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New guidelines: clinicians should incorporate HIV prevention into ongoing care of patients

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Historically, prevention has been centered on educating those not yet infected with HIV about how they can avoid becoming infected. However, focusing attention solely on the uninfected population may not be enough, particularly in light of the upsurge in new diagnoses experienced in the last two years.

The Centers for Disease Control and Prevention (CDC) issued new guidelines that shift prevention education initiatives to those already infected.¹ One policy is to try to reach the infected community during routine visits to their healthcare providers. The stigma of HIV/AIDS prevents many people from disclosing their diagnosis, and often healthcare providers are the only people with whom they can talk openly about the disease.

The new guidelines aim at helping healthcare professionals communicate with their HIV-infected patients about what they can do to prevent transmitting the virus to others. The guidelines further the objectives outlined in the new, national HIV prevention initiative that CDC introduced in April 2003 and result from collaboration among the CDC, the National Institutes of Health (NIH), the Health Resources and Services Administration (HRSA), and the HIV Medicine Association of the Infectious Diseases Society of America.

The guidelines put more responsibility on clinicians, many of whom have said they lack the time or feel uncomfortable talking about sex and

drugs with their patients. But the health agencies and doctors' organization that issued the guidelines say they are needed because existing efforts to control HIV have stalled. The guidelines are intended to provide a workable method for merging prevention with medical care, with the overall goal of reducing HIV transmission.

The audience for the new guidelines includes physicians and physician assistants, nurses, social workers and others who work in medical settings and provide care to persons living with HIV. The guidelines call for:

Screening patients for risk of HIV transmission.

Recommended screening practices include using questionnaires and interviews with open-ended questions to assess risk behaviors, as well as testing for sexually transmitted diseases (STDs) when appropriate. Screening may be conducted apart from or during the medical encounter by treating physicians as well as other medical personnel. The guidelines recommend talking to female patients about strategies to prevent mother-to-child HIV transmission.

Delivering prevention interventions.

Health care providers can help reduce their patients' risk of transmitting HIV through such strategies as delivering prevention messages, providing condoms and printed information,

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The new guidelines put more responsibility on clinicians

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and, when appropriate, referring patients to outside prevention services.

Partner counseling and referral services. The guidelines encourage health care professionals to determine whether patients have notified partners of their infection, and to help patients contact local health departments to arrange for notification of partners who have not already been informed. The guidelines emphasize the importance of reaching partners with counseling and testing services.

“With an estimated 900,000 people in our country living with HIV, prevention strategies for HIV-infected individuals are essential,” said Harold Jaffe, MD, director of CDC’s National Center for HIV, STD, and TB Prevention. “Health care professionals provide a critical link to HIV prevention information and services. They can help equip HIV-infected individuals with the best tools to protect their health and the health of their partners.”²

While research has shown that some people who are aware of their HIV status tend to reduce risky behavior, recent reports suggest that many have difficulty sustaining those behavior changes. At the same time, medical professionals who care for HIV-infected patients have not had clear guidance on

how to help patients maintain safe behaviors and protect their partners. Current research has indicated that many HIV-infected persons remain sexually active, and many of them are concerned about the risk of infecting their partners.

The importance of education in the prevention of transmission to non-HIV-infected persons is emphasized in the guidelines. During screening, prevention and partner notification discussions, HIV-positive patients should be made aware

The guidelines are needed because existing efforts to control HIV have stalled.

of the risk of transmission associated with certain behaviors as well as the need to inform partners of their HIV status. The guidelines caution against emphasizing the degree of risk associated with particular activities as opposed to others. Clinicians are also instructed to assume all HIV-positive patients can still transmit HIV regardless of low or undetectable viral loads. HIV-positive patients should be reminded that the only certain ways to prevent transmission to non-infected persons is to abstain or limit encounters to those already

infected, and that they have a responsibility to disclose to prospective partners.

The guidelines instruct healthcare providers to inform their HIV-infected patients of their duty to disclose their status to sex and needle sharing partners and of the potential criminal penalties which may be imposed for their failure to do so. Note, however, that the guidelines must be read in conjunction with applicable laws in the jurisdiction in which the clinician practices.

