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HIV Education Prison Project

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HEPP NEWS

May 2000 Vol. 3, Issue 5

HIV
EDUCATION
PRISON
PROJECT

Sponsored by the Brown University School of Medicine Office of Continuing Medical Education and the Brown University AIDS Program.

ABOUT HEPP

HEPP News, a forum for correctional problem solving, targets correctional administrators and HIV/AIDS care providers including physicians, nurses, outreach workers, and case managers. Published monthly and distributed by fax, HEPP News provides up-to-the-moment information on HIV treatment, efficient approaches to administering HIV treatment in the correctional environment, national and international news related to HIV in prisons and jails, and changes in correctional care that impact HIV treatment. Continuing Medical Education credits are provided by the Brown University Office of Continuing Medical Education to physicians who accurately respond to the questions on the last page of the newsletter.

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In accordance with the Accreditation Council for Continuing Medical Education Standards for Commercial Support, the faculty for this activity have been asked to complete Conflict of Interest Disclosure forms. Disclosures are listed at the end of articles. All of the individual medications discussed in this newsletter are approved for treatment of HIV unless otherwise indicated. For the treatment of HIV infection, many physicians opt to use combination antiretroviral therapy which is not addressed by the FDA.

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TELEMEDICINE IN PRACTICE: TEXAS DEPARTMENT OF CRIMINAL JUSTICE

David Paar, M.D.*
Director, AIDS Care and Clinical Research Program,
University of Texas Medical Branch at Galveston

Telemedicine was introduced in the U.S. in the late 1950s when the Bureau of Indian Affairs used telephone and video programs to train paramedics who resided on Indian reservations (1). Despite technological advances that have greatly expanded the potential applications of telecommunication, telemedicine has developed slowly in the U.S. where issues such as physician acceptance, federal regulation of Medicare/Medicaid reimbursement, other third party reimbursement, and state regulation of medical licensure have impeded widespread adoption (2). Two recent reviews of the use of telemedicine in the U.S. suggest that only 50 - 80 telemedicine programs conduct interactive consultation (1,2). Radiology, Cardiology, Dermatology, and Psychiatry are the specialties that have used telemedicine most extensively (2).

Telemedicine has been incorporated into various correctional healthcare systems and appears to meet with physician and patient satisfaction and to reduce costs that are associated with travel and security for inmate healthcare. Although a comprehensive review of the literature is beyond the scope of this article, selected published information regarding the use of telemedicine in prisons has been reviewed and summarized. In addition, this article will highlight the development of a telemedicine clinic for HIV care in the Texas Department of Criminal Justice.

TELEMEDICINE IN PRISONS LITERATURE REVIEW

The experience of seven correctional jurisdictions' use of telemedicine for inmate healthcare has been reported. Most of these reports describe a pilot or feasibility study in which telemedicine was incorporated into the existing correctional healthcare system. Since primary medical care is provided at the correctional unit, telemedicine has been used for specialty or subspecialty consultation. In most cases,

telemedicine has replaced specialty/subspecialty care that had been provided at a distant location, most commonly at a university medical center. None of the reports compare specific health outcomes of care delivered in a traditional clinic visit versus care delivered via

Two recent reviews of the use of telemedicine in the U.S. suggest that only 50-80 telemedicine programs conduct interactive consultation.

telemedicine. In general, patients and providers have been satisfied with their respective telemedicine experiences. According to the reports, six out of seven systems indicated that reductions in travel and security for inmate healthcare costs have had a positive financial impact. See Heppigram on page 6 for details of each correctional jurisdiction's experience with telemedicine.

TELEMEDICINE FOR HIV CARE IN THE TEXAS DEPARTMENT OF CRIMINAL JUSTICE

In 1997 there were approximately 2,000 identified HIV+ inmates in the TDCJ. Most were housed in the eastern sector of the state. University of Texas Medical Branch Galveston has a managed healthcare contract to provide both primary and specialty care to inmates who are housed in the eastern sector of the state. This area covers 134,000 square miles (approximately half the area of the state) and contains 69 correctional facilities. Prior to the

Continued on page 2

WHAT'S INSIDE

| | |
|----------------------------|------|
| Spotlight | pg 5 |
| HEPPigram | pg 6 |
| Save The Dates | pg 7 |
| HIV 101 | pg 8 |
| Self-Assessment Test | pg 9 |

TELEMEDICINE IN PRACTICE...

