A n estimated 12 million Americans acquire a sexually transmitted disease (STD) every year. More than 25 different infectious organisms can be transmitted sexually, and five STDs—chlamydia, gonorrhea, AIDS, syphilis and hepatitis B—are among the country’s 10 most frequently reported infections. Infection rates for some STDs in the United States are the highest in the industrialized world; in some cases, they rival those reported in developing countries.

If detected and treated at an early stage, many STDs are curable. However, others are not: More than 55 million Americans are believed to be infected with an incurable viral disease such as genital herpes or human papillomavirus (HPV). Once infected, individuals are forever at risk of transmitting these diseases to their sexual partners.

Women are more likely than men to become infected with an STD, and because they are less likely to have symptoms, women typically suffer more severe health consequences than do men. Cervical cancer, for example, which is linked to some strains of HPV, kills more than 4,500 women each year. At least one million women per year experience an episode of pelvic inflammatory disease (PID), a complication of undetected chlamydia or gonorrhea that can give rise to infertility or a life-threatening ectopic pregnancy. In addition, many STDs can be transmitted to a child during pregnancy or birth, and can result in stillbirth, as well as other serious consequences. Moreover, STD infection can make both men and women more susceptible to infection with the human immunodeficiency virus (HIV).

Besides their enormous impact on individuals, these infections also create a huge financial burden for the country. While no comprehensive data on costs are available, expenditures on direct medical care and related services, as well as the indirect costs attributed to loss of productivity associated with the seven major STDs* and their related syndromes, totaled an estimated $10 billion in 1994. If the economic consequences of HIV and AIDS are included in the estimate, total costs associated with STD-related illnesses reached almost $17 billion.

A “Hidden Epidemic”
The public is largely unaware of the serious health consequences and financial costs associated with the high prevalence of STDs in the United States. To call attention to this “hidden epidemic” and to study ways to address the problem, the Institute of Medicine (IOM) in 1994 convened a 15-member expert panel. Its mandate was to “(a) examine the epidemiological dimensions of STDs in the United States and factors that contribute to the epidemic; (b) assess the effectiveness of current public health strategies and programs to prevent and control STDs; and (c) provide direction for future public health programs, policy and research in STD prevention and control” [p.1-1]. The Institute directed the panel to focus its efforts on STDs other than HIV infection.

The panel’s report, released in November 1996, concluded that the United States lacks “an effective national system for STD prevention” [p.6-3]. According to the report, prevention is hampered by a variety of factors, including a reluctance to discuss sexual issues and the resultant lack of awareness about STDs, the media’s irresponsible treatment of sex, the fragmentation of services, inadequate training of health professionals and insufficient resources.

According to the IOM, bold leadership from policymakers in both the public and the private sectors and at the local, state and national levels is needed in order to overcome these obstacles. The IOM recommends that strategies to enhance STD prevention efforts focus on promoting healthy sexual behavior, developing strong leadership, encouraging greater financial support for STD prevention, targeting services to adolescents and other hard-to-reach groups and ensuring universal access to high-quality services.

**Healthier Sexual Behavior**
Numerous biological, social and behavioral factors contribute to the high rates of STDs in this country—among them the asymptomatic nature of many infections, delayed detection and treatment, poverty, substance abuse, and sexual risk behavior such as inconsistent condom use. Nonetheless, the report stresses that the first obstacle that must be overcome in order to effectively address STD prevention is the “secrecy” that surrounds sexuality and the stigma associated with STD infection.

According to the IOM’s report, society’s unwillingness to confront sexual issues undermines STD prevention in a variety of ways. It hinders the dissemination of accurate, straightforward information about STDs in education programs for adolescents and impedes communication between parents and children as well as between sex partners. Moreover, society’s reluctance to address sexuality compromises the ability of doctors and other health care professionals to counsel their patients about prevention and impedes research on sexual behavior. Furthermore, the mass media contribute to societal ambivalence by presenting sexual messages and imagery in an unbalanced manner.

