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New data from the CDC confirm HIV is on the rise

Latest statistics offer sobering look at epidemic

A new report on HIV diagnoses among 29 states for 1999 to 2002 is as strong a statement as national public health officials have ever given to confirming anecdotal reports that HIV infection rates are on the rise.

The report published by the Centers for Disease Control and Prevention (CDC) in the Dec. 1, 2003, *Morbidity and Mortality Weekly Report* still refers to new HIV diagnoses, instead of using the term "cases." But it also states that the increase in HIV diagnoses more likely reflects an increase in new cases rather than more intensive testing efforts.

"We're trying to keep saying here, 'You put all the pieces together, and it's not headed in the right direction,'" says **Ronald O. Valdiserri**, MD, MPH, deputy director of the National Center for HIV, STD, and TB Prevention at the CDC in Atlanta.

The four states, including Florida, which have been added to the report, include states with high Hispanic populations, he says.

"We would like to get to the point in time when we can talk about trends in all the states, but this is the largest sample we have," Valdiserri adds.

However, because the states vary in the way they collect HIV data, a clear-cut HIV trend still may be years away. For instance, Florida, which now is among the 29 HIV reporting states, saw a significant increase in its new HIV diagnoses in 2002

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Study confirms trend of MSM engaging in unsafe sex with Internet partners

When the number of early syphilis cases in San Francisco increased from 41 in 1998 to 495 in 2002, and more than two-thirds of these cases also were HIV-positive, health department officials decided that new prevention interventions were needed. The syphilis outbreak also was notable in how it mainly involved men who have sex with men (MSM) by 2002. In 1998, only 22% of the early syphilis cases involved MSM, whereas in 2002, 88% involved MSM. Investigators with the San Francisco Department of Public Health discovered that a significant majority of the MSM syphilis cases listed the Internet as venue for meeting sexual partners 19

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HIV epidemics combining to worsen problem

New HIV infections worldwide topped 5 million in 2003, and 3 million people died of AIDS globally, catapulting the epidemic to its most bleak year yet. And despite talk about expanding treatment and prevention services to Africans, few are getting it. 1

A wake-up call in China

Until recently, there have been multiple barriers to initiating HIV prevention and education programs in China. That might be changing thanks to an unlikely scenario. Criticism of the way China dealt with SARS could result in more attention to HIV 2

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because of its testing push, which resulted in a 9% increase in HIV testing, says **Lorene Maddox**, MPH, data analyst manager in the Division of HIV in Tallahassee.

In 2003, the new HIV diagnoses in Florida have leveled off to the 5,000 to 6,000 a year that the state had experienced prior to 2002, she says.

One problem with Florida's HIV data is that the state does not permit a viral load test to be used as confirmation that someone is HIV-positive for purposes of surveillance. In other words, people who were diagnosed as positive prior to 1997 and who have not since then developed AIDS but have periodic viral load tests as part of their treatment need to be retested before they can be counted as an HIV diagnosis for purposes of Florida's data collection, Maddox explains.

Overall, the 29 states saw a 5% increase in HIV diagnoses from 1999 to 2002. Among Hispanics, that increase was 26%, and among men who have sex with men (MSM) of all ethnic backgrounds, there was a 17% increase from 1999 to 2002. Heterosexual women had no increase in new diagnoses.[1]

"The rates of diagnoses among injection drug users (IDUs) and heterosexuals are relatively stable, and the only significant increase in diagnoses was among MSM," Valdiserri says.

Also, there were no significant changes in new HIV diagnoses among African-Americans and Asians/Pacific Islanders.[1]

HIV clinicians were not surprised by the CDC's report because they've seen firsthand a recent trend of increased HIV cases, says **R. Scott Hitt**, MD, chief executive officer of the American Academy of HIV Medicine (AAHIVM) in Los Angeles.

"When I talk to providers, I hear that they see a disturbing increase in infections," he says.

Howard Grossman, MD, has seen an increase in HIV cases in recent years in his general internal medicine practice, the Polari Medical Group in New York City. He sees about 950 HIV-infected patients.

"I think it's incredibly alarming," Grossman says. "It's a scary time with HIV right now, and a lot of us don't know what's going to happen next."

With so many people becoming infected, there's a real possibility of another huge explosion in new HIV infections, he adds.

Another clue that new HIV infections were on the rise was the increase in syphilis infections in the last few years, notes **Rowena Johnston**, PhD, associate director of basic research at the American Foundation for AIDS Research, also in New York City.

"You'll get syphilis if you have unprotected sex, and if you see an increase in any other sexually transmitted disease (STD), you will see an increase in HIV," she says.

Reasons for this increase include the complacency that has surrounded HIV infection among some high-risk groups, as well as the attitude among heterosexuals, particularly people in some ethnic groups, that they are not at risk of infection, Johnston explains.

"Non-Caucasians have felt they were not at risk because all previous prevention messages targeted one group, and they didn't grow up or have themselves surrounded by people who died of AIDS," she says.

Needed: More money and more patience

Effective HIV prevention requires more resources and patience, Johnston points out.

"We're talking about sex, one of the most complicated issues there is; and certainly, there will not be one program applicable to every member," she adds.

AAHIVM recently called for the federal government to turn around the trend by increasing funding for HIV prevention programs.

"The sad part of all of this is the government didn't say, 'What we're doing is working, and we will add new money into this,'" Hitt says. "Instead, they said, 'We'd like you to do better, but we won't give you the resources to do it,' and that puts the CDC in a tough place."

Instead of increasing HIV prevention funding, the Bush administration and Congress have earmarked some of the existing spending for certain types of programs, and that leaves less in the pie for proven prevention strategies, he says.

Examples include abstinence-only education programs and the prevention for positives program, Hitt says.

"Congress didn't include funding for the new programs, and second of all, I think these programs for HIV-positive people have a very real possibility of increasing the stigma of HIV," he adds. "Some people see that [positives prevention program] shifting all responsibility for new infections on the people living with HIV."

Whenever there's a culture in which one group is targeted as causing the damage, then there's a real chance of stigma, Hitt explains.