HIV and criminal law

In 1987, Louisiana passed a law called “Intentional Exposure to AIDS Virus,” La. R.S. 14:43.5. This law makes it a felony to expose someone to HIV without his or her lawful consent and imposes a potential fine and imprisonment, as well as registration as a sex offender.³ In order to be criminally liable, the defendant must have known of his or her HIV status and that the contact could result in transmission.⁴

The use of protection is not enough, and partners must be informed of HIV status and the potential for transmission.⁵ Actual transmission is not required and ignorance of the law is not a defense.⁶ Since actual transmission is not required, it is arguable that an HIV-positive person can still be prosecuted even when his/her partner was already HIV-positive as well. In summary, regardless of a potential partner’s HIV status or the use of protection,



informed consent must be received to avoid criminal liability for intentional exposure.

In 1989, Arkansas passed a criminal statute making it a felony to expose another person to HIV, Ark. Code Ann. §5-14-123 (Michie 1997). To be convicted, one must know he is HIV positive, expose someone through transfer of blood or sexual contact and fail to inform the "victim" of his HIV status.⁷ Similar to the Louisiana statute, actual transmission is not required and use of protection is not a defense. However, unlike the Louisiana statute, knowledge of how HIV is transmitted does not appear to be required.

Mississippi has not yet enacted a criminal exposure statute but rather has relied upon state court decisions enforcing a quarantine order issued by the Mississippi Department of Health.⁸ The order mandates that infected persons notify sexual contacts that sex presents a risk of exposure even if a condom is used and prohibits certain risk prone behaviors such as solicitation of prostitution and needle sharing.⁹ Violations of this order constitute a felony. Once again, merely selecting an infected partner and not disclosing one's own HIV-positive status may not be in compliance with the quarantine order.

Partner notification

Partner notification can be performed by the HIV-positive patient, the physician or state health department. The guidelines recommend that sex and needle sharing partners of HIV-positive patients be notified

as soon as possible after initial diagnosis. The theory is that informing partners early on and getting them in for testing will aid in risk prevention if they are not positive and in treatment if they are.

Medical information is protected and is considered private. Generally, disclosure of protected information is prohibited and any unauthorized disclosures constitute a breach of the fundamental right to privacy. However, in certain instances disclosure may be permitted or even required when

Reports suggest that many patients have difficulty sustaining their original risk-reduction behavior changes.

the safety of others is involved. Some states impose mandatory partner notification. Louisiana, Arkansas and Mississippi have each enacted their own laws regarding confidentiality and disclosure.

In Louisiana, disclosure of HIV test results is prohibited without express written consent. There are two statutes which deal specifically with disclosure. LA R.S. 37:2718(B) applies only to social workers and covers all confidential statements made by clients, while the HIV Testing and Confidentiality Statute, LA R.S. 40:1300.11-16, prohibits disclosure by anyone without express written consent.

The only available exceptions to this duty of confidentiality involve the prevention of greater harm to a third person. Social workers are permitted to disclose when a statement "reveals the contemplation of a crime or harmful act."¹⁰ Notice, however, that this statute does not appear to apply to past contacts but rather permits disclosure only in the interest of preventing harm to ongoing contacts. Under the HIV Testing and Confidentiality Statute, physicians are allowed to inform a contact of a patient's HIV status only if there is a significant risk of infection, the patient has already been counseled on the need to inform but has refused to do so, and the patient has been given the option of having a public health officer disclose to the contact possible exposure without naming the patient.¹¹ If all of these conditions are met, the physician may disclose to the contact the possibility of his or her exposure to HIV but may not reveal the patient's name.¹²

Take notice that these exceptions only apply to social workers and physicians, respectively, and do not impose mandatory disclosure.

In Arkansas, physicians of HIV-infected persons must immediately report this information to the Department of Health.¹³ The disclosure is to remain confidential and any subsequent disclosure by the Department of Health to contacts is to be anonymous.¹⁴ This statute differs from the Louisiana and Mississippi statutes in that reporting is required but only by physicians, while the statute remains silent

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Legal

Clinicians are wondering how they will find the time to comply

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as to other healthcare professionals.