(continued from page 1)

introduction of telemedicine for HIV health-care, inmates traveled to UTMB Galveston for HIV clinic which is conducted one day per week in the TDCJ Inpatient/Outpatient Hospital located on the UTMB campus. Because of the distances involved, inmate travel can take up to a week each way and involves nightly stays at several transfer units along the way. Like the other systems that delivered specialty care at a central location, the cost of transportation and associated security for healthcare-related travel was enormous.

Since time and space in the Galveston Inpatient/Outpatient Prison Hospital facility

Because of the distances involved, inmate travel can take up to a week each way and involves nightly stays at several transfer units along the way.

are limited, only one day per week could be assigned for HIV care. An average of 100 inmates were seen weekly, and due to a limited number of medical providers, the clinic day often stretched to 10 - 12 hours, which incurred additional operation costs for overtime for clinic staff and ancillary healthcare providers. By the end of the day, morale among providers, support staff, and patients was low.

Inmates also had valid concerns related to their healthcare. When they are away from their unit of assignment overnight, they risk losing their cell or dormitory bed. Their possessions (which are often numerous for those with long sentences) have to be turned over to security for safekeeping during their absence, nonetheless; many inmates report that possessions are lost on their return. While provisions have been made to stock transfer units with all anti-retroviral medications, the truth is that doses of medications are often missed during stays at transfer units. For all of these reasons, some inmates refused to travel for HIV-related healthcare or refused to return to clinic as frequently as the providers felt was necessary.

UTMB Correctional Managed Care made a commitment in the early 1990s to develop telemedicine for correctional healthcare. A

large telecommunication network that links 12 remote sites with the primary site for specialty healthcare in Galveston was installed. The 12 remote sites are hubs that are in proximity to surrounding correctional units so that telemedicine may still involve inmate travel, but travel back and forth to each of the hubs takes less than a day altogether. In 1997, subspecialty services were mandated to develop telemedicine clinics.

During planning for the HIV telemedicine clinic, the following provider issues were raised:

- Could an adequate provider-patient relationship be established or maintained via telemedicine?
- Could patient confidentiality be maintained during telemedicine encounters?
- If telemedicine was judged inadequate for a particular patient, would TDCJ Managed Care certify a Galveston HIV Clinic visit to address the patient's healthcare needs?

The patient-provider issue had to wait until telemedicine encounters commenced for resolution. In regard to the other issues, it was determined that confidentiality remained the responsibility of healthcare providers and ancillary support staff used to conduct telemedicine [for a review of telehealth confidentiality issues, see Stone, 1999] (12). UTMB Managed Care also recognized that not all health issues could be addressed using telemedicine, so there was no issue with precertification for onsite visits following a telemedicine encounter that was deemed inadequate for effective healthcare.

One system issue related to unit level laboratory capabilities also had to be addressed. At most TDCJ correctional units, blood specimens for laboratory tests are collected and processed at the units and then transported by an established courier system to UTMB Galveston where the tests are performed. Prior to 1997, inmates had to travel to Galveston for viral load testing since laboratory personnel were not trained to process viral load specimens and courier vans did not have the equipment to properly store specimens during transport to Galveston. This was addressed by training unit level laboratory personnel to process viral load specimens and by purchasing temperature controlled transport units for the courier vans.