Valdiserri says the CDC is sensitive to the issue of stigma and has taken steps to make sure it doesn't happen.

"We've had a series of national meetings with various groups, including one on the issue of stigma, and we're very sensitive to that issue," he says. "I think that, in short, what it means is we have to work very closely with these communities so that the prevention message gets out in ways that are beneficial to communities and society."

The CDC also is investing in its early testing initiative with the objective of getting more people tested for HIV and into treatment, Valdiserri explains.

Money for drugs and treatment needed, too

Hitt and other critics have said that while the early testing program is a laudable goal, it also should be accompanied by increased funding, especially for HIV treatment, since states and AIDS Drug Assistance Programs already are struggling to serve the people who need help with their HIV medication.

So far, no additional funding for treatment has been proposed. That means if early testing programs are a success, it creates a large population of people who know they are HIV-positive but who are not able to receive antiretroviral treatment, Hitt says.

"One branch of government says we need to test all these people and get them into care, and the other branch has no contingency for treating all these people," he continues.

The CDC and the Health Resources and Services Administration in Rockville, MD, are working closely throughout the implementation of the early testing initiative and are developing estimates of how many people might be reached during the first years of this initiative, Valdiserri says.

"We are not naïve, and we do understand concerns about resources," he points out. "We're talking about people who already are infected with HIV and who are unaware and may be transmitting this virus to others, so there's an ethical imperative to try to provide people with that information."

Also, not all of the people diagnosed with HIV will be ready for antiretroviral therapy, and it's still better from the medical and public health standpoint to diagnose people early in the disease, Valdiserri says.

Critics say the federal government's prevention initiatives are underfunded, and the CDC is hamstrung by the Bush administration's political agenda to come up with an effective plan to stem the rising epidemic.

Referring to the political side of the issue, says Grossman: "Everything is so fear-based and faith-based that they're never going to come up with effective messages. There are people at the CDC who care, but I don't think there's anybody in the [Bush] administration who cares."

The nation's local and state health departments too often are hobbled by inadequate resources and an ideology that is too anti-science to do their job, says **Paul Feldman**, public affairs director of the National Association of People With AIDS in Washington, DC.

In the meantime, it appears the CDC will not succeed with its five-year plan to cut new HIV infections in half by the year 2005.

"Obviously, the CDC has had its knuckles rapped over that [plan]. Unfortunately, we're living in a time when there's been an emphasis on abstinence-only sex education, and anyone who looks at scientific evidence out there knows this is not the way to decrease the incidence of HIV," Johnston says.

The federal government and the CDC need to change the way they look at HIV prevention and education, using a corporate marketing and advertising model as their guide, suggests **Cornelius Baker**, executive director of the Whitman Walker Clinic in Washington, DC.

"We need to think of prevention in HIV and STDs as a lot more like selling Coca-Cola," he says. "The reality is that there is not a market Coca-Cola would ever leave off the table."

The goal should be to sell HIV prevention to as many people as possible with a generalized message for that population, Baker adds.

"But distribution messages are different, so while you have one overall universal message, you also have to layer it and cut it and reach deeper into some communities that you know are more likely to be interested," he explains.

With HIV prevention there also needs to be a general message for the American public, because even people in monogamous relationships could hear the message and help influence the behavior of people who are at greater risk, Baker says.

Likewise, there should be a full, scientifically based comprehensive sexual health education program in every school in the country, Baker says.

"Things only become barriers if there is not the political will," he says. "The real challenge for

our nation's leaders is: Do they have the political will, or are they prepared to be judged harshly by history?"

Reference

1. Increases in HIV Diagnoses — 29 States, 1999-2002. *MMWR* 2003; 52(47):1,145-1,148. ■

CAFTA will harm HIV care, according to critics

Final agreement helps drug companies, they say

Creation of a Central American Free Trade Agreement (CAFTA) will result in more deaths from AIDS in the Central American nations participating in the agreement, charge several organizations that work to provide health care to poor populations.

President George W. Bush and his administration pushed for new intellectual property rules that will obstruct access to medicine by increasing medicine prices and delaying or blocking generic competition, says **Asia Russell**, director of international policy for Health GAP of New York City. Russell and other international health care advocates spoke at a news conference held in early December, during the CAFTA negotiations.

CAFTA is designed to establish a trading area between the United States and five Central American countries — Guatemala, Honduras, Costa Rica, Nicaragua, and El Salvador. When the CAFTA talks concluded in December, Costa Rica opted out of the negotiations, although it still might continue. The U.S. Congress is expected to consider CAFTA in 2004.

What's at stake with regard to HIV is CAFTA's protection of intellectual property rules, which will make it less likely that countries that have signed the agreement will have access to generic versions of antiretroviral medications. Places that are able to use generic AIDS drugs have seen 98% reductions in costs. Antiretroviral drugs that normally cost $10,000 per person, per year, now cost $140 per person, per year, meaning many more people in poor nations will have access to them, Russell and other international health experts explain.

"The dynamic within the negotiations is that the U.S. makes extensive demands on intellectual property and patent protection," says **Robert Weissman**, co-director of Essential Action of Washington, DC.

"There is more or less resistance from the countries that the U.S. is trying to impose these standards on, but they are normally not well-positioned politically or economically to resist too hard," he adds.

Now that CAFTA has concluded, it will be up to the U.S. Congress to either pass or reject it, Weissman explains.

"There will be an up or down vote on the agreement," he says. "Because it will be governed by the fast-track procedures, it will not be possible for members of Congress to support amendments to the agreement or the deletion of any of the harmful enhanced patent protections."

Health care clinicians who work in Central America say the differences between brand name antiretroviral drugs and generic drugs can be spelled out in human lives.

Generics preferred

Even when poor nations purchase brand name HIV drugs at a greatly reduced price, the cost still is much higher than if they were able to purchase generic versions.

For example, the Honduran government purchases the nongeneric versions of zidovudine, lamivudine, and nevirapine at an annual cost of $850 in U.S. currency. Roughly, 1,200 people have been receiving these medications within the past two years, says **Alain Rias**, field coordinator, MSF Honduras, Doctors Without Borders/Medecins Sans Frontieres (MSF).