Mississippi has a general confidentiality statute covering all protected medical information which forbids disclosure without written consent of the patient.¹⁵ However, exception is made to allow "any physician, osteopath, dentist, hospital, nurse, pharmacist, podiatrist, optometrist or chiropractor to report to the State Department of Health necessary information regarding any person afflicted with any communicable disease...who neglects or refuses to comply with accepted protective measures to prevent the transmission of the communicable disease."¹⁶ Thus, the listed healthcare providers are allowed to disclose to the State Department of Health if the patient has continued to risk exposure to others. In contrast to the Louisiana statute, however, physicians are not permitted to disclose on their own and, in contrast to the Arkansas statute, this reporting is not mandated.¹⁷ Exception is also made when the patient has communicated to the treating physician, psychologist or social worker "an actual threat of physical violence against a clearly identified or reasonably identifiable potential victim or victims" at which point the healthcare provider may communicate the threat to the potential victim, law enforcement, or the parent or

guardian of the potential victim.¹⁸ Although this rule has not yet been interpreted to include threats of HIV exposure, it is arguable that exposure could be considered a physical threat.

Duty to warn

The question remains, however, as to whether there is an affirmative duty to warn contacts of potential future exposure. Many states have adopted an affirmative duty to warn for mental health professionals when a third party is in physical danger. Sometimes referred to as a "Tarasoff" duty after the California decision in which it first emerged, this duty requires mental health professionals to warn if their client has communicated a threat of physical violence, the victim is clearly identified, and the client has the apparent ability to follow through with the threat.¹⁹ In Louisiana, this rule has been codified by LA R.S. 9:2800.2 and has been interpreted by state courts to create an affirmative duty to warn for psychiatrists, psychologists and social workers.²⁰ Although this statute has not yet been applied to intentional exposure of HIV, it is arguable that exposure could be construed as a threat of physical violence thus invoking a duty to warn.

Mississippi and Arkansas have remained silent on this issue and have not yet joined

Louisiana in implementing this controversial rule. However, note that Mississippi permits but does not require disclosure in instances of threats of physical violence to a third party.²¹ The statutory language of the Mississippi law is similar to that found in LA R.S. 9:2800.2 which Louisiana courts have interpreted as imposing an affirmative duty to warn.

Conclusion

The new CDC guidelines reflect a paradigm shift from focusing prevention efforts on uninfected persons and universal precautions to stressing the responsibility of people who are HIV positive to stem new infections. Whether the guidelines result in a decrease in new infections remains to be seen. Critics have charged that the new guidelines serve only to add to the stigma borne by many people infected with HIV and that they promote an "us" versus "them" mentality. Others have suggested that the new guidelines, with their emphasis on criminal liability for exposure, will chill the rapport between patient and clinician. On a more practical note, many people in healthcare have wondered how they will manage to cover these new areas during limited clinic time.❖

REFERENCES

¹ Incorporating HIV Prevention into the Medical Care of Persons Living with HIV, *Morbidity and Mortality Weekly Report*, 52(RR12) (July 18, 2003).



² New Guidelines Aim to Help Health Care Providers Incorporate HIV Prevention into Ongoing Care of Persons Living with HIV, *CDC Press Release* (July 17, 2003).

³ LA R.S. §14:43.5(E).

⁴ *State v. Gamberella*, 633 So 2d 595, 602 (La. App. 1st Cir. 1993)

⁵ *Id.* at 605.

⁶ *Id.* at 602.

⁷ Ark. Code Ann. §5-14-123(a) (Michie 1997).

⁸ See State Legislation, *Virginia, Mississippi Shelve Bills on Criminal Exposure*, 14(4) AIDS Pol'y ... Law (March 5, 1999); *Carter v. Mississippi*, No. 1998-KA-01497-COA 1999WL 1034827 (Miss. App. Nov. 16, 1999).

⁹ See *Carter v. Mississippi*, No 1998-KA-01497-COA 1999WL 1034827 (Miss. App. Nov. 16, 1999) at *1.

¹⁰ LA R.S. §37:2718(B)(3).

¹¹ See LA R.S. §40:1300.14(E)(1).

¹² See LA R.S. §40:1300.14(E)(2).

¹³ See Ark. Code Ann. §20-15-904(b).

¹⁴ See Ark. Code Ann. §20-15-904(c)(1).

¹⁵ See MS ST §41-21-97; MS ST §13-1-21.

¹⁶ MS ST §13-1-21(2).

¹⁷ See LA R.S. §40:1300.14(E)(1); see Ark. Code Ann §20-15-904(b).

¹⁸ MS ST §41-21-97(e).

¹⁹ See *Tarasoff v. Regents of University of California*, 131 Cal. Rptr. 14 (1976).