Tasks necessary to conduct telemedicine

clinics efficiently were identified and assigned to specialists and to unit providers. HIV specialists designed data collection forms that would capture all of the clinical and laboratory data necessary to make HIV-related medical decisions. Unit providers would collect available data prior to the telemedicine encounter and fax this information to the Galveston site prior to the encounter. Galveston HIV specialists were responsible for initiating and changing antiretroviral therapy and were available for telephone consultation as necessary by the unit providers. Unit providers were responsible for monitoring ongoing antiretroviral therapy for adherence, toxicity, and efficacy and to make indicated interventions to improve adherence or treat side effects. Since unit providers were being asked to actively participate in HIV care, a three-day "HIV Minifellowship for Correctional Care Providers" was developed and is conducted two to three times per year. Course faculty are the UTMB HIV specialists who take advantage of the opportunity to establish a professional working relationship as well as to provide education.

HIV telemedicine clinics are conducted once per week and are staffed at the primary site in Galveston by a physician, physician assistant, two clerical staff, a clinical pharmacist to help review compliance and other drug-related issues, and a

The remote site is staffed by the presenter (usually an R.N.) with appropriate clerical and security support. Equipment at both sites includes video and sound equipment, a FAX machine, and computers which are used to access electronic data that both systems share.

research nurse who may verbally screen appropriate patients for participation in clinical trials. The remote site is staffed by the presenter (usually an R.N.) with appropriate clerical and security support. Equipment at both sites includes video and sound equipment, a FAX machine, and computers which are used to access electronic data that both systems share (primarily laboratory data and healthcare appointment data). Completed medical

Continued on page 4

LETTER FROM THE EDITOR

Dear Colleagues,

In response to reader request, HEPP focuses on telemedicine this month. Dr. David Paar, Director, Director, AIDS Care and Clinical Research Program, University of Texas Medical Branch at Galveston, provides a personal report on the establishment and evaluation of a telemedicine program targeting HIV treatment for the Texas DOC. While his experience has been favorable, some concerns about telemedicine have been raised by other correctional HIV providers. My own reaction to telemedicine has been tinged with concern; will long range video ever be able to recreate the private conversation that occurs between patient and physician in the HIV clinic? Dr. Paar believes that close up shots can recreate a sense of privacy. However, I imagine some of the visual cues that I use to evaluate patients might be lost - the subtle shifting in a chair that comes when adherence is being discussed, that clues me into the possibility that the patient is not giving accurate information. For example, will patients be as willing to address their life issues, their histories of substance abuse, their violent domestic relationships with me on a video monitor? These are all components of my HIV treatment interviews, since they provide the framework within which adherence to HIV medication will need to take place (post release). I also imagine that my discussions with patients about HIV prevention might not take place over a monitor; would my patients be as forthcoming about their HIV risk behaviors?

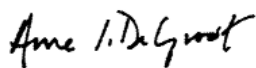
Nevertheless, telemedicine addresses some of the major concerns that patients may have about leaving their home facility for distant HIV specialty care centers. In states where the number of inmates affected by HIV is high and specialty care sites are distant, telemedicine may be able to bridge the gap between no specialty care and much improved care. And, consistent with my role as an educational newsletter editor, I wholeheartedly support the use of telemedicine facilities for increasing teaching opportunities- often described as tele-consultation involving case discussions with providers on site. Increased communication with providers at remote sites will definitely improve patient care.

Also in this month's HEPP News is a report on HIV testing comparing standard serum assays (EIA and Western blot) with other newer methodologies. One such methodology is in use in the New York State DOC. Next month we'll address another topic of great interest to our readers: Hepatitis C.

After reviewing this issue, readers should be able to list advantages and disadvantages of telemedicine, distinguish the advantages of using different HIV diagnostic tests, and list the some of latest findings concerning HIV and lung disease.

Thank you for your continued support of HEPP News. We look forward to hearing from you!

Sincerely,



Anne S. De Groot, M.D.

The editorial board and contributors to HEPP News include national and regional correctional professionals, selected on the basis of their experience with HIV care in the correctional setting and their familiarity with current HIV treatment. We encourage submissions, feed-back, and correspondence from our readership.