Rias, who provides HIV treatment in Honduras to about 300 patients, says the organization purchases generic drugs at a cost of about $400 per year, less than half what the Honduran government pays.

"In conversations we've had with our partners over the months, we've come to realize that the Honduran government is under pressure to continue buying brand names," he says. "They fear retaliation from the U.S. trade representative for crossing them."

The people who have access to antiretroviral treatment have recovered very quickly and have started to work again, earning money to feed their families, Rias points out.

Most of the HIV patients seen at his clinic are women who often are raising children without male partners, and their lives are very difficult,

he says. "For these women, their main preoccupation is staying alive to see their children grow up."

Since HIV medicine continues to be inaccessible for most Hondurans, the country has one AIDS death every two hours, and AIDS is the first cause of mortality among women of childbearing age, Rias adds.

Guatemala's epidemic, which is expected to pass 70,000 people living with HIV/AIDS, also may be hurt by CAFTA's intellectual property rights agreements, says **Ruben Mayorga**, MD, director of the Organization de Apoyo a una Sexualidad Integral frente al Sida and the advocacy coordinator of the Central American Network of People Living with HIV/AIDS.

Guatemala, as part of a national social security program, currently has HIV treatment for 1,300 adults and 300 children, and the Doctors Without Borders is treating 6,700 people with generic antiretroviral medications, he says.

A Global Fund proposal would have Guatemala treat 2,000 more people in 2004, 4,000 more people in 2005, and so on until the government is treating 8,000 more people in 2008, Mayorga explains.

"With the curtailing of the government's ability to use generic medications, this would not be possible, and more than 15,000 Guatemalans would die in the next few years, unnecessary deaths," he says. ■

Study: HIV diagnosis won't stop unprotected sex

Study shows prevention efforts are hindered

Research in an inner-city population has showed that many of the people, particularly women, diagnosed with HIV infection continued to engage in unprotected sex after their diagnosis and prevention education.

"What we found was that more than 40% of all patients had some HIV risk behavior after they knew they were positive," says **Joseph P. McGowan**, MD, medical director of the Center for AIDS Research and Treatment at North Shore University Hospital in Manhasset, NY.

The study was conducted among patients at the Bronx-Lebanon Hospital Center in New York City, where McGowan previously worked.

Also, the study found that 25% of those infected with HIV had a new sexually transmitted disease (STD) diagnosis, and 15% used injection drugs.[1]

In further examination of the data from 256 HIV-infected patients, researchers found unprotected sex was reported by heterosexual women more than by heterosexual men. Men who have sex with men (MSM) had similar rates as the women of failing to use protective measures during sex.

Sex traders at risk

Those who reported that they traded sex for money or drugs reported the highest rates of having unprotected sex of all other HIV-positive groups after receiving an HIV diagnosis, adds McGowan.

"We focused on the women, and what we found was that if there was a history of trading sex for money or drugs then that was highly associated with having unprotected sex after HIV infection," he says.

Patients who had been diagnosed with HIV infection more than five years ago had the highest rates of unprotected sex, with 54% reporting having had unprotected sex.

By contrast, 27% of patients who had been diagnosed less than a year earlier reported having unprotected sex, and 36% of patients who had been diagnosed between one and four years said they had unprotected sex, McGowan adds.

Investigators also found that study participants who were on highly active antiretroviral therapy (HAART) also were more likely to have unprotected sex, he points out.

"If someone was on HAART and traded sex for money or drugs, they were 11 times more likely to have unprotected sex than those who didn't trade sex or have HAART," McGowan notes.

The association between unprotected sex and HAART might be due to the fact that people feel safer when on antiretroviral drugs, and perhaps, do not feel they are at risk for transmitting the virus, he speculates.

However, there was no indication that the patients who were on HAART were basing their behavior on their viral loads, which — if low — can reduce the risk of transmitting HIV, says McGowan.

Another possibility for this finding is that some of the people who trade sex and are on HAART may be selling their medicine to buy drugs, he says.

Researchers theorize that the women who trade sex have low self-esteem and may be less empowered to enforce condom use on their clients and sexual partners, McGowan adds.

"And if they insist on condom use, it might also reveal their status, and that would affect their ability to proceed with the sexual interaction," he says.

Prevention counseling had been given to all of the people involved in the study, first after they received word that they were HIV-positive and then on an annual basis, McGowan says.

"These behaviors are very hard to change," he continues. "Many studies show that drug use and trading sex, especially if it's survival sex, is very difficult to change after an individual finds out he or she is positive."

A more optimistic way to view the findings is to note that there was a 60% drop in unsafe sexual behavior among the HIV-positive patients, because 100% of them had engaged in unsafe sexual practices prior to their HIV diagnosis, says McGowan.

What these findings mean for HIV clinicians is that they need to enhance their safe sex messages and counseling for HIV-positive patients, he points out.

"The safe sex message should be given in a nonjudgmental way in an ongoing fashion," McGowan says. "We stress that how you give the message is very important; we want to give it in a way that motivates them to change."

Simply telling people to use condoms is not effective, he says.

For some patients, the problem may be their drug use, especially crack cocaine and alcohol use, so that has to be addressed in a nonjudgmental way, McGowan adds.

"We need to set achievable goals for people, and instead of saying 'Stop using drugs,' say 'Let's try to cut back on drugs,'" he suggests.

"Yes, they may be engaged in unsafe sex, and, yes, they are HIV-positive; but we don't want to approach them in a judgmental or condescending way because we understand their motivations are not that they want to get people infected," explains McGowan.

Reference

1. McGowan JP, Shah SS, Ganea CE, et al. Risk behavior for transmission of human immunodeficiency virus (HIV) among HIV-seropositive individuals in an urban setting. *Clin Infect Dis* 2004; 38:122-127. ■

Study confirms the link between MSM and web

San Francisco officials use on-line interventions

When the number of early syphilis cases in San Francisco increased from 41 in 1998 to 495 in 2002, and more than two-thirds of these cases also were HIV-positive, health department officials decided that new prevention interventions were needed.