²⁰ See *Doyle v. United States*, 530 F Supp 1278 (CD Cal 1982); *Durapau v. Jenkins*, 656 So 2d 1067 (La. App. 5th Cir. 1995).

²¹ See MS ST §13-1-21(2).

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Medicine

Managing HIV/HBV coinfection can challenge clinicians

Mary J. Murphy, MD

While HAART has led to decreased AIDS-related morbidity and mortality, deaths from liver disease in HIV-infected patients have risen significantly since the advent of the HAART era. Coinfection with HCV and HBV are largely responsible for this rise. Appropriate management of coinfecting patients is essential in order to prolong the survival benefits offered by HAART therapy.

The prevalence of chronic hepatitis B among HIV-infected persons in the West is between 10-15% compared to 0.2-1% in the general population. 90-95% of HIV-infected persons have evidence of past exposure to or chronic infection with HBV. This reflects the shared routes of transmission of these two infections: sexual contact and blood exposure.

Following acute infection with HBV, 5-10% of persons in general will go on to develop chronic infection. Chronic infection is characterized by persistence of hepatitis B surface antigen (HBsAg) and lack of production of surface antibody (anti-HBs). Antibody to core antigen (anti-HBcore) is also usually detected. Active chronic infection is further characterized by the presence of hepatitis e antigen (HBeAg) which correlates with active viral replication indicated by a high HBV viral load or HBV DNA > 100,000 copies/ml. The presence of anti-HBcore alone is usually indicative of past exposure without chronic infection,

although in some individuals it may reflect latent disease with detectable HBV DNA. Viral variants known as pre-core mutants occur in some individuals and are more frequent in strains found in East Asia and Southern Europe. Persons with these mutants do not express HBeAg but have positive HBsAg and high HBV DNA levels in the setting of chronic infection.

Complications of chronic HBV infection include cirrhosis, end-stage liver disease and hepatocellular carcinoma (HCC). Alcohol use, age and increased liver enzymes further increase the risk for cirrhosis. Alcohol,

Coinfection is associated with a higher risk of liver related death compared to mono-infection.

smoking and cirrhosis are associated with an even higher risk for HCC, although between 10-30% of those who develop HBV-associated HCC do not have preexisting cirrhosis.

HIV negatively impacts HBV infection in several respects. Coinfection is associated with a substantially higher risk of liver related death compared to HBV mono-infection or infection with HIV alone. The fact that liver-

related deaths have increased in coinfecting persons since the introduction of HAART reflects the efficacy of HAART in reducing traditional causes of death, such as OIs and malignancies, but its inability to control untreated HBV and HCV infection.

HIV/HBV coinfection is associated with increased progression of HBV infection. This increased rate of liver damage has been noted particularly since the advent of HAART and may be related to the higher levels of HBV DNA seen in coinfecting patients despite relatively lower transaminase levels. Coinfecting persons are also at greater risk of developing chronic infection following acute HBV infection. This increased risk is estimated to be between 3 and 6 fold and is highest in those with lower CD4 counts. This correlates with the finding that coinfection is associated with decreased clearance rates of HBsAg and HBeAg compared to mono-infection.

Persons with both HIV and HBV are more likely to have latent or occult HBV infection. Between 20-50% of coinfecting individuals with anti-HBcore as the only serologic marker of HBV infection (i.e. no HBsAg) have been found to have high HBV DNA levels and elevated liver enzymes. HIV/HBV coinfection has also been associated with spontaneous loss of anti-HBs and reactivation of disease in previously immune persons. Finally, coinfecting patients are



at greater risk of developing cirrhosis compared to those with mono-infection.

All HIV patients should be screened for hepatitis B with HBsAg, anti-HBs and anti-HBcore. Those with positive HBsAg should be further tested for HBeAg, anti-HBe and HBV DNA. Those who have anti-HBcore alone should be tested for HBV DNA to look for occult HBV infection. Patients who are negative for all three serologic markers are considered naive to HBV exposure and should be vaccinated. Recombinant HBV vaccine is given in a three dose series at 0, 1 and 6 months. It is also available combined with hepatitis A vaccine and given on the same schedule. Recombinant vaccine efficacy is reduced in coinfecting persons with seroconversion rates of 20-30% compared to 90% in the general population. The presence of anti-HBs should be verified following vaccination in coinfecting persons and those without it should be revaccinated. To prevent transmission or acquisition of HBV, patients should be counseled regarding safe sex practices and told to avoid sharing needles and personal hygiene items such as razors, toothbrushes and nail clippers. Non-immune persons should have repeat annual screening for hepatitis B.

