovudine. Nineteen women seroconverted after a mean time from inclusion of 14.1 months. The first seroconversion was observed 2 months after inclusion and the last one after 3 years.

Risk of Seroconversion and Condom Use

The 343 women who had at least one follow-up visit made up a total of 529.6 person years (py) of observation. The median follow-up was 24 months (range 1-55). The incidence rate based on the 19 observed seroconversions was 3.6 per 100 py. Thirty-eight women, followed for a total of 41.7 py altogether suspended sexual intercourse with their infected partners at or just before the time of enrollment: no seroconversions occurred in this group, which was excluded from further analyses. Among the remaining 305 women, the yearly seroconversion rate was 3.9%.

Three seroconversions were noted among couples always using condoms (Table 2), and most seroconversions (16/19, 84%) occurred in couples never or not always using this device. The risk of infection was increased sixfold among women with nonconsistent use of condoms (never or not always) (RR 6.4, CI 1.9-21.9).

TABLE 2. Incidence rates (IR) and relative risks (RR) of seroconversion by condom use

Condom use	N	py ^a	HIV ⁺	IR	RR (95% CI) ^a
Never	79	139.3	8	5.7	1
Not always	55	82.5	8	9.7	1.7 (0.6-4.5)
Always	171	266.0	3	1.1	0.2 (0.1-0.7)

^a 95% confidence interval.

^b Person years at risk of acquiring the infection.

Relationship Length, Sexual Behavior, and Vaginitis

Women who had, at the time of inclusion, been in their relationships ≤ 1 year had a higher incidence of seroconversion when compared with women with longer relationships (Table 3). This finding was observed in both groups of condom use. In the group with nonconsistent condom use, a small and not statistically significant risk increase was seen for higher frequencies of sexual intercourse and for a history of vaginitis. In the same group, anal sex was associated with a 40% risk increase that did not reach statistical significance.

Twenty-two women used oral contraceptives (11 in association with condoms), and none of them seroconverted. Despite counseling two women continued to use intrauterine devices, and the one who did not use condoms seroconverted.

Man's Disease Stage, CD4⁺ Cell Count, and p24 Antigen Positivity

Women in the group of nonconsistent condom use had incidence rates about three times higher when exposed to symptomatic partners or those with low CD4⁺ cell count (Table 4). A detectable p24 antigen in the man was associated with increased risks both in condom users and nonusers.

Analysis of Couples with Inconsistent Use of Condoms and Where the Man Has a Low CD4⁺ Cell Number

Since a low CD4⁺ cell number and the presence of detectable HIV-1 antigens in blood are frequently associated with advanced stages of disease, we focused the analysis on 87 couples with nonconsistent use of condoms and where the infected man had a CD4⁺ cell count < 400 . As shown in Table 4, this subgroup was 28.5% of the entire population but contributed to 14 of 19 (73.7%) of the observed seroconversions (incidence rate 9.3 per 100 py). Taking partners of men asymptomatic and negative to HIV antigen (incidence rate 4.7 per 100 py) as the reference category, the incidence was about three times higher among partners of symptomatic or antigen-positive men (12.4 and 13.3, respectively, per 100 py). The joint presence of the antigen and of symptoms of AIDS had an additive effect on the incidence rate of seroconversion of the woman (25.2 per 100 py).

TABLE 3. Incidence rates (IR) and relative risks (RR) of seroconversion by relationship duration, sexual behavior, history of vaginitis, and oral contraceptive use

Variables	Condom use									
	Not always—never					Always				
	N	py ^a	HIV ⁺	IR	RR (95% CI) ^b	N	py ^a	HIV ⁺	IR	RR (95% CI) ^b
Relationship length										
≤1 yr	33	39.2	4	10.2	1	26	40.5	3	7.4	1
>1 yr	101	181.8	12	6.6	0.7 (0.2–2.0)	145	225.4	0	0	0
Frequency of intercourse										
<2 weeks	74	129.3	9	6.7	1	100	159.4	1	0.6	1
>2 weeks	60	92.6	7	7.6	1.1 (0.4–2.9)	71	106.6	2	1.9	3.0 (0.3–32.9)
Anal intercourse										
No	113	189.8	13	6.9	1	159	246.1	3	1.2	1
Yes	21	32.1	3	9.3	1.4 (0.4–4.8)	12	20.0	0	0	0
Vaginitis										
No	123	200.2	14	7.0	1	162	246.5	3	1.2	1
Yes	11	21.6	2	9.2	1.3 (0.3–5.8)	9	19.6	0	0	0
Oral contraceptive use										
No	123	203.7	16	7.9	1	160	251.0	3	1.2	1
Yes	11	18.1	0	0	0	11	15.0	0	0	0

^a Person years at risk of acquiring the infection.^b 95% confidence interval.

Multivariate Analysis

The use of condoms during all sexual intercourse was associated with a 90% risk reduction. Women with relationships lasting >1 year had a 70% statistically significant risk reduction. A low and nonsignificant risk increase was found for women reporting intercourse two or more times weekly and for those practicing anal sex. Among the indicators of a partner's infectiousness, the increased risk of infection in female partners of men positive for HIV p24 was higher than in univariate analysis (RR 4.0, CI 1.2–13.3). A borderline statistically significant risk increase remained for female partners of symptomatic men.

DISCUSSION

The results of this study confirm in a prospective setting the protective effect of condom use. The annual seroconversion rate was 5.7% and 9.7%, respectively, in couples never or not always using condoms and was reduced to 1.1% in those who always used this device. Inconsistent use of condoms, in this study, had no effect on the risk of acquiring the infection, since no significant difference was noted between those never or not always using condoms.

Condom use reduced so dramatically the number of seroconversions that the role of many reported risk factors was not recognizable in the group of

TABLE 4. Incidence rates (IR) and relative risks (RR) of seroconversion by characteristics of the infected man

Variables	Condom use									
	Not always—never					Always				
	N	py ^a	HIV ⁺	IR	RR (95% CI) ^b	N	py ^a	HIV ⁺	IR	RR (95% CI) ^b
Disease stage										
Asymptomatic	97	160.7	7	4.4	1	122	190.9	2	1.1	1
Symptomatic	37	61.1	9	14.7	3.4 (1.3–9.1)	39	75.2	1	1.3	1.2 (0.1–14.0)
Viral p24 antigen										
Negative	117	200.9	12	6.0	1	147	233.3	2	0.9	1
Positive	17	30.0	4	13.3	2.2 (0.7–6.9)	24	32.4	1	3.1	3.4 (0.4–40.0)
CD4 ⁺ per mm ³										
>400	47	72.1	2	2.7	1	77	120.6	3	2.5	1
≤400	87	149.8	14	9.4	3.4 (0.8–14.8)	94	145.5	0	0	0

^a Person years at risk of acquiring the infection.^b 95% confidence interval.