The syphilis outbreak also was notable in how it mainly involved men who have sex with men (MSM) by 2002. In 1998, only 22% of the early syphilis cases involved MSM, whereas in 2002, 88% involved MSM.[1]

Investigators with the San Francisco Department of Public Health (SFDPH) discovered a common thread running through these cases — the Internet. It was reported as the meeting place for sexual partners by 32.6% of the people included in the surveillance report, compared with 20.6% who used bars, 13.3% who used bathhouses, and 12.6% who met partners at sex clubs.[1]

Public health officials had to develop new strategies for tracking down sexual partners of syphilis cases, including asking for on-line handles and e-mail addresses through which they could notify MSM that they may have been exposed to syphilis, says **Jeffrey Klausner**, MD, of STD Prevention and Control Services, SFDPH.

"We won't disclose the source individual, and we won't start communicating with the partner until we start confirming who that partner is," he says.

"Then we usually try to have a conversation over the phone or face to face with the goal of getting that partner evaluated and potentially treated for syphilis infection," he explains.

No-name reporting blocks investigation

Unfortunately for the health department, the same kind of outbreak investigation cannot be conducted for HIV cases because the state does not permit HIV reporting by name, Klausner notes.

"No-names reporting is a barrier to controlling public health risk of HIV," he says.

"Without a name, I can't follow up with individuals to know where they met their partners and then to work with them to actively notify

their partners about recent exposure, " Klausner continues.

However, the syphilis outbreak provided a good opportunity to step up interventions for HIV and other sexually transmitted diseases (STDs), and the SFDPH responded by developing interventions that used the Internet as a tool, as well as by promoting a more general educational effort called Healthy Penis 2003.

Reaching target audience through the web

This campaign includes a special web site (www.healthypenis2003.org/about.html), newspaper ads, shelter posters, subway billboards, and 7-foot mascot characters who walk in parades and visit bars and clubs each month, Klausner says. The number of people tested for syphilis has increased since the campaign began, he adds.

Health department officials also have investigated the Internet sites most commonly sited as meeting spots for sexual partners and contacted the web hosts to seek assistance with prevention education, Klausner says.

"We go to that business and try to collaborate with them to do on-line prevention activities, such as banner ads, hot links to sexual health sites," he explains. "Some businesses have been a lot more cooperative like gay.com, and others like AOL have been obstructive and don't want anything to do with educating members."

In between the two are Craig's List and m4m4 sex.com, with which the SFDPH has begun to form new collaborations, Klausner continues.

Once the collaboration and education begins, the results are apparent. For instance, two years ago the No. 1 web site used by MSM who have early syphilis was gay.com, he says. Now, gay.com is the fourth highest site on the list, and the most common site is m4m4sex.com, Klausner adds. "That's why it's important, and not just for San Francisco," he says. "We talk to people in New York and Miami, too."

The Centers of Disease Control and Prevention (CDC) has acknowledged how the Internet is becoming one of the biggest venues for at-risk sexual activity.

"There's a lot of interest in the community on how we can work with Internet providers and elements of industry to use the Internet proactively to provide health information," explains **Ronald O. Valdiserri**, MD, MPH, deputy director of National Center or HIV, STD, and TB Prevention of the CDC.

"San Francisco is reporting on using the Internet as a way to facilitate partner notification activities," he says. "And a national coalition of STD directors and the CDC held a meeting in August in DC where we brought together members, researchers, community activists, program providers, and a lot of people affiliated with the business to talk about this broad topic of the Internet and what we can do about it."

The CDC is doing some Internet-specific research, but it is leaving the Internet prevention program work to the state and local health departments and community-based organizations (CBOs), Valdiserri says.

"We would consider that to be a potentially appropriate outreach site in the same way that we would consider a bathhouse or a public park where cruising and public sex is taking place," he points out.

However, SFDPH officials have found that there are national sexual networks in which syphilis is being transmitted, and the web sites are the basis for these networks.

This also is why federal funding is needed to promote Internet prevention work, Klausner says.

CBOs and other groups have been doing groundbreaking work on reaching at-risk MSM through the Internet, but they and local health departments lack the resources to handle the vast cyberspace and geographical web of on-line activity.

"There's a national structure to the Internet, and a lot of travel and internationally-based service providers serve lots of people," Klausner says. "It's a challenge for me to develop prevention programs for San Francisco and have a lot of non-San Francisco people involved."

For example, the SFDPH has a web site with a health education service called "Ask Dr. K." Maintaining the web site takes time and money out of the pocket of San Francisco taxpayers, and yet, fewer than 10% of the people who are served by the web site live in San Francisco, he says.

"Because of the cross-jurisdictional nature of the Internet, there really has to be federal funding," Klausner says.

Reference

1. Use and early syphilis infection among men who have sex with men — San Francisco, California, 1999-2003. *MMWR* 2003; 52(50):1,229-1,232. ■

Review mortality trends to reveal emerging picture

Mortality increased for some complications

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[Editor's note: This article is based on a presentation the authors gave at the 43rd Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), held Sept. 14-17, 2003, in Chicago.]

We conducted this study on HIV-infected patients, between 1994 and December 2002, to assess the mortality rate in our patient population, trends in mortality, and to compare the antemortem and postmortem diagnoses. We also looked for emerging complication, if any, in this patient population.

This study was conducted in an inner-city university hospital at Washington DC, which has the highest AIDS incidence rate in USA. The majority of the population was African-American (83%). Among these, 68.4% were males and 34.6% were females and the average age was 39.

A total of 3,785 patients died during the 1994-2002 period, and 555 (14.66%) had HIV, according to medical records and autopsy records of the hospital.

The mortality in our patients decreased by more than 3% in these years, while the number of admissions of HIV-infected patients remained steady at about 9% of total hospital admissions.

Awareness regarding the HIV testing also increased. All the patients who died with HIV in last three years of study period were aware of their diagnosis before admission. There also was a 15% decrease in autopsy rate in HIV-infected patients. About 26% patients were on antiretroviral medications, and more patients were receiving medications in the later years. There was a downward mortality trend secondary to opportunistic infections and an upward trend secondary to sepsis, hepatic, and renal complications. Prostatitis, therosclerosis, disseminated cytomegalovirus, mycobacterium avium complex, and disseminated fungal infections were the most commonly missed diagnoses.