Prevention measures for patients with chronic HBV include hepatitis A vaccine for those who are non-immune (anti-HAV IgG negative) and avoiding alcohol, tobacco and hepatotoxic drugs such as Tylenol. Herbal supplements should be used with caution as many are potentially hepatotoxic.

Monitoring for HCC with alpha fetoprotein and liver ultrasound to detect mass lesions should be done every 6-12 months.

There are currently three approved drugs for treating hepatitis B: interferon alfa-2b, lamivudine (3TC) and adefovir (ADV). Interferon is given at a dose of 5,000 units SQ daily or 10,000 units SQ three times/week. HBeAg seroconversion rates are around 33% for mono-infected patients. Reported response rates in coinfecting patients are considerably lower but adequate studies are lacking. Interferon has multiple side effects that limit its use.

Coinfecting persons are also at greater risk of developing chronic infection following acute HBV infection.

Preliminary studies suggest that long-acting or pegylated interferon may prove to be more effective than standard interferon.

The well-tolerated nucleoside analogue 3TC has activity against both HIV and HBV and has been widely used to treat both. The dose in coinfecting patients should be 150 mg PO BID as for HIV and should usually be used as a component of a fully potent HAART regimen. The dose should be adjusted for renal insufficiency (Table I). HBeAg seroconversion rates in coinfecting patients are 22-28%, similar to those in mono-infected

persons. Response rates increase when treatment is continued beyond 12 months but this benefit is compromised by increasing resistance. 90% of coinfecting and 66% of mono-infected patients have resistant virus known as YMDD mutants after four years of therapy with 3TC. Like naturally occurring pre-core variants, YMDD mutants may not express HBeAg. Although YMDD mutants may be replication impaired, the long-term outcome of chronic monotherapy with 3TC for HBV infection is unclear. Increased transaminases or flares may be seen with both the development of mutant virus and discontinuation of 3TC. In the latter case, hepatic decompensation has been reported and therefore abrupt suspension of 3TC is not recommended.

Adefovir is a nucleotide analogue approved in 2002 for HBV treatment. Low dose ADV at 10 mg PO QD has activity against both wild type and 3TC resistant HBV. At higher doses, it is also active against HIV but has unacceptable renal toxicity. ADV has been shown to significantly improve liver histology, decrease ALT and suppress HBV DNA. HBeAg seroconversion rates are around 12%. In contrast to 3TC, resistance develops slowly with reported rates of 1.6-2.5% after two years of therapy. Whether monotherapy with ADV is appropriate for coinfecting patients is still unknown. Low dose ADV may not select for HIV reverse transcriptase mutations but further confirmation is needed. Discontinuation of ADV leads to reversal of treatment

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Medicine

Combination therapy is reasonable while awaiting clinical trials

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benefits and transaminase flares. Like 3TC, renal dosing is required (Table I).

Tenofovir (TNV) is a nucleotide analogue approved for HIV treatment. Though not yet approved for HBV therapy, it has activity against both wild type and YMDD strains and data from studies in progress show HBV DNA suppression similar to that seen with ADV.

Discontinuation of TNV also leads to flares and renal dosing is necessary (see Table I).

Emtricitabine (FTC) is a derivative of 3TC recently approved for HIV treatment. Because of its long half-life, it can be given once daily at a dose of 200 mg. FTC is not yet licensed for HBV treatment but ongoing trials show seroconversion rates similar to 3TC. See Table I for renal dosing of FTC.

Consideration should be given to treatment of HBV in nearly all HIV/HBV coinfecting patients because of the negative impact that HIV has on HBV infection. The goal of treatment for HBV infection with current therapies is suppression or control of disease rather than cure for most patients. This is particularly true for those who are coinfecting. Combination oral therapy is still under study but looks promising. Given the lessons learned from HIV monotherapy and the problem of resistance with 3TC monotherapy, combination oral therapy may be the most rational option while awaiting

definitive information on optimal treatments for HBV. Because the optimal therapy is still unknown, treatment should be individualized. Liver biopsy can provide additional important information to support initiation or delay of HBV treatment. Whether HAART is indicated is also an important consideration.