TABLE 5. Incidence rates (IR) and relative risks (RR) of seroconversion of female sexual partners of men with CD4⁺ counts <400 per mm³ not using condoms

Characteristics	N	py ^a	HIV ⁺	IR	RR (95% CI) ^b
Asymptomatic, p24 antigen negative	47	84.6	4	4.7	1
Symptomatic, p24 antigen negative	6	8.1	1	12.4	2.6 (0.3–23.3)
Asymptomatic, p24 antigen positive	25	45.2	6	13.3	2.8 (0.8–10.0)
Symptomatic, p24 antigen positive	9	11.9	3	25.2	5.4 (1.2–23.8)

^a Person years at risk of acquiring the infection.

^b 95% confidence interval.

women who always used them. In couples with inconsistent use of condoms we have found a high infectiousness of partners with symptomatic disease or those positive to p24 antigen. Furthermore, when the man had a CD4⁺ cell count <400 cells per mm³, the concurrent presence of symptoms of disease and of p24 antigen in serum carried an additive effect on incidence. Based on the incidence estimates of this study, one-quarter of the women not using condoms who are partners of symptomatic men positive to p24 antigen and with a CD4⁺ cell count of ≤400 are expected to seroconvert in 1 year of sexual exposure. This result suggests that counseling must be an ongoing process. In fact, the reduction of CD4⁺ cells, symptoms of AIDS, and p24 antigenemia are signs of disease progression, and over time all infected subjects are expected to increase their infectiousness in parallel with the evolution of the disease.

Women seronegative at the time of inclusion after long-standing relationships (>1 year) with an infected man had 70% less risk of seroconversion. Some women might carry latent infections that do not express antibodies (29); in this case, an imbalance in their number between the two groups with shorter and longer relationships could explain the difference in the risk observed in this study. However, asymptomatic carriers have been described to be rare, and even their existence has been questioned (30–32). On the other hand, women still seronegative after long-standing relationships with infected men might represent a subpopulation with less susceptibility to infection. A lower susceptibility might be due to genetic factors, which have been hypothesized on the basis of variations in CD4⁺ receptor molecules on the surface of T cells (33). Molecular variations in HIV might influence its capacity to infect a new host (34), and women remain-

ing seronegative after long-term relationships might be partners of men carrying viral strains with less of a sexual infectivity.

The practice of anal sex was associated with a risk increase only in women reporting that they never or rarely used condoms during sexual intercourse. This result confirms that this practice has to be discouraged in partners of seropositive men. However, it also suggests that the effect of high-risk practices can be lessened or completely prevented by the use of condoms.

Small and nonsignificant risk increases were observed among women reporting a higher frequency of sexual intercourse. This result does not agree with what we observed in the cross-sectional part of the study, where women reporting sexual intercourse more than two times weekly had a twofold risk increase (25). A lack of consistency of the risk of transmission per each single sexual act with an infected person (35,36) has been noted in other studies. The lack of association between seroconversion and frequency of intercourse in this study might stem from the small number of seroconversions, which prevents reliable estimates when the investigated variable is not strongly associated with the risk of seroconversion.

The results on oral contraceptives and IUDs, although somewhat anecdotal, agree with our previ-

TABLE 6. Relative risks (RR) of seroconversion estimated by multivariate analysis (Cox's proportional hazard model)

Variables	RR (95% CI) ^a
Relationship length	
≤1 year	1
>1 year	0.3 (0.1–0.8)
Condom use	
Not always–never	1
Always	0.1 (0.0–0.5)
Frequency of intercourse	
<2 weeks	1
≥2 weeks	1.3 (0.5–3.7)
Anal intercourse	
No	1
Yes	1.1 (0.3–4.4)
Vaginitis	
No	1
Yes	0.8 (0.2–3.57)
Partner's disease	
Asymptomatic	1
Symptomatic	2.6 (0.9–7.1)
Partner's p24 antigen	
Negative	1
Positive	4.0 (1.2–13.3)
Partner's CD4 ⁺ count	
≥400	1
<400	1.2 (0.4–4.0)

^a 95% confidence interval.

ous findings in the cross-sectional part of the study (25,37). No seroconversion was observed among the 22 women using oral contraceptives, whereas one of the two women who used IUDs seroconverted. As condoms are not completely successful in preventing unwanted pregnancies, it is advisable to use oral contraceptives and not IUDs in association with condoms when maximal contraceptive efficacy is required in women sexually exposed to HIV.

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From the Surgeon General, US Public Health Service

Condom Use for Prevention of Sexual Transmission of HIV Infection: In 1989, a Public Health Service committee including representatives from the Centers for Disease Control and Prevention (CDC), the National Institutes of Health (NIH), and the Food and Drug Administration (FDA) reviewed with the Surgeon General the scientific data based on which condoms were recommended as part of a national strategy to prevent transmission of the human immunodeficiency virus (HIV). Although the committee concluded that only sexual abstinence or mutual monogamy between uninfected partners completely eliminate the risk of sexual transmission of HIV, it also concluded that latex condoms are highly effective barriers and should be used consistently by all persons who have multiple partners or have a primary partner who is infected or whose serostatus is unknown.

Recently, members of the committee met again with the Surgeon General to review data from the epidemic, new studies on condom efficacy, and statistical studies projecting the impact of condom use on the epidemic. The following updated data support the 1989 recommendation and indicate that proper use of latex condoms provides a high degree of protection against the sexual transmission of HIV.

Status of the Epidemic

Infection with HIV continues to increase in the United States and heterosexual transmission plays an increasingly important role. The proportion of cases of the acquired immunodeficiency syndrome (AIDS) attributable to heterosexual transmission increased by 21% during 1991, making heterosexual transmission the category with the largest percentage increase in AIDS cases from 1990 through 1991.

In Vitro Studies of Latex Condoms

One NIH study that evaluated latex condoms using scanning electronic microscopy found no holes even on magnification at $\times 2000$. Although the inability of this investigation to identify holes in latex condoms is reassuring, microscopic holes in latex condoms can occur. The FDA conducts periodic testing of condom lots using the water-leak test, which can identify holes as small as 10 μm . Recent FDA data indicate that the average batch of condoms has a water-leak rate of 0.3%.