When comparing antemortem to postmortem diagnoses, missed diagnoses were in endocrine, gastrointestinal systems, renal and electrolyte, central nervous system, cardiovascular systems, infectious diseases, respiratory system followed by hematology and oncology in decreasing order.

We looked at different organ systems and separate disease processes to assess the yearly increase or decrease in mortality.

Over all mortality from sepsis increased by 9.6%; disseminated candida decreased by 55%; disseminated cytomegalo virus infection decreased by 18% while the adrenal cytomegalo virus infection increased by 16%; cryptococcal meningitis increased by 7%, while bacterial meningitis decreased by 34%.

In gastrointestinal complications, liver cirrhosis increased by 31%, whereas gastrointestinal bleed increased by 2%. About 50% of the patients were found to have severe atherosclerosis of one or more of their coronary arteries.

In respiratory complications, the incidence of bronchopneumonia increased, while *Pneumocystis carinii* pneumonia, *Mycobacterium* tuberculosis, and *Mycobacterium avium* complex infection decreased.

The mortality from the nonopportunistic infections may not be more than the non-HIV cohort; but there is a change in mortality trend, as the mortality from opportunistic infection decreased significantly.

The mortality from opportunistic infection decreased probably secondary to decreased threshold by clinicians for diagnosing and treating these infections. So the physicians who are taking care of HIV patient, while they have low threshold for opportunistic infections, should not forget the other infections not traditionally associated with HIV.

If we look at different infections, the mortality decreased from *Pneumocystis carinii* (Pearson's R –0.51), *Mycobacterium avium* complex (Pearson's R –0.04), *Mycobacterium* tuberculosis (Pearson's R –0.62). The mortality from disseminated fungal infections decreased by 55% and disseminated cytomegalovirus by 18%.

The overall mortality in HIV-infected patients decreased by more than 3%.

HIV is a complicated disease, and some of the complications now are emerging as the patients are living longer. Some of the complications may not add directly to the mortality but may add to morbidity and affect the quality of life.

In our analysis, about 50% patients were found to have severe atherosclerosis of one or more of their coronary arteries, but only very few had any kind of work-up for coronary artery disease. About 47% patient had testicular atrophy, but few were worked up and were on replacement therapy.

So taking care of HIV patients should be a model-based group approach including involvement of expertise from every discipline, because these patients not only have psychological and social issues but also variety of complications from treatment and disease itself. As the mortality is decreasing, patients and physicians taking care of them are experiencing some of the new challenges. Be vigilant for coinfections and associated complications, like as in our analysis, the mortality from liver cirrhosis increased tremendously. Try to keep the pill burden as low as possible with special emphasis on prophylaxis medications and vaccinations.

As new complications are emerging from HIV therapy as well as disease itself, clinicians should be very vigilant to look for not only the complication which are associated with HIV but others also, which are not traditionally associated with HIV.

Recommended reading

1. Farthing C, Khanlou H, Yeh V, et al. Early virologic failure in a pilot study evaluating the efficacy of once daily abacavir (ABC), lamivudine (3TC), and tenofovir DF (TDF) in treatment naïve HIV-infected patients (oral presentation). Presented at the 2nd International AIDS Society Meeting. Paris; July 2003.

2. Gallant JE, Rodriguez A, Weinberg W, et al. Early nonresponse to tenofovir DF (TDF) + abacavir (ABC) and lamivudine (3TC) in a randomized trial compared to efavirenz (EFV) + ABC and 3TC: ESS30009 unplanned interim analysis (oral presentation # H-1722a). Presented at the 43rd Interscience Conference on Antimicrobial Agents and Chemotherapy. Chicago; September 2003.

3. Gerstoft J, Kirk O, Obel N, et al. Low efficacy and high frequency of adverse events in a randomized trial of the triple nucleoside regimen abacavir, stavudine, and didanosine. *AIDS* 2003, 17:2,045-2,052.

4. Gulick RM, Ribaudo HJ, Shikuma CM, et al. ACTG 5095: A comparative study of 3 protease inhibitor-sparing antiretroviral regimens for the initial treatment of HIV infection. Abstract 41. Presented at 2nd IAS Conference on HIV Pathogenesis and Treatment. Paris; July 2003. ■

FDA Notifications

UCB Pharma and FDA issue advisory letter

UCB Pharma Inc. and the Food and Drug Administration recently issued a "Dear health care professional" letter advising health care professionals of the risk of dispensing errors between lopinavir/ritonavir (Kaletra), an antiretroviral, and levetiracetam (Keppra), an antiepileptic drug.

According to the letter, "Medication dispensing errors are a serious threat to quality health care and necessitate the combined efforts of all involved to minimize their occurrence.

"UCB Pharma Inc. would like to advise you that dispensing errors may occur between levetiracetam tablets and oral solution and lopinavir/ritonavir capsules and oral solution. Your assistance is requested in clearly communicating oral and written prescriptions for these two products to help avoid dispensing errors.

"Patients erroneously receiving either medication would be unnecessarily subjected to the risk of adverse effects. In addition, patients with epilepsy who do not receive their antiepileptic drug due to a dispensing error would be inadequately treated and could experience serious consequences, including status epilepticus.

"Levetiracetam, an antiepileptic, is available as tablets and oral solution. Levetiracetam tablets, 250 mg are blue, 500 mg are yellow, and 750 mg are orange, oblong-shaped, scored, film-coated tablets debossed with "ucb" and "strength" on one side. They are supplied in containers of 120 tablets.

"Levetiracetam oral solution is a clear, colorless, grape-flavored liquid supplied in 16 fl oz white HDPE bottles containing 500 mg levetiracetam per 5 mL.

"Lopinavir/ritonavir, an antiretroviral, is available as capsules or oral solution. Lopinavir/ritonavir 133.3 mg lopinavir/33.3 mg ritonavir capsules are orange soft-gelatin capsules imprinted with the Abbott corporate logo and "PK." Lopinavir/ritonavir is available in bottles of 180 capsules.