In antiretroviral (ARV) naive coinfecting patients who need HAART, a recommended HAART combination including 3TC or

All HIV-infected patients should be screened for hepatitis B and appropriate prevention measures instituted.

FTC plus ADV or TNV should be considered. In ARV naive patients who do not require HAART because of high CD4 counts and low HIV RNA, treatment of HBV should be considered if there is evidence of active disease such as detectable HBV DNA, increased liver enzymes, positive HBeAg or liver biopsy showing significant inflammation, fibrosis or cirrhosis. For these patients, two drugs active against HBV in a HAART regimen is one option. Interferon may also be an option except in those with decompensated cirrhosis.

For patients who do not need HAART and have no evidence of

active HBV disease, that is, undetectable HBV DNA, normal ALT, negative HBeAg and normal liver biopsy (if done), close monitoring for liver disease may be reasonable. Repeating LFTs every four months, PT/INR every six months and HIV DNA every four to six months would be prudent in addition to monitoring for HCC.

In patients who are currently on HAART with or without 3TC and have active HBV disease, 3TC should be continued or added (or add FTC) plus ADV or TNV. If there is no evidence of active disease, the current HAART regimen may be continued with close monitoring for liver disease or adjustment of the HAART regimen to include two agents active against HBV can also be considered.

Transaminase flares may occur with the initiation of HAART in coinfecting patients. In most cases these flares are transient or mild and require only monitoring of LFTs. For significant or persistent elevations, other etiologies should be looked for such as development of YMDD mutants, reactivation of HBV DNA replication, HBeAg seroconversion or hepatic steatosis and/or lactic acidosis due to NRTIs, notably d4T and also ddI. Depending on the cause, management includes optimizing HBV treatment in the first two cases, continuing HAART for seroconversion and substituting other drugs for nucleoside analogues implicated in mitochondrial toxicity. In



patients with symptomatic lactic acidosis, HAART should first be held until the condition has resolved.

Treatment of patients with HIV/HBV coinfection presents clinicians with several challenges. All HIV-infected patients should be screened for hepatitis B and appropriate prevention measures instituted.

Virtually all coinfecting patients should be considered for HBV treatment, especially those with evidence of active HBV disease or low CD4 counts. Combination therapy may be the most reasonable approach while awaiting results from clinical trials to determine the best therapeutic strategies.❖

REFERENCES

1. Thio CL. Hepatitis B in the human immunodeficiency virus infected patient: epidemiology, natural history and treatment. *Seminars in Liver Disease* 2003;23:125-136
2. Pillero PJ, Faragon JJ. Hepatitis B Virus and HIV Coinfection. *AIDS Reader* 2002;12:443-451
3. Chung RT. New developments in the management of hepatitis B virus/HIV coinfection. *Medscape General Medicine* 2002;4(3)

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Table 1. Renal dosing for nucleoside/tide analogues

3TC	CC* >50 150 mg BID	CC 30-49 150 mg QD	CC 15-29 150 mg then 100 mg QD	CC 5-14 150 mg then 25 mg QD	CC <5 50 mg then 25 mg QD
FTC	CC >50 200 mg QD	CC 30-49 200 mg Q 48h	CC 15-29 200 mg Q 72h	CC <15 and HD** 200 mg Q 96h***	
ADV	CC >50 10 mg QD	CC 20-49 10 mg Q 48h	CC 10-19 10 mg Q 72h	CC <10 not on HD: unknown	HD 10 mg Q 7 days***
TNV	CC >50 300 mg QD	CC 30-49 300 mg Q 48h	CC 10-29 300 mg 2x/wk	CC <10 not on HD: unknown	HD 300 mg Q 7 days***

*Creatinine Clearance in ml/min

**Hemodialysis

***Give dose after hemodialysis

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Nursing

Anatomy of an accident: lessons learned after a needlestick

Patricia Gootee, NP

Not far from the consciousness of health care workers in HIV clinics lurks the concern that they could be accidentally exposed to debilitating and eventually fatal infectious diseases. Accidents happen everyday, but most of the time the consequences are mere inconveniences. But for those accidents that have serious potential consequences, there is PEP (post exposure prophylaxis).