Fortunately, there are obstacles to the passage of HIV through a microscopic hole. A free virus, which is non-motile, would pass through a hole only if it were associated with a cell that moves or if it were moved by hydrostatic pressure through the hole. Monocytes and lymphocytes that may carry HIV are 10 to 15 μm in diameter, too large to pass through the microscopic holes detected by routine testing. An FDA study simulated free HIV in fluid under pressure and found that most condoms leaked no fluid at all, and that even the worst-performing condom reduced estimated viral exposure by 10 000-fold. This evaluation was reassuring, especially since several extreme assumptions were made; for example, the titer of HIV-sized particles used was 100 million times the titer of HIV in semen.

Epidemiologic and Statistical Studies

Although laboratory data now demonstrate the barrier effectiveness to HIV of condoms, one must go beyond the laboratory to look at effectiveness during actual use. Studies of people who use condoms for contraception report failure rates ranging from less than one per 100 to 16 per 100 users per year. The importance of proper condom use is evident from a recent report of Great Britain's Oxford Family Planning Cohort study, in which condom-user failure rates for pregnancy among married, more experienced users were predicted to be as low as six per 1000 users per year.

Since 1989, both statistical modeling and prospective observational studies have provided evidence that the relative risk of HIV infection among condom users is equivalent to that for pregnancy, but that the absolute risk of acquiring HIV infection from condom failure is lower than the comparable risk for pregnancy. The results of two recent observational studies from the highest-risk group (discordant couples, in which one partner is HIV-seropositive and one is not) have now demonstrated a relative risk reduction for HIV of 80% or better. Based on an underlying seroconversion rate of 20 in 100 discordant couples and an 80% risk reduction, four seroconversions in 100 discordant couples using condoms are expected per year.

Consistent with this projection, a recently published prospective study from Zaire identified an annualized condom-

user HIV failure rate of 3.1 in 100 in discordant couples. Other studies in discordant couples have shown no seroconversions among consistent condom users, and condom-user HIV failure rates for the general population have been projected to be two to four seroconversions per 100 000 condom users. Not only are the failure rates for condom users low but, independent of the level of HIV in the general population, 20%, 40%, or 80% of all new HIV seroconversions in the United States will be avoided if 25%, 50%, or 100%, respectively, of persons use condoms consistently and correctly.

New Behavioral Studies

Because proper condom use is key to preventing the sexual transmission of HIV, it is imperative to better understand the determinants of correct condom use. Some studies are under way and more are planned. One early finding is that motivation plays a key role. It is unreasonable to expect that people at risk will be highly motivated to systematically use condoms unless they believe that condoms will be highly effective if they do so. We have a responsibility to let them know that a compelling case now exists for condom effectiveness—if condoms are used consistently and correctly.

Conclusion

Our message must be clear and simple. First, the only sure way to avoid the risk of sexual exposure to HIV is to have sex in a monogamous relationship with an uninfected partner or to abstain. Insertive sex with an infected partner or one of unknown serostatus is unsafe. If one engages in these unsafe practices, a latex condom should be used every time from start to finish. Doing so is a highly effective way to reduce the risk of sexual exposure to HIV. Instructions for proper condom use are contained in the FDA brochure *Condoms and Sexually Transmitted Diseases... Especially AIDS*, which is available through the National AIDS Hotline, (800) 342-AIDS.

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ABSTRACT

HETEROSEXUAL TRANSMISSION OF HIV IN EUROPEAN COHORT OF COUPLES

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Objective: To determine risk factors and rates of HIV transmission in serologically discordant couples receiving regular safe-sex counselling.

Methods: From 1987 to 1991, 563 couples were recruited from 9 countries in a cross-sectional study. 378 HIV(-) partners recruited in settings where follow-up was achievable were included in the prospective study. At each interview, partners were tested, interviewed and counselled. Only partners presenting no risk factors for HIV infection other than sexual contacts with the index (HIV(+) partner) were included.

Results: The follow-up rate was 80.4% (304/378). 128 couples (42%) stopped sexual contacts (less than 3 months after inclusion for 59). Mostly because of death or severe disease of the index. 245 couples still having sexual contacts 3 months after inclusion were followed for a median of 22 months. 123 (50.2%) couples used condoms for each episode of vaginal or anal intercourse. No seroconversions occurred among these 123 partners (95% CI: 0-1.5/100 person-years). 12 seroconversions occurred among the remaining 122 partners (seroconversion rate = 5/100 person-years (95% CI: 2.6-8.8), or 1.2 per 1000 unprotected contacts (95% CI: 0.6-2.1). Cumulative rates of seroconversion at 24 months (SR) were compared using Kaplan-Meier survival analysis. Among irregular condoms users, SR were similar whatever the frequency of condom use, and the sex of the partner (12.5% for females versus 11.0% for males). For partners of symptomatic (or with $T4 < 200/\text{mm}^3$) index cases, SR was 36.7%, compared to 8.5% for partners of asymptomatic index cases with $T4 > 200/\text{mm}^3$ ($p < 0.01$). SR were different ($p = 0.05$) between partners reporting 1) no STD (9.5%), 2) non-ulcerative STD (25.0%), and 3) ulcerative STD (40.0%). The SR for female partners were different ($p = 0.02$) according to the frequency of sperm ejaculation by male index cases: no ejaculation (0%), ejaculation for about half of sexual contacts (6.7%) and nearly always ejaculation (29.7%).

Conclusion: 1. No seroconversion occurred in regular condom users. 2. The observed transmission rate of 1.2/1000 unprotected contacts should be interpreted with caution since it may greatly vary according to the presence or absence of risk factors: Advanced stage of infection for the index and partner's STD were found to increase the risk, whilst avoidance of sperm ejaculation showed some protective effect.

MNWR

- 589** Update: Barrier Protection Against HIV Infection and Other Sexually Transmitted Diseases
- 597** Nosocomial Enterococci Resistant to Vancomycin — United States, 1989–1993

MORBIDITY AND MORTALITY WEEKLY REPORT

Update: Barrier Protection Against HIV Infection and Other Sexually Transmitted Diseases

Although refraining from intercourse with infected partners remains the most effective strategy for preventing human immunodeficiency virus (HIV) infection and other sexually transmitted diseases (STDs), the Public Health Service also has recommended condom use as part of its strategy. Since CDC summarized the effectiveness of condom use in preventing HIV infection and other STDs in 1988 (1), additional information has become available, and the Food and Drug Administration has approved a polyurethane "female condom." This report updates laboratory and epidemiologic information regarding the effectiveness of condoms in preventing HIV infection and other STDs and the role of spermicides used adjunctively with condoms.*

Two reviews summarizing the use of latex condoms among serodiscordant heterosexual couples (i.e., in which one partner is HIV positive and the other HIV negative) indicated that using latex condoms substantially reduces the risk for HIV transmission (2,3). In addition, two subsequent studies of serodiscordant couples confirmed this finding and emphasized the importance of consistent (i.e., use of a condom with each act of intercourse) and correct condom use (4,5). In one study of serodiscordant couples, none of 123 partners who used condoms consistently seroconverted; in comparison, 12 (10%) of 122 seronegative partners who used condoms inconsistently became infected (4). In another study of serodiscordant couples (with seronegative female partners of HIV-infected men), three (2%) of 171 consistent condom users seroconverted, compared with eight (15%) of 55 inconsistent condom users. When person-years at risk were considered, the rate for HIV transmission among couples reporting consistent condom use was 1.1 per 100 person-years of observation, compared with 9.7 among inconsistent users (5).