The lack of frank discussion about sex, the IOM panel points out, has contributed to a glaring lack of public awareness about STDs and to misperceptions about individual risk and the consequences of infection. The report notes a recent survey in which almost two-thirds of respondents knew little or nothing about STDs other than HIV, and it cites other research suggesting that most people seriously underestimate both their risk of acquiring an STD and the possible health consequences of STD infection. The report states that even clinicians are generally poorly informed about STDs. In sum, the panel warns that the lack of accurate information about the risks and consequences of STDs may actually encourage people to engage in behavior that increases their chances of becoming infected.

The IOM report proposes that an independent, long-term national campaign be established to address these problems and to promote “a new norm of healthy sexu-

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* Chlamydia, gonorrhea, syphilis, chancroid, genital herpes, human papillomavirus and hepatitis.
Developing effective STD prevention programs will require active participation and strong leadership by both the public and private sectors, the report declares. It urges the federal government to develop basic clinical standards for STD services, to coordinate a comprehensive national surveillance system that collects data on STDs from all providers* and to support state and local health departments in their efforts to provide universal access to services. The report also urges state health departments to implement comprehensive STD prevention programs, to support local health departments in their efforts to provide STD services and to collect information on reportable diseases from public and private providers. Local health departments are urged to assume similar responsibilities at the community level.

Even as its report stresses the need for the public sector to make STD prevention a higher priority, the panel acknowledges that these agencies lack the resources and the organizational capability to fully implement a national prevention system. The private sector must therefore assume greater responsibility for STD prevention, the report concludes, both in terms of providing services and of promoting public discussion and raising awareness.

The panel also believes that the public and private sectors must work together more closely. Accordingly, the panel proposes the establishment of a long-term independent roundtable to facilitate collaboration. The roundtable would serve as a neutral forum where representatives from all levels of government, the private health-care sector, business, the mass media, schools and community-based groups could work together to develop and implement a comprehensive system of STD services. In light of the demonstrated synergy between STD infections and HIV susceptibility, the IOM also recommends that STD prevention be an integral component of a national strategy to prevent HIV infection. Furthermore, public and private agencies involved in cancer prevention should support STD prevention as a way to avert STD-related cancers, including cancers of the liver and cervix.

Increased Financial Support
In FY 1995, the public sector spent about $231 million on STD prevention and an additional $105 million on STD-related biomedical and clinical research. At these levels, the IOM estimates, the public sector spent only $1 on STD prevention for every $43 spent on treatment and other STD-related costs, while it invested only $1 in biomedical and clinical research for every $94 in disease-related expenditures.

However, the panel stresses, STD prevention is highly cost-effective. For example, every $1 spent on early detection and treatment of chlamydia and gonorrhea saves an estimated $12 in treatment costs and lost productivity. Accordingly, the IOM urges increases in funding for STD services by all levels of government as well as by the private sector. It also recommends that the federal government continue to provide funding designated specifically for these services. Consolidating STD funding into a block grant that covers many public health programs, as several DHHS and Senate proposals have suggested, would have “a devastating impact on STD prevention,” [p. 6-29], the report warns. Such changes would likely make state politics, rather than objective considerations of public health or social needs, the critical determinant of funding levels.

Targeted Services
Three million teenagers acquire an STD every year. Adolescents are at greater risk of STDs than adults for several reasons: They are more likely to have multiple sex partners, to have high-risk partners and to engage in unprotected intercourse. In addition, adolescent females are biologically more susceptible to cervical infections than are older women.

Most teenagers are sexually active by the time they finish high school and are therefore at risk of STD infection. Indeed, many of the serious health consequences of STDs that appear in adults, such as cancer and infertility, are the result of infections acquired or behavior begun during adolescence or young adulthood. Therefore, the report concludes, a national effort to prevent STDs must focus on teenagers. It recommends that adolescents be encouraged to delay intercourse “until they are emotionally mature enough to take responsibility for this activity” [p. 6-38]. Recognizing that many young people will not heed this advice, the panel also recommends that teenagers have access to information and instruction in how to prevent STDs and unintended pregnancy.