Six months after having been personally involved in an accident requiring PEP is a good time to look back and address the issues that led up to the event and how they might have been avoided in the first place.

The following case study took place in March of this year and is shared as a teaching tool. As they say, "Hindsight is 20/20."

The scenario

After a two-week stay in the hospital, where he was treated for a life-threatening hemorrhage and subsequently tested positive for HIV, Mr. H, a 45-year-old father of five, arrived at the HIV clinic, having traveled 90 miles from his home. He was feeling hopeless, weak and anxious after being told he had AIDS and that he was too sick to be treated closer to home. The case manager from his local AIDS service organization had arranged for his transportation to the clinic by bus.

Initial visits are overwhelming for patients because of the long wait, extensive financial evaluation, blood work and visits with social services, health education, nursing, and finally a provider addressing their most immediate symptoms. However, after the visit was completed, Mr. H returned home via a long bus ride, and with medication that would begin his long road to recovery.

Estimates indicate that 600,000-800,000 sharps injuries occur annually. As many as one half go unreported.

On his second visit to the clinic, his case manager again made transportation arrangements but failed to give him ample time for his visit. The patient was anxious that he would miss his bus and be stranded in a strange city late at night. Mr. H's appointment was for 12 noon and his return ticket was for 1:30 pm, allowing him only a small window of time to get in and out of the clinic.

To start the visit off, it was noticed on the clinic card that he was ineligible for medication in the clinic pharmacy. The clock was ticking. The card had to be changed in order for Mr. H to obtain his antiviral medication and start treatment. This took

another 20 minutes of his allotted time. Then, an expedited pharmacy visit was arranged for him to obtain his medications and receive instructions (another 30 minutes).

Lastly he had to visit the Medication Patient Assistance office to obtain the medication for anemia. The medication was in hand while he was still filling out forms to obtain the medication through the patient assistance program. The injection was given in the patient assistance office, without a needle disposal setup and without protective gloves. Remember, the clock was ticking.

After all the rushing to get him out the door to catch a cab to the bus station, the needle and syringe from his injection were transported to the needle box in another room.

The needlestick

That's when the unthinkable happened: the needle sheath dropped down and I was stuck with the needle! Now time stood still for a moment, and everything seemed to go in slow motion.

This was a good time to test our PEP protocols and fortunately they worked and proceeded like "clock work": the first dose of medication was given within 45 minutes of the incident on site and the rest of the work was done in the Emergency Department and Employee Health. Our system functioned very well after an



exposure, eliminating waits for check-in, lab work, and most importantly, medication. At our large public hospital, with a large indigent population, HIV-infected clients are expected. Thus, the system has been tested many times.

The National Institute for Occupational Safety and Health (NIOSH) and the Centers for Disease Control and Prevention (CDC) recommend that safety devices be evaluated periodically by employers and that employees report hazards from needles observed in the work environment. After the incident at our clinic, the failed device was reported and demonstrated to the nursing supervisor. However, the cause was user error, not the device.

The big picture

This incident is part of a much larger picture, however. Nationwide, 8 million health care workers in the United States work in hospitals and other health care settings. Accurate data are lacking at present, however, estimates indicate that 600,000 to 800,000 such injuries (sharps injuries) occur annually. About half go unreported. Data from the EPINet system suggests that at an average hospital, workers incur about 30 needlestick injuries per 100 beds per year. There is no data to date which describes reasons for non-reporting, however, after my own personal experience, I can testify that embarrassment at making multiple mistakes gave a moment's pause before reason prevailed and I reported the incident to my supervisor.

According to NaSH (National Surveillance System for Hospital Health Care Workers), there are three main risks related to needle stick injuries: recapping, transferring body fluid between containers, and failing to properly dispose of used needles in puncture-resistant sharps containers. NaSH data show that about 38% of percutaneous injuries occur during use and 42% occur after use and before disposal.

Going back to the original dilemma (the patient not having enough time for the visit), the situation was beyond our control. A better triage of needs should have been done: the focus of the visit could have been one goal rather than trying to deal with all of the patient's problems. His anemia medication could have waited until his next visit, or his case manager could have been contacted to arrange for his transportation home at a later time. As stated before, hindsight is 20/20. ♦

REFERENCES

University of Virginia's International Health Care Workers Safety Center and its EPINet needlestick injury data collection system: www.med.virginia.edu/~epinet

The National Institute for Occupational Safety and Health (NIOSH): <http://www.cdc.gov/niosh/200-108>

Pat Gootee is a nurse practitioner in the HIV Outpatient Program (HOP) Clinic of MCLNO.