Condom use reduces the risk for gonorrhea, herpes simplex virus (HSV) infection, genital ulcers, and pelvic inflammatory disease (2). In addition, intact latex condoms provide a continuous mechanical barrier to HIV, HSV, hepatitis B virus (HBV), *Chlamydia trachomatis*, and *Neisseria gonorrhoeae* (2). A recent laboratory study (6) indicated that latex condoms are an effective mechanical barrier to fluid containing HIV-sized particles.

Three prospective studies in developed countries indicated that condoms are unlikely to break or slip during proper use. Reported breakage rates in the studies were 2% or less for vaginal or anal intercourse (2). One study reported complete slippage

*Single copies of this report will be available free until August 6, 1994, from the CDC National AIDS Clearinghouse, P.O. Box 6003, Rockville, MD 20849-6003; telephone (800) 458-5231.

Barrier Protection — Continued

off the penis during intercourse for one (0.4%) of 237 condoms and complete slippage off the penis during withdrawal for one (0.4%) of 237 condoms (7).

Laboratory studies indicate that the female condom (Reality™[†])—a lubricated polyurethane sheath with a ring on each end that is inserted into the vagina—is an effective mechanical barrier to viruses, including HIV. No clinical studies have been completed to define protection from HIV infection or other STDs. However, an evaluation of the female condom's effectiveness in pregnancy prevention was conducted during a 6-month period for 147 women in the United States. The estimated 12-month failure rate for pregnancy prevention among the 147 women was 26%. Of the 86 women who used this condom consistently and correctly, the estimated 12-month failure rate was 11%.

Laboratory studies indicate that nonoxynol-9, a nonionic surfactant used as a spermicide, inactivates HIV and other sexually transmitted pathogens. In a cohort study among women, vaginal use of nonoxynol-9 without condoms reduced risk for gonorrhea by 89%; in another cohort study among women, vaginal use of nonoxynol-9 without condoms reduced risk for gonorrhea by 24% and chlamydial infection by 22% (2). No reports indicate that nonoxynol-9 used alone without condoms is effective for preventing sexual transmission of HIV. Furthermore, one randomized controlled trial among prostitutes in Kenya found no protection against HIV infection with use of a vaginal sponge containing a high dose of nonoxynol-9 (2). No studies have shown that nonoxynol-9 used with a condom increases the protection provided by condom use alone against HIV infection.

Reported by: Food and Drug Administration, Center for Population Research, National Institute of Child Health and Human Development, National Institutes of Health. Office of the Associate Director for HIV/AIDS; Div of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion; Div of Sexually Transmitted Diseases and HIV Prevention, National Center for Prevention Svcs; Div of HIV/AIDS, National Center for Infectious Diseases, CDC.

Editorial Note: This report indicates that latex condoms are highly effective for preventing HIV infection and other STDs when used consistently and correctly. Condom availability is essential in assuring consistent use. Men and women relying on condoms for prevention of HIV infection or other STDs should carry condoms or have them readily available.

Correct use of a latex condom requires 1) using a new condom with each act of intercourse; 2) carefully handling the condom to avoid damaging it with fingernails, teeth, or other sharp objects; 3) putting on the condom after the penis is erect and before any genital contact with the partner; 4) ensuring no air is trapped in the tip of the condom; 5) ensuring adequate lubrication during intercourse, possibly requiring use of exogenous lubricants; 6) using only water-based lubricants (e.g., K-Y jelly™ or glycerine) with latex condoms (oil-based lubricants [e.g., petroleum jelly, shortening, mineral oil, massage oils, body lotions, or cooking oil] that can weaken latex should never be used); and 7) holding the condom firmly against the base of the penis during withdrawal and withdrawing while the penis is still erect to prevent slippage.

Condoms should be stored in a cool, dry place out of direct sunlight and should not be used after the expiration date. Condoms in damaged packages or condoms that show obvious signs of deterioration (e.g., brittleness, stickiness, or discoloration) should not be used regardless of their expiration date.

[†]Use of trade names is for identification only and does not imply endorsement by the Public Health Service or the U.S. Department of Health and Human Services.

Barrier Protection — Continued

Natural-membrane condoms may not offer the same level of protection against sexually transmitted viruses as latex condoms. Unlike latex, natural-membrane condoms have naturally occurring pores that are small enough to prevent passage of sperm but large enough to allow passage of viruses in laboratory studies (2).

The effectiveness of spermicides in preventing HIV transmission is unknown. Spermicides used in the vagina may offer some protection against cervical gonorrhea and chlamydia. No data exist to indicate that condoms lubricated with spermicides are more effective than other lubricated condoms in protecting against the transmission of HIV infection and other STDs. Therefore, latex condoms with or without spermicides are recommended.

The most effective way to prevent sexual transmission of HIV infection and other STDs is to avoid sexual intercourse with an infected partner. If a person chooses to have sexual intercourse with a partner whose infection status is unknown or who is infected with HIV or other STDs, men should use a new latex condom with each act of intercourse. When a male condom cannot be used, couples should consider using a female condom.

Data from the 1988 National Survey of Family Growth underscore the importance of consistent and correct use of contraceptive methods in pregnancy prevention (8). For example, the typical failure rate during the first year of use was 8% for oral contraceptives, 15% for male condoms, and 26% for periodic abstinence. In comparison, persons who always abstain will have a zero failure rate, women who always use oral contraceptives will have a near-zero (0.1%) failure rate, and consistent male condom users will have a 2% failure rate (9). For prevention of HIV infection and STDs, as with pregnancy prevention, consistent and correct use is crucial.

The determinants of proper condom use are complex and incompletely understood. Better understanding of both individual and societal factors will contribute to prevention efforts that support persons in reducing their risks for infection. Prevention messages must highlight the importance of consistent and correct condom use (10).