"Lopinavir/ritonavir oral solution is a light yellow- to orange-colored liquid supplied in amber-colored 160 mL glass bottles containing 400 mg lopinavir/100 mg ritonavir per 5 mL.

"Please take great care when writing a

CE/CME *directions*

To complete the post-test for *AIDS Alert*, study the questions and determine the appropriate answers. After you have completed the exam, compare your answers with those listed in the box **on p. 24.** If any of your answers are incorrect re-read the article to verify the correct answer.

At the end of each six-month semester, you will receive an evaluation form to complete and return to receive your credits.

CE/CME *questions*

5. In the a recent report by the CDC, HIV diagnoses increased by 5% overall between 1999 to 2002. Which of the following statistics also were revealed in this report, published in the December 2003 *MMWR*?
   A. Men who have sex with men showed a 10% increase in new HIV diagnoses during this period.
   B. African-Americans had a 17% increase in new HIV diagnoses during this period.
   C. Hispanics had a 26% increase in new HIV diagnoses during this period.
   D. all of the above

6. Several U.S. and international health care groups criticized the recent agreements made under the Central American Free Trade Agreement (CAFTA) based on what grounds?
   A. CAFTA would make it difficult for Central American countries to retain skilled health care workers, who instead would be attracted to immigrating to the United States where higher-paying jobs are plentiful.
   B. CAFTA would obstruct access to medicine by increasing medicine prices and delaying or blocking generic competition.
   C. CAFTA would force Central American nations to use abstinence-only prevention messages.
   D. none of the above

7. A study conducted at the Bronx-Lebanon Hospital Center found that even after being diagnosed with HIV, a portion of patients continued to have some HIV risk behavior. What percent of patients continued to engage in risky behaviors?
   A. 15%
   B. 23%
   C. 37%
   D. 40%

8. San Francisco health officials have reported an early syphilis outbreak between 1998 and 2002, particularly among men who have sex with men (MSM), who accounted for 88% of the early syphilis cases reported in 2002. What was the chief venue for these men, two-thirds of whom also were HIV-positive, to meet sexual partners?
   A. bathhouses
   B. Internet
   C. sex clubs
   D. bars

prescription for levetiracetam by making sure that levetiracetam can be easily read and understood by the person filling the prescription.

"Clearly communicating both written and verbal prescriptions is a vital step in the prevention of future dispensing errors. You might consider, when appropriate, including the intended use on prescriptions for these products.

"Please inform your patients that they should carefully check all medications they receive and immediately bring any problems, questions, or concerns to the pharmacist's attention.

"If you become aware of a prescription dispensing error involving Levetiracetam, please contact UCB Pharma Inc. immediately. Phone: (800) 477-7877, option 9. Or call USP Medication Errors Reporting Program. Phone: (800) 233-7767. Call the FDA MEDWATCH program. Phone: (800) FDA-1088. Fax: (800) FDA-0178. Web: http://www.fda.gov/medwatch.

"Before prescribing levetiracetam [Keppra], please consult the enclosed full-prescribing information. Lopinavir/ritonavir (Kaletra) is a registered trademark of Abbott Laboratories. K1312-0403." ■

CE/CME *answers*

Here are the correct answers to this month's CME/CE questions.

5. **C. Hispanics had a 26% increase in new HIV diagnoses during this period.**
6. **B. CAFTA would obstruct access to medicine by increasing medicine prices and delaying or blocking generic competition.**
7. **D. 40%**
8. **B. Internet**

CE objectives

After reading this issue of *AIDS Alert*, CE participants should be able to:

- identify the particular clinical, legal, or scientific issues related to AIDS patient care;
- describe how those issues affect nurses, physicians, hospitals, clinics, or the health care industry in general;
- cite practical solutions to the problems associated with those issues, based on overall expert guidelines from the Centers for Disease Control and Prevention or other authorities and/or based on independent recommendations from specific clinicians at individual institutions. ■

AIDS ALERT®
INTERNATIONAL

Epidemics in Asia, Eastern Europe worsen global picture

UNAIDS reports no good news in sight

New HIV infections worldwide topped 5 million in 2003, and 3 million people died of AIDS globally, catapulting the epidemic to its most bleak year yet.

"The most important finding of this report is that the epidemic continues to deepen and expand in southern Africa and also is threatening southern and eastern Asia," says **Peter Piot**, MD, executive director of UNAIDS in Geneva. Piot spoke in preparation of World AIDS Day on Dec. 1, 2003, addressing the current state of the world's AIDS epidemic.

By comparison, in 2002, there were an estimated 4.8 million new HIV infections and 2.7 million deaths, he points out.

Despite a great deal of talk in the past year about expanding treatment and prevention services to Africans, only 2% of Africans who need HIV treatment have access to it, according to the UNAIDS report.

On the positive side, it appears that spending for HIV in developing countries will be about $4.7 billion in 2003, a 50% increase from the $3.1 billion spent in 2002, Piot says.

"That still is roughly half of what is needed to mount an effective response, but we are moving forward," he adds. "I feel strongly that we are entering a new phase in the global response to AIDS."

Unfortunately, it is beginning to appear that parts of Asia and Eastern Europe have lost any late-start advantages they may have had in stopping the epidemic before it began to penetrate the general population, the UNAIDS report shows.[1]

For example, three Asian countries, Cambodia, Myanmar, and Thailand, have serious nationwide epidemics, the report states.[1]

"I would say that we could describe the Cambodian and Thailand epidemic as being ones that have gone outside the high-risk groups," says **Karen Stanecki**, MPH, UNAIDS senior advisor on demographics and related data.

HIV prevalence in Cambodia has remained stable at 3%, but at the same time, HIV prevalence has dropped among its highest risk groups from more than 40% to 29%, Piot says.

"We have some worrisome information and data on behaviors in Nepal and Bangladesh, and we see great opportunities for these countries to put in controls and programs now," Stanecki says. This also is true for certain states in India, she adds. "So there is a big, crying need to look at those populations for risky behavior as well as with messages to the general population."