Check out the HIV Clinician website at deltaaetc.org.

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▲ Earl CE, Penney PJ. Rural nursing students' knowledge, attitudes, and beliefs about HIV/AIDS: a research brief. *Journal of the Association of Nurses in AIDS Care*. 14(4):70-3, 2003 Jul-Aug.

▲ French MA, Herring BL, Kaldor JM, Sayer DC, Furner V, de Chanet CC, Dwyer DE. Intrafamilial transmission of HIV-1 infection from individuals with unrecognized HIV-1 infection. *AIDS*. 17(13):1977-81, 2003 September 5.

▲ Fanning G, Amado R, Symonds G. Gene therapy for HIV/AIDS: the potential for a new therapeutic regimen. *Journal of Gene Medicine*. 5(8):645-53, 2003 August.

▲ Price S, Goyette J. Role of the psychiatrist in the care of patients with hepatitis C and HIV/AIDS. *Psychiatric Quarterly*. 74(3):261-76, 2003 Fall.

▲ Desai N, Mathur M, Weedon J. Lactate levels in children with HIV/AIDS on highly active antiretroviral therapy. *AIDS*. 17(10):1565-8, 2003 July 4.

▲ Wang B, Mikhail M, Dyer WB, Zaunders JJ, Kelleher AD, Saksena NK. First demonstration of a lack of viral sequence evolution in a nonprogressor, defining replication-incompetent HIV-1 infection. *Virology*. 312(1):135-50, 2003 Jul 20.

▲ Stein JH, Wu Y, Kawabata H, Iloeje UH. Increased use of lipid-lowering therapy in patients receiving human immunodeficiency virus protease inhibitors. *American Journal of Cardiology*. 92(3):270-4, 2003 Aug 1.

▲ Ray AS, Murakami E, Basavapathruni A, Vaccaro JA, Ulrich D, Chu CK, Schinazi RF, Anderson KS. Probing the molecular mechanisms of AZT drug resistance mediated by HIV-1 reverse transcriptase using a transient kinetic analysis. *Biochemistry*. 42(29):8831-41, 2003 Jul 29.

▲ Stephens TT, Braithwaite R, Cozza S, Robillard A, Arriola KJ. History of prior TB infection and

HIV/AIDS risk behaviours among a sample of male inmates in the USA. *International Journal of STD and AIDS*. 14(8):514-8, 2003 August.

▲ Schrimshaw EW. Relationship-specific unsupportive social interactions and depressive symptoms among women living with HIV/AIDS: direct and moderating effects. *Journal of Behavioral Medicine*. 26(4):297-313, 2003 August

▲ Liang H, Wu H, Carroll RJ. The relationship between virologic and immunologic responses in AIDS clinical research using mixed-effects varying-coefficient models with measurement error. *Biostatistics*. 4(2):297-312, 2003 April.

▲ Hall HI, Li J, Campsmith M, Lee LM. First positive HIV test date: an assessment of the reliability of information collected for HIV/AIDS surveillance in the United States. *Annals of Epidemiology*. 13(8):580, 2003 September.

▲ Kisner P, Brown B. Factors that influence the medication decision making of persons with HIV/AIDS: a taxonomic exploration. *Journal of the Association of Nurses in AIDS Care*. 14(4):46-60, 2003 Jul-Aug.

▲ Warner LA, Wei W, McSpirtt E, Sambamoorthi U, Crystal S. Ante- and postpartum substance abuse treatment and antiretroviral therapy among HIV-infected women on Medicaid. *Journal of the American Medical Womens Association*. 58(3):143-53, 2003 Summer.

▲ Poluri A, Maanen MV, Sutton RE. Genetic therapy for HIV/AIDS. *Expert Opinion on Biological Therapy*. 3(6):951-63, 2003 September.

▲ Ambrose JA, Gould RB, Kurian DC, DeVoe MC, Pearlstein NB, Coppola JT, Siegal FP. Frequency of and outcome of acute coronary syndromes in patients with human immunodeficiency virus infection. *American Journal of Cardiology*. 92(3):301-3, 2003 Aug 1.

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