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Barrier Protection — Continued

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Nosocomial Enterococci Resistant to Vancomycin — United States, 1989–1993

As part of continual surveillance for antibiotic resistance among pathogens associated with nosocomial infections, a recent analysis of data reported to CDC's National Nosocomial Infections Surveillance (NNIS) system demonstrated a 20-fold increase in the percentage of enterococci associated with nosocomial infections that are resistant to vancomycin from January 1, 1989, through March 31, 1993. Many of these strains are resistant to all available antimicrobial agents. This report summarizes that analysis.

The NNIS system began in 1970 when selected U.S. hospitals routinely reported nosocomial infection surveillance data for aggregation into a national data base; it is the only source of national data on the epidemiology of nosocomial infections in the United States. Isolates of *Enterococcus* sp. from nosocomial infections reported to the NNIS system from January 1, 1989, through March 31, 1993, were examined. Up to four pathogens could be reported for each episode of nosocomial infection. Multiple isolates of the same species from the same patient were not reported. Information on site of isolation (e.g., respiratory tract or urinary tract), place of acquisition of infection (intensive-care unit [ICU] or non-ICU), medical school affiliation of hospital (teaching or nonteaching), hospital size, and the hospital's susceptibility testing method was obtained for each infection and/or isolate.

Of 16,571 nosocomial *Enterococcus* isolates, 10,961 (66.2%) were tested for vancomycin susceptibility; 278 (2.5%) were resistant. The percentage of nosocomial enterococci resistant to vancomycin increased from 0.3% in 1989 to 7.9% in 1993 ($p < 0.0001$, chi-square test). Among patients in ICUs with nosocomial infections, the percentage of enterococcal isolates resistant to vancomycin increased from 0.4% in 1989 to 13.6% in 1993 ($p < 0.0001$) (Figure 1). Vancomycin resistance varied by site of infection: gastrointestinal (e.g., intraabdominal abscess), skin and soft tissue, and bloodstream sites had the highest percentage of resistant nosocomial enterococci (7.8%, 4.1%, and 3.8%, respectively).

Of the 10,961 nosocomial enterococcal isolates tested for vancomycin susceptibility and reported to the NNIS system, 1881 were from primary bloodstream infections; 323 (17.2%) patients died. Of the patients with primary bloodstream infection, mortality was significantly higher in those with vancomycin-resistant isolates compared with those with vancomycin-susceptible isolates (26 [36.6%] of 71 versus 297 [16.4%] of 1810; $p < 0.0001$, chi-square test). Insufficient data on comorbidity were obtained to determine the relation of the bloodstream infection to death in these patients.

Vancomycin-resistant nosocomial enterococci have been reported from nine of 33 states with NNIS hospitals; the highest percentages were from NNIS hospitals in New York, Pennsylvania, and Maryland (8.9%, 5.6%, and 3.6%, respectively). Vancomycin resistance also varied by teaching affiliation of hospital: 14 (0.6%) of 2154 nosocomial enterococci at nonteaching hospitals were resistant versus 264 (3.0%) of 8807 at teaching hospitals ($p < 0.0001$, chi-square test). The percentage of vancomycin resistance varied also by number of beds in the hospital: none of

Let me help you.

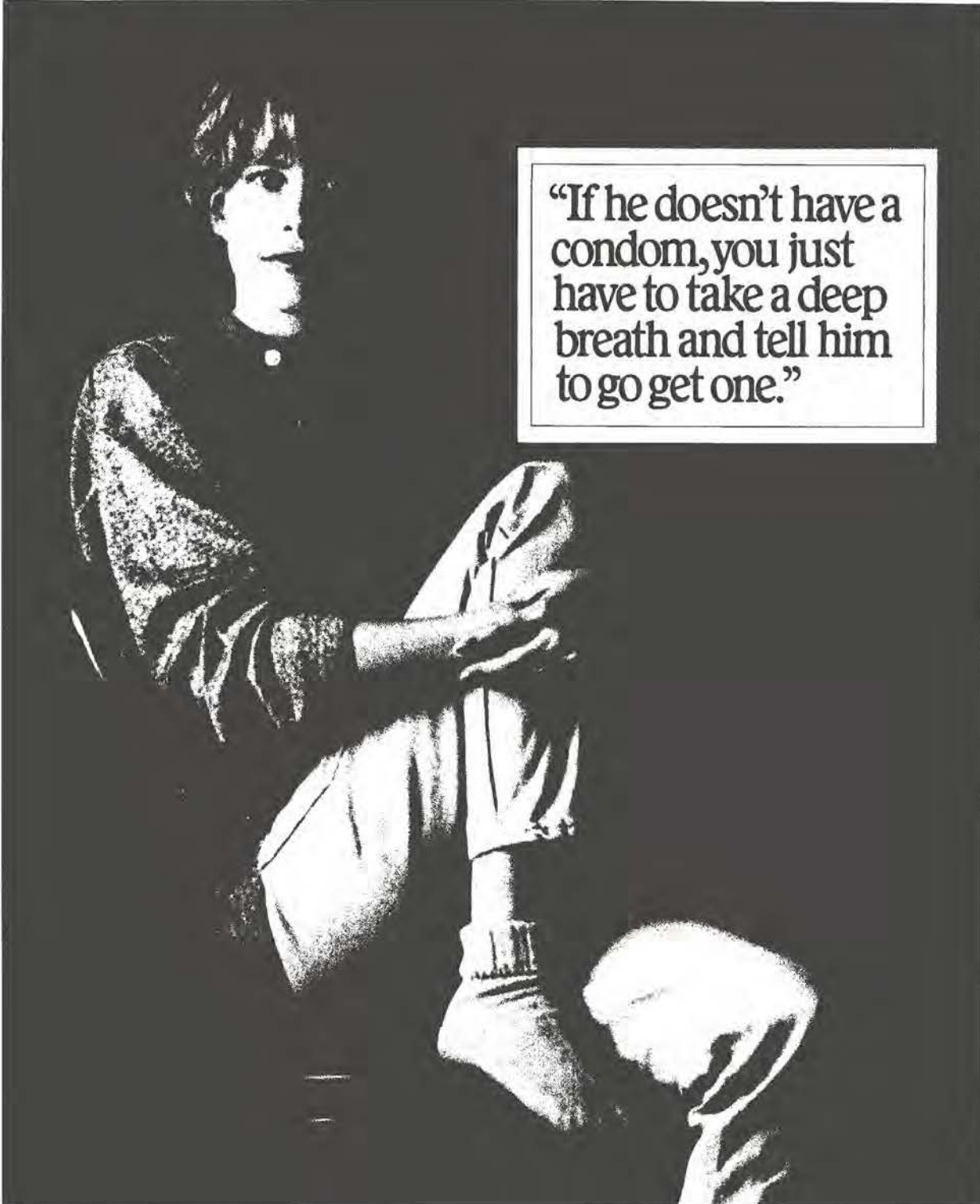
**If you want him to use a condom,
this is all you have to say.**

If you'd like information about condoms, HIV, and HIV prevention, call 1-800-342-AIDS.