Along with endorsing mass media campaigns targeted at teenagers, the IOM calls upon school districts to ensure that schools provide age-appropriate STD-related health education, as well as access to condoms and confidential clinical services (including STD screening, diagnosis and treatment). The report recommends that information and services be made available to students before they be-

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* STD incidence is underestimated because many private health care providers do not report STD cases to their local health department.
come sexually active and stresses the need for access without parental consent. Access to school-based clinical services is important, the report explains, because teenagers tend to use regular health care facilities infrequently and have little ability to pay for services on their own.

In addition to targeting teenagers, the IOM calls for special efforts to bring services to substance abusers, commercial sex workers, prisoners, the homeless and other groups that have high rates of infection and are difficult to reach in traditional health care settings. The panel recommends that STD programs collaborate with drug and alcohol treatment facilities, prisons, migrant health centers and programs in other settings that provide services to these high-risk populations. The report also urges the National Institutes of Health and other federal agencies and private companies to collaborate in the development of diagnostic tools, such as rapid saliva and urine tests, that would be especially useful in mobile clinics and other nontraditional settings.

**Universal Access**

STD services are provided in a variety of settings: Clinics operated by state and local health departments; community-based centers such as family planning and prenatal clinics; and doctors’ offices and other private health care settings. According to the report, these services are typically fragmented, inadequate and sometimes of poor quality.

An important strategy for expanding access to care, the IOM argues, is to incorporate into primary and reproductive health care services the full range of STD services, including screening, diagnosis and treatment, partner notification and treatment, and health education and counseling. The IOM believes that this strategy will increase the likelihood of early detection of STD infection and will expand opportunities for prevention counseling, since primary care is apt to foster an ongoing relationship between the clinician and the patient.

The IOM report notes that private health plans, and especially managed care plans, have the potential to improve the quality of and access to STD services, although very few private health plans currently make the prevention and treatment of STDs a high priority. In part, the report explains, this is because most health plans do not perceive STDs to be a serious problem among their members, and, since many plans have typically relied on the availability of public STD services, they have not developed the capacity to provide STD-related care. The report calls upon health plans generally, and managed care plans in particular, to increase their involvement in STD prevention, not only among their members but in the larger community as well. It recommends that both private practitioners and managed care providers offer comprehensive STD services to their clients and to their clients’ sex partners, regardless of the partners’ insurance status.

Even with the expansion of STD-related services to other providers, the IOM says, public STD clinics must continue to function as a “safety net” for services to uninsured and underserved persons. But, the report notes, services in those clinics vary widely in quality, scope, accessibility and availability. Many clinics, particularly those in large cities, are overwhelmed with patients; as a result, recruitment of highly qualified professionals is difficult, and the care provided is often impersonal. To remedy these problems, the report urges local health departments to establish partnerships with medical, nursing and other professional schools to provide staffing and management of STD clinics.

It also recommends that health departments collaborate with other community-based providers, such as family planning clinics, school-based programs, university and hospital medical centers and private practitioners to improve access to care and enhance the quality of services. The report points out that in contrast to STD clinics (where clients are primarily males), family planning clinics serve large numbers of women. Moreover, CDC-supported demonstration projects to provide widespread screening and treatment of women and their partners in family planning clinics have resulted in significant reductions in the prevalence of chlamydia, the most common bacterial STD in the country.

Another key to improving the quality of STD services is better training of health care professionals. Training in STD prevention and management in U.S. medical schools is generally poor, the report points out, and many clinicians, particularly in the private sector, are unaware of both the prevalence of STDs among their patients and the potentially serious consequences of these diseases. As a result, the report says, clinical STD care is often inappropriate or inadequate.

“STDs are hidden epidemics of tremendous health and economic consequences in the United States,” the report concludes. “An effective system of STD prevention...will have to be developed at the local, state and national levels, with full participation of both the public and private sectors. The process of preventing STDs must be a collaborative one. No one agency, organization or sector can effectively do it alone; all members of the community must do their part. A successful national initiative to confront and prevent STDs requires widespread public awareness and participation and bold national leadership from the highest levels” [p.6-69].

**Reference**