It's estimated that India has about 4.5 million people infected with HIV, which compared with the country's enormous population seems insignificant, but that is misleading, because in some states, there may be a 2% HIV prevalence rate, and in some districts, HIV prevalence may be as high as 5%, Piot says. "That's really the highest prevalence rates in the general population outside of Africa and the Caribbean."

Also, in several Indian states, there are serious epidemics. Tamil Nadu and Maharashtra have HIV prevalence of more than 50% among sex workers in some cities; and in Manipur, there is an HIV prevalence among injection drug users (IDUs) of 60% to 75%.[1]

In Thailand, the situation is a little different. The country has done a good job with fighting AIDS, starting in the early 1990's, Piot says. "Basically, what happened is it made the sex industry safe thanks to 100% condom program, and so there has been a more than 85% reduction in new HIV infections," he explains. "But what we see now is there is an increase in transmission of HIV outside commercial sex among young people and IDUs."

For this reason, Thailand is a good example of how it's a fantasy that a country can control the AIDS epidemic by only focusing on high-risk groups, Piot adds.

Also, shortly after World AIDS Day, there were reports from the United Nation's AIDS agency in Thailand that condoms had disappeared from some sex venues that catered to men who have sex with men (MSM) due to police raids of these establishments and threats that condoms would be used as evidence against the clubs' owners, according to national news reports.

The UNAIDS report also expresses concern about the budding epidemic in Vietnam, where HIV outbreaks among IDUs has begun to occur. Estimates show that 65% of the nation's HIV infections are among IDUs and that more than 20% of IDUs in most provinces were HIV-positive.[1] Likewise, Vietnam sex workers also are at increasing risk for infection as their prevalence rates have climbed to 24% in some areas, the report says.[1]

One major problem in Vietnam is the mobility of sex workers, Stanecki says.

"Sex workers from Vietnam go into other countries and then return, and it's a huge issue. We're trying to monitor the situation and provide help on it."

Myanmar's epidemic primarily involves IDUs and commercial sex workers, but reports suggest it has spread to migrant gem miners and loggers, who may be spreading it to the general population.[1] Injection drug use has driven large HIV outbreaks in regions of Indonesia and China. In Indonesia, for instance, studies have suggested that more than 90% of IDUs have used unclean injecting equipment.[1]

In parts of Indonesia, there now is evidence of heterosexual HIV transmission that is not identified to any high-risk population, Piot says. "But it's still a 1% to 2% infection rate," he adds.

Reference

1. UNAIDS/WHO. *AIDS Epidemic Update December 2003.* Geneva; 2003. ■

China private partnership offers some new hope

SARS outbreak opened doors for HIV prevention

Until recently, there have been multiple barriers to initiating HIV prevention and education programs in China, where certain areas have high rates of HIV prevalence and concentrated epidemics.

Barriers included financial resources, cultural issues, and a lack of urgency since the nation's overall HIV prevalence remains very low.

Then China had to deal with the severe acute respiratory syndrome (SARS) epidemic and the international criticism that surrounded how the government dealt with the epidemic, and the world's most populated country was ready for some changes in its public health infrastructure.

"I basically believe SARS was quite a wake-up call for China," says **David Ho**, MD, executive director of the Aaron Diamond AIDS Research Center and professor at Rockefeller University, both in New York City.

"The SARS epidemic pointed out the importance of public health and how it could impact the whole society," he says. "Of course, China with its impressive growth over the past two decades is a success story; but in two months, the country saw Beijing come to a grinding halt, and Hong Kong suffered from the same."

Furthermore, SARS forced China's leadership to re-examine the public health infrastructure and realize how it is inadequate, particularly in rural areas, Ho adds.

It is within the context of this change that the Chinese AIDS Initiative has been formed as a new partnership that involves the Aaron Diamond AIDS Research Center and other private organizations. The private groups will work with Chinese health officials on meeting a variety of goals that would enhance HIV testing, counseling, prevention, and treatment.

"What we want to do with this alliance is to scale up because we cannot continue to have small pilot projects in China," Ho says. "We have to go and make an impact now."

This approach will require training a critical mass of health care professionals and building clinical infrastructure, including labs, he adds.

While the alliance initially will pursue these changes in the areas most effected by HIV, the improvements could serve as models for other Chinese regions, as well, Ho says.

"Of course, China eventually would have to take on this effort on its own, but I think we certainly could help by not just making suggestions,

(Continued on page 4)

Latest global data show a disturbing trend

According to UNAIDS in Geneva, the HIV/AIDS epidemic is growing despite the world's attention and efforts at increasing prevention and treatment efforts.

The AIDS Epidemic Update of December 2003 provides these statistics about the state of the world in 2003 with regard to the AIDS epidemic:

- **Sub-Saharan Africa:**
  - Between 25 million and 28.2 million people are infected with HIV/AIDS, including 3 million to 3.4 million new infections.
  - Adult prevalence is 7.5% to 8.5%.
  - AIDS deaths of both adults and children are 2.2 million to 2.4 million.
  - African women are 1.2 times more likely than men to be infected with HIV, and the ratio is highest among people, ages 15 to 24.
  - HIV prevalence ranges from less than 1% in Mauritania to nearly 40% in Botswana and Swaziland.
  - Pregnant women have HIV prevalence rates averaging 20% in most countries with the prevalence rate ranging to past 35%.
  - Uganda has seen a drop in HIV prevalence to 8% in Kampala, which had a 30% prevalence rate among pregnant women a decade earlier.
  - In Ethiopia, HIV prevalence among army recruits ranged from 3.8% for rural recruits to 7.2% for urban recruits.
  - In Kenya, a 2002 survey reported HIV infection among 10% of pregnant women.
  - West Africa, which invested heavily in HIV prevention programs in the 1980s, continues to have a very low HIV prevalence level among pregnant women, with only 1% HIV prevalence. However, HIV prevalence among sex workers has increased slowly, with a 14% rate in Dakar.
- **Eastern Europe and Central Asia:**
  - An estimated 1.2 million to 1.8 million people are living with HIV/AIDS.
  - New infections range from 180,000 to 280,000.
  - Adult HIV prevalence is 0.5% to 0.9%.
  - Total deaths from AIDS are estimated to be between 23,000 and 37,000.
  - The Russian Federation, Ukraine, and the Baltic States have the worst HIV epidemic, although the epidemic is beginning to spread to Kyrgystan, Uzebekistan, and continues to grow in Belarus, Moldova, and Kazakhstan.
  - The epidemic mainly affects young people, with more than 80% of people who are HIV-positive younger than 30. This is particularly true of injection drug users (IDUs). In the Ukraine, one-fourth of the people diagnosed with HIV are younger than 20; and in Belarus, 60% of them are 15 to 24; 80% of HIV cases are among IDUs younger than 30 in the Russian Federation.
  - While most infections occur in young men due to used injection drug equipment, surveillance data show that HIV infection rates are on the rise for women, whose share of new infections rose from 24% in 2001 to 33% in 2002. This also has led to an increase in mother-to-child transmission of the virus, particularly in Kaliningrad and Krasnodar.
- **East Asia and the Pacific:**
  - An estimated 700,000 to 1.3 million people live with HIV/AIDS.
  - New infections are between 610,000 to 1.1 million.
  - Adult prevalence is 0.1%.
  - AIDS deaths are between 32,000 and 58,000.
  - IDUs in China's Xinjiang have an HIV prevalence rate of between 30% and 80%, while the HIV prevalence rate in Guangdong is 20%.
  - The epidemic has spread to 31 provinces of China, and reported HIV/AIDS cases have increased significantly in recent years.
- **Latin America:**
  - An estimated 1.3 million to 1.9 million people are living with HIV/AIDS.
  - New infections are between 120,000 and 180,000.
  - Adult HIV prevalence is between 0.5% to 0.7%.
  - Estimated AIDS deaths are between 49,000 and 70,000.
  - Most South American countries have epidemics that the result of IDU and men who have sex with men (MSM) transmission.
  - In Central America, most heterosexual and MSM transmission are most common.
  - National HIV prevalence is about 1% in Guatemala, Honduras, and Panama.
- **Caribbean:**
  - People living with HIV/AIDS number an estimated 350,000 to 590,000.
  - New infections are estimated to be between 45,000 to 80,000.
  - Adult HIV prevalence is between 1.9% and 3.1%.
  - Deaths due to AIDS are between 30,000 and 50,000.
  - The region's most serious epidemics are on Hispaniola Island in Haiti and the Dominican Republic.

(Continued on next page)

- The national HIV prevalence rate in Haiti continue to be 5% to 6%, as it has been since the 1980s.
- In the Dominican Republic, HIV prevalence has stabilized, probably due to prevention efforts.

❒ **Western Europe:**
- Between 520,000 and 680,000 people live with HIV/AIDS.
- New infections number between 30,000 and 40,000.
- Adult HIV prevalence is 0.3%.
- Deaths numbered between 2,600 and 3,400.

❒ **North America:**
- An estimated 790,000 to 1.2 million people live with HIV/AIDS.
- New infections are between 36,000 and 54,000.
- Adult HIV prevalence is between 0.5% and 0.7%.
- The number of AIDS deaths is between 12,000 and 18,000.

❒ **South and Southeast Asia:**
- An estimated 4.6 million to 8.2 million people live with HIV/AIDS.
- New infections fall between 610,000 and 1.1 million.
- Adult HIV prevalence is between 0.4% and 0.8%.
- Deaths from AIDS were between 330,000 and 590,000.

❒ **North Africa and Middle East:**
- Between 470,000 and 730,000 people are estimated to be living with HIV/AIDS.
- New infections are between 43,000 and 67,000.
- Adult HIV prevalence is 0.2% to 0.4%.
- AIDS deaths were between 35,000 and 50,000.

❒ **Australia and New Zealand:**
- Between 12,000 and 18,000 people live with HIV infection.
- New infections are between 700 and 1,000.
- Adult HIV prevalence is 0.1%.
- Deaths from AIDS number fewer than 100. ■

but by leading the way with a few of these efforts," he says.

Ho outlines the challenges ahead in forging a lasting HIV program in China:

- First, China needs to have a national plan that defines the extent of the epidemic, he says. China has two major HIV epidemics that involve different modes of transmission.

One is in the South and Southwest, including Xinjiang where 35% to 80% of the area's injection drug users (IDUs) are HIV-positive, according to data from UNAIDS of Geneva. China's second epidemic is in the central provinces, where there is a separate epidemic that was caused by the sale of HIV-infected blood and plasma from 1992 to 1996, Ho explains.

"A lot of people are infected, but no one really knows the magnitude of the epidemic," he adds.

- Another challenge is to provide large-scale testing after properly training people and offering the public incentives for being tested.

For instance, if there was a treatment component to the testing and prevention-counseling program, then people would have an important incentive to being tested, Ho adds.

- Reducing stigma and cultural barriers also are challenges that need to be met.

There needs to be legislation that protects the rights of people who are HIV-infected, and there needs to be legal reform, Ho says.

- Both the U.S. government and nongovernmental organizations need to be included in the alliance.

"Our long-term vision is to have hundreds of staff on the ground in China," he points out. "Before we get to that level, we have to acquire substantial funding from the government and other private sources. We cannot scale out to that level without more financial support."

- The Aaron Diamond AIDS Research Center will continue with its vaccine program, which had its first vaccines administered in December, Ho says.

"Our vaccines have been tested in animals and re-tested in animals to assure safety, and we've gone through human subjects review and Food and Drug Administration (FDA) review, and now we're doing the first phase of a study in the United States," he explains.

"Then we will take the vaccine to the Southwest province of Yunnan in China." The Chinese part of the vaccine program will be subject to a Chinese government review before it can begin, Ho adds.

- Prevention programs will be initiated. In the fall of 2003, the first public service announcements about HIV, initiated by the Aaron Diamond center, were aired, Ho says.

"The first ad primarily dealt with the issue of stigma and discrimination, but we'll have a series of public service announcements that will address condoms, drug use, and so on," he adds.

"All of these things have to be linked to other efforts, and unless it's a multipronged process, it won't have the same level of impact," explains Ho. ■