AMERICA
RESPONDS
TO AIDS



U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES
Public Health Service



"If he doesn't have a condom, you just have to take a deep breath and tell him to go get one."

It's not the easiest thing in the world to say.

But these days, you have to. If you're dating someone who doesn't like condoms, talk before having sex. Explain how you feel. Offer to help during the awkward moments. And if this doesn't work, ask yourself, is it worth the risk?

For more information on condoms and AIDS, call 1-800-342-AIDS for answers you can count on.

AMERICA
RESPONDS
TO AIDS



U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES
Public Health Service

What Have You Got Against A Condom?



The simple act of putting on a condom can save your life, if they're used properly and every time you have sex. For more information about AIDS and condoms, call 1-800-342-AIDS.

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U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES
Public Health Service

**TALKING POINTS & SUPPORTING DATA:
MMWR ON THE EFFECTIVENESS OF CONDOMS**

1. **Latex condoms are highly effective against the sexual transmission of HIV when used consistently and correctly during sexual intercourse.**
 - New, compelling studies demonstrate that latex condoms are highly effective when used correctly and consistently. (MMWR)
 - Two studies present the strongest evidence to date that latex condoms are highly effective in preventing HIV. The studies monitored people at extremely high risk by studying couples in which one person was HIV-positive and the other was uninfected. With repeated exposures to HIV, condoms proved to be highly effective for couples using condoms consistently and correctly.
 - Of 123 couples studied from 1987 to 1991, in which one of the partners was HIV-infected and they consistently and correctly used condoms, **none** of their partners became infected. However, among 122 couples who inconsistently used condoms, 10% (12 of 122) became infected. (DeVincenzi)
 - In an Italian study of uninfected female partners of HIV-infected men, only 2% (3 of 171) of the women whose male partners always used condoms during sexual activity became infected. However, 15% (8 of 55) of inconsistent condom users became infected. (Saracco)
2. **Latex condoms must be used consistently and correctly in order to be highly effective in preventing the transmission of HIV.**
 - Consistent use means using a condom from start to finish with **every** act of intercourse.
 - Correct use involves a few simple steps.
 - Use a new condom **every time** you have sex -- anal, oral or vaginal.
 - Put the condom on after the penis is erect and before it touches any part of your partner's mouth, anus, or vagina. (If the penis is uncircumcised, pull the foreskin back before putting on the condom).

- To put the condom on, pinch the reservoir tip of the condom, then unroll it all the way down the penis. (If the condom does not have a reservoir tip, pinch the tip enough to leave a half-inch space for semen to collect.) Always insure that no-air is trapped in the tip. It can cause the condom to break.
 - If you feel a condom break during sex, stop, pull out, and put on a new condom.
 - After ejaculation and while the penis is still erect, hold the rim of the condom and carefully withdraw so no semen is spilled.
 - Using lubricants: you may want to apply additional lubrication to reduce the possibility the condom will break. You should only use **water-based** lubricants, such as glycerin or over-the-counter lubricating jelly.
- Never use "oil-based" products with condoms, such as cooking or vegetable oils, baby oil, hand lotion, or petroleum jelly. They can weaken the latex and cause the condom to break.
- Storing condoms: Condoms should be stored in a drawer or closet -- somewhere cool, dry and out of direct sunlight. Changes in temperature, rough handling or age can make the latex brittle or gummy. Never use condoms that are damaged or discolored, brittle, or sticky. And don't store them in your wallet or car glove compartment for a long time.

3. Latex condoms are excellent quality products.

- Recognizing that latex condoms are highly effective, in April 1993 the FDA announced that labeling for latex condoms should inform the public that: "if used properly, latex condoms will help to reduce the risk of transmission of HIV infection and many other STDs." Other contraceptives are required to carry a statement that they do *not* protect against HIV infection and other STDs.
- Studies by the FDA Center for Devices and Radiological Health confirm that latex condoms are a highly effective mechanical barrier to HIV-sized particles.
- During the manufacturing process, condoms are double-dipped in latex and undergo stringent quality control procedures.

4. **As a medical device, latex condoms are rigorously tested to ensure that they meet federal and industry quality assurance standards.**
 - Every condom manufactured in the United States is tested by manufacturers for defects, including holes or areas of thinning, before it is packaged.
 - The FDA randomly tests condoms produced domestically or imported into the U.S. to ensure that they meet quality assurance requirements. The standard test used by the FDA is the water-leak test, in which the condom is filled with 300 ml of water, stretching it to as much as four times its original size. If FDA finds that more than 4 per 1000 condoms leak, the lot is not allowed to be sold here.
5. **When condoms fail, it is usually due to user error.**
 - Most condom breakage is due to incorrect usage rather than poor condom quality. Common reasons for breakage include teeth or fingernail tears, using oil-based lubricants, using old condoms, exposure to heat, reusing condoms, unrolling the condom before putting it on, or leaving air in the tip.
 - There is no indication that condom breakage rates are different for anal or vaginal intercourse.
 - Many Americans don't know that latex condoms provide better protection from HIV than natural membrane condoms, and don't understand that they should be used from start to finish, or that only water-based lubricant should be used. It is vital to step up our efforts in educating the public about correct condom use.
6. **Both refraining from intercourse with infected partners and consistent and correct condom usage are effective prevention strategies.**
 - A two-pronged AIDS prevention approach is needed in this country -- with messages encouraging both abstinence and the correct and consistent use of condoms. Both strategies can be highly effective if practiced all the time.
 - We know that one of the key determinants of condom use is the belief that condoms work. Stated another way, sexually active individuals will be less motivated to use condoms if they don't believe that they will be effective barriers. Therefore, it is important that sexually active individuals get the message that latex condoms provide effective protection from HIV if they are

used correctly and consistently. We have a responsibility to let the public know that a compelling case now exists for condom use as a prevention strategy -- if condoms are used consistently and correctly.

- A clear message about condoms is not incompatible with the message to young people that initiation of sexual activities at an early age carries health risks. In fact, recent data from Switzerland demonstrates that a public education campaign promoting condom use can be effective without increasing the proportion of adolescents who are sexually active. (Hausser)

QUESTIONS & ANSWERS: MMWR ON THE EFFECTIVENESS OF CONDOMS

	QUESTION	ANSWER
1	What about studies that suggest condoms have as high as a 15.7% contraceptive failure rate?	These studies do not distinguish between inconsistent and consistent condom use. Recent studies show that pregnancy rates are estimated to be as low as 2% for couples who use condoms consistently and correctly. (Trussell) Similarly, in two studies involving extremely high-risk couples in which one partner was HIV-infected and the other was not, condoms were found to be highly effective when used consistently and correctly.
2	What does highly effective mean?	We know from the discordant couple studies that in extreme risk situations, the consistent use of condoms provides a significant reduction in risk. (Refer back to Talking Point #1 about discordant couple studies)
3	Isn't it naive to think that people can use condoms consistently and correctly?	No, people can use condoms correctly by following a few simple steps (See talking points). Discordant couple studies clearly demonstrate that consistent <u>and</u> correct condom use is possible if the couple is highly motivated.

4	Can't condoms break?	Condoms rarely break. In those cases where breakage occurs, it is usually related to user error rather than condom quality. Using old condoms is a leading cause of breakage. Other common reasons for breakage include fingernail tears, exposure to heat or sunlight, reusing condoms, or unrolling the condom before putting it on. Use of oil-based lubricants such as baby oil, vegetable oil, petroleum jelly, and cold cream can weaken latex condoms considerably and cause them to break. Mineral oil, a common ingredient of hand lotions can cause a 90% decrease in condom strength after as little as 60 seconds of exposure. (Voeller)
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5	How are condoms regulated and tested?	Condoms are classified as medical devices, regulated by the FDA, and manufactured according to national standards. Every condom sold in the U.S. is tested by the manufacturer electronically for defects, including holes or areas of thinning, before it is packaged. During the manufacturing process, condoms undergo stringent quality testing. In addition, the FDA randomly tests condoms using the water-leak test, in which a condom is filled with 300 ml of water. If FDA finds that more than four per 1000 condoms leak, the lot is not allowed to be sold here.
6	Don't condoms have microscopic holes that allow HIV to pass through?	Condoms are required to undergo demanding tests, including tests for holes before they are sold. If any holes are found, the condoms are discarded. Laboratory studies show that intact latex condoms provide a continuous barrier to microorganisms as well as sperm.
7	Researchers studying surgical gloves made out of latex found "channels of 5 microns that penetrated the entire thickness of the glove."	The quality of latex condoms is higher than that of latex gloves. Condoms are made differently than gloves. Condoms are doubled-dipped in latex while gloves are only single-dipped. Condoms also undergo much more stringent quality control procedures than gloves.

8	What about a University of Texas Medical Branch study that estimated condoms to be only 69% effective in preventing HIV in heterosexual couples?	The University of Texas did not conduct a new study. It is a meta-analysis of existing studies. That is, it applied statistical methods to previously published studies. This method has several flaws. First, the study only cites data collected prior to July 1990, overlooking recent studies that provide some of the most compelling evidence that condoms are effective. Second, the study did not distinguish between consistent and inconsistent use of condoms.
9	Why did the FDA approve the female condom if it has proven to be only 74% effective in recent studies?	The female condom is the first barrier method of contraception available within the control of the female partner which provides some level of protection against pregnancy and STDs, including HIV. As a very new product, limited studies have been conducted on its effectiveness against STDs and HIV. However, the clinical data do suggest that female condoms provide some level of protection against some STDs and HIV. PHS is currently undertaking additional studies to assess the effectiveness of female condoms against HIV and other STDs as well as to develop additional methods of contraception for women.

10	Isn't abstinence the only foolproof way to prevent HIV infection?	Refraining from intercourse with infected partners is the most effective HIV prevention strategy. This is an especially important message for young people. There is little disagreement that premature initiation of sexual activity carries health risks. We need to strive for a climate supportive of young people who are choosing to delay sexual activity. Periodic abstinence, however, carries with it certain risks. A 1988 National Survey of Family Growth found abstinence to have a contraceptive failure rate of 26% when not practiced consistently. So, in abstinence -- as in condom use -- consistency is key.
11	Why are you changing your position on the effectiveness of condoms used in conjunction with a spermicide?	Scientific studies show that condoms are more effective than many people previously thought and that spermicides may be less effective than had been hoped. CDC recommendations actually are not changing significantly. We are reinforcing the recommendation to use condoms. We don't encourage the use of spermicides except as an adjunct to condoms and for those whose goal is contraception.

12	Is the federal government advocating/condoning sexual intercourse outside of marriage?	There are many sound public health reasons to abstain from sexual intercourse, such as preventing STDs, including HIV, and unwanted pregnancy. However, the federal government does not determine what is or is not morally acceptable behavior. From a public health perspective, if a person chooses to have sexual intercourse, using condoms correctly every time during sex is the best way to prevent HIV infection.
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13	Why are you releasing this information now? Aren't people already using condoms?	We are releasing this information now because recently presented scientific data sheds new light on this important public health issue. We feel the public needs this information, and the MMWR is the most rapid means to disseminate it to health professionals and the public. Most sexually active people are not using latex condoms every time they have sex. For example, in San Francisco, only 6% of heterosexual males with multiple sex partners reported always using condoms. In another study, only about 20% of sexually active American women reported that their male partners used condoms. A national survey of heterosexual adults with multiple sex partners found only 17% used condoms all of the time (Catania). One of the key determinants of condom use is the belief that they work. Therefore, it is important for sexually active individuals to get the message that latex condoms can provide effective protection from HIV if they are used correctly and consistently.
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14	Don't education programs about condoms result in increased sexual activity among adolescents?	No. Several studies have shown that levels of sexual activity among young adults decreased or remained the same after sex education programs which included information about condoms. In a recent Swiss study of 16-19 year olds, an AIDS prevention effort focusing on condom use did not increase the level of sexual activity or the number of sex partners of young people. However, condom use did increase among those already sexually active. A 1992 study reported in Family Planning Perspectives found that AIDS education and sex education resulted in decreases in the number of sex partners and the frequency of intercourse. Having received education was also associated with more consistent condom use.
15	In choosing a condom, is there any way to know which brand is best? Do some condoms have higher quality standards than others?	All of the condoms marketed in the U.S. today meet federal quality assurance standards. The CDC recommends latex condoms for prevention of HIV and STDs. Consumers should look for the word "latex" on the package. Color, shape, and packaging are all issues of personal preference. All are effective.

16	What are you going to do now that you have this information? Is the government going to start a condom promotion campaign? Are you going to release ads on condoms?	The CDC is now planning the next stage of its HIV Public Information Program. It will include the implementation of a 5-year prevention marketing program to prevent the sexual transmission of HIV among sexually active young Americans. The CDC is faced with opposition regarding condoms from both sides of the issue. Some people want the CDC to promote only abstinence as a strategy to prevent HIV and not to discuss condoms at all. Others say the CDC is not talking enough about condoms. The CDC's education programs are driven by science. As the nation's leading prevention agency, our mission is to prevent disease and protect the health of all Americans. For people who are sexually active, it is our duty to provide them with accurate, scientific information about the effectiveness of condoms against STDs, including HIV when they are used correctly and consistently. CDC-supported public health and education programs provide young Americans with information about the actions they can take to reduce their risk of acquiring HIV infection, including delaying and abstaining from sexual activity.
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17	Why are you promoting this information now?	Two recent studies -- especially the discordant couple studies -- have provided the data to make a compelling new case for condom effectiveness.
18	Why are you promoting condoms even though they're not foolproof?	Because they substantially reduce the risk of HIV infection during vaginal, anal or oral sex. Similarly, we promote many other health behaviors that significantly reduce risk, but do not entirely eliminate it. For example, we promote wearing bicycle helmets which are 85% effective at reducing injury or death and wearing seat belts which are 40-55% effective at reducing injury.

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WAYS TO LOCALIZE THE MMWR

TIP SHEET

The MMWR provides a wonderful opportunity to work with local media to help frame support and awareness around your organization's HIV/AIDS public information efforts. The scientific findings outlined in the report can be used to generate local media attention and can be used to reinforce your agency's public information efforts.

Take advantage of media opportunities

Be proactive. Contact a local print or broadcast reporter to "pitch" a local story idea that incorporates the report's findings and features an agency program or service. Discuss the need for more education and prevention, cite local statistics reflecting an increase in the rate of HIV infection among different populations, such as young people. Convey how the report's findings have positive implications for the state and local HIV/AIDS education and prevention programs.

Make a statement. Develop a statement and release it along with the enclosed CDC statement to local media, AIDS service organizations and other interested constituencies outlining your agency's policy on condom efficacy.

Utilize experts. Develop a list of local experts that a reporter or journalist can use to generate story ideas and or quotes. Develop the list to include representatives from local AIDS service organizations, state and local health department spokespersons, and science and public health officials.

Use the MMWR materials to create tie-in opportunities

Release a local study. Use the findings to build support for education and prevention programs that link HIV/AIDS education and awareness with condom education. Develop and release a local report about the current status and success of HIV/AIDS programs with recommendations that call for condom education including information about condom efficacy and the need for providing the public with more information about condoms.

Make it known. Provide AIDS service organizations, state government offices and departments (e.g. public affairs), public interest groups, and other supportive constituencies with the MMWR update to make sure that they too can use it to bolster their HIV/AIDS communication efforts. Find out if there are upcoming events, health fairs, town meetings or conferences where the MMWR materials can be distributed.

CONVEY A NEW PERSPECTIVE: DEVELOP AN OP-ED

TIP SHEET

Op-ed's are an excellent tool to help frame your organization's message about the effectiveness of condoms and other HIV/AIDS education and prevention issues. To place an op-ed piece in a local newspaper or magazine isn't complicated -- the key to success is making sure that the key ingredients - timeliness, a fresh perspective and factual information -- are presented clearly to an editor.

An opposite-editorial, or "op-ed" as it is commonly referred to, is the page adjacent to (opposite) the editorial page in newspapers and is used for columns and opinion articles by newspaper staffers, syndicated columnists, guest writers and for the newspaper readership. Most newspapers consider this page as belonging to their readers and look for articles that reflect local concerns, issues and opinions. Here are some quick tips for successfully developing an op-ed.

DO

- ✓ Contact the newspaper or magazine that you want to submit the piece to and find out:
 - Who the piece should be sent to. Typically, this a staff person who works in the editorial department.
 - What the deadline is for submitting the piece, this will vary among daily, weekly or monthly news publications.
 - The recommended length and format for the piece. Most newspapers require the piece to be typed and doublespaced. The typical length of an op-ed is 800 words.
- ✓ State your position or opinion upfront in the first paragraph. Editors look specifically for pieces that convey clearly a position or opinion.
- ✓ Make it timely. Examine the newspaper to see what topics are currently being covered by the newspaper. Generally editors look for pieces that reflect local concerns and issues or national topics that have a local angle and offer variation on issues. It is unlikely for a newspaper to print similar op-ed viewpoints on the same day or even during the same week.
- ✓ Express your viewpoint in a way that adds to public understanding or offers a fresh perspective. Reviewers look for pieces that are informative, factual and provide reasoning to back up your opinion. Being contrary or using humor is fine, as long as it reinforces your lead.
- ✓ Remember to submit your name, professional affiliation, job title and phone number.

DON'T

- ✗ Use jargon or acronyms that won't be understood by the general reader.
- ✗ Use an op-ed as a forum to personally attack an individual or organization.
- ✗ Expect to be paid. Newspapers don't compensate readers for sending in a piece.
- ✗ Don't be surprised if your piece appears edited. This is what editors do.

FOR MORE INFORMATION

For additional information on the contents of this kit, please contact:

National AIDS Information and Education Program

(404) 639-0956

(404) 639-0973 (fax)

Centers for Disease Control and Prevention

Mail Stop E-25

1600 Clifton Road

Atlanta, GA 30333

For media inquiries, please contact:

CDC Press Office (Media Only)

(404) 639-3286

CDC National AIDS Clearinghouse

PO Box 6003

Rockville, MD 20849-6003

800-458-5231

CDC National AIDS Hotline

800-342-AIDS

800-344-7432 (Spanish)

800-243-7889 (Deaf)

POPULATION 1992

WHITE MALES	1,510,638
Homosexual white males	226,595
Prevalence in white men	779/100,000
Prevalence in gay white males	4809/100,000
Prevalence in white heterosexual males	32/100,000
WHITE FEMALES	1,633,333
Prevalence in white females	18/100,000
BLACK MALES	376,745
Homosexual Black males	52,011
Prevalence in Black men	975/100,000
Prevalence in homosexual Black men	4962/100,000
Prevalence in heterosexual Black man	1511/100,000
BLACK FEMALES	406,666
Prevalence in Black women	75/100,000
HISPANIC MALES	1,180,500
Hispanic Homosexual males	177,083
Prevalence in homosexual Hispanic men	2300/100,000
Prevalence in Heterosexual Hispanic men	376/100,000
HISPANIC FEMALES	1,050,000
Prevalence in Hispanic females	27/100,000