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- Yes, I would like to order the following back issues (please include volume/issue/date).
- Yes, I would like my HEPP News to be delivered in the future as an attached PDF file in an e-mail (rather than have a fax).
- Yes, I would like to add my contact information for my complimentary subscription of HIV Inside.

NAME: _____

FACILITY: _____ (Optional) # of HIV Infected Inmates: _____

CHECK ONE: Physician Physician Assistant Nurse Practitioner Nurse/Nurse Administrator
 Pharmacist Medical Director/Administrator HIV Case Worker/Counselor Other

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

FAX: _____ PHONE: _____ E-MAIL: _____

SIGNATURE: _____ DATE: _____

TELEMEDICINE IN PRACTICE...

(continued from page 2)

data forms are faxed from the remote site to Galveston prior to the encounter. The patient encounter occurs, and the specialist writes a clinic note with recommendations which is faxed to the remote site for inclusion in the medical record. Follow up appointments are requested at intervals deemed appropriate by the HIV Specialist.

*A potentially promising
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Experience has shown that patient-provider relationships can be established and maintained with telemedicine. My personal observation is that close-up video shots of both the patient and the provider are effective in creating a sense of intimacy that is lacking when long shots are used. The use of auxiliary cameras, for example a document camera, can be used to present visual educational information such as pill charts and viral replication cycles. This information can then be faxed to the inmate. Formal provider and patient satisfaction surveys have not

been completed, but the two physicians and one physician assistant who conduct telemedicine clinic feel it is effective in treating HIV and more efficient from a time standpoint than specialty care delivered onsite at Galveston.

The first year of the Texas telemedicine experience was reported and reviewed above (11). Cost savings due to a reduction in travel and security for inmate healthcare were directly related to the total number of telemedicine encounters. Comparison of specific medical outcomes (i.e. number of patients achieving nondetectable viral loads) between telemedicine and onsite HIV care have not been conducted, but the telemedicine providers who also staff onsite HIV clinic have not noted major differences in progress between the two populations. In 1995, the number of deaths in HIV-positive inmates peaked and then began to decline in parallel with national trends in HIV-related deaths. This trend has been attributed to combination chemotherapy with protease inhibitors and/or efavirenz. This trend has continued through 1999, therefore; the introduction of telemedicine did not affect this gross measure of overall HIV care.

In 1999, a "teleconsult" clinic for HIV care was established. In this clinic, unit providers perform patient encounters and collect clinical and laboratory data that is necessary for medical decision making on forms that were designed by the HIV specialists. This infor-

mation is faxed to the specialist prior to teleconsult clinic. During the clinic, the specialist and the unit provider use telecommunication equipment to develop a plan for HIV care. Both providers have the patient's medical chart for review of information that is pertinent, but not easily summarized on data collection forms. This method of healthcare delivery works best when unit providers are highly motivated to participate and have attended the "HIV Minifellowship for Correctional Healthcare Providers" so that minimal baseline HIV knowledge has been established.

CONCLUSION

A potentially promising expansion of telemedicine in correctional settings would be to use it for discharge planning and linkage to community-based services. For example, telemedicine could be used for inmates to "meet" and establish rapport with community-based providers prior to being released, thereby increasing the likelihood that releasees would actually obtain needed services in the community.

At the TDCJ, telemedicine allowed a notable reduction in overall healthcare costs. Since its establishment last year, the Teleconsult Health Clinic at TDCJ appears to be delivering effective HIV healthcare. Anecdotally, providers and patients seem to be satisfied with telemedicine encounters and medical outcomes between the clinics appear to be similar.

*Speaker's Bureau: Roche Pharmaceuticals

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TREATMENT NEWS

HIV Testing: Oral Mucosal Transudate (OMT) Technology

Oral Mucosal Transudate (OMT) testing has been shown to enhance access and acceptability of HIV testing in at-risk populations. OMT testing finds twice as many HIV-infected clients as serum-based testing. While the cost of an OMT test is slightly more expensive than serum-based tests (\$34.46 versus \$31.62), the cost for people who are seronegative is less (\$16.16 versus \$17.22). Since most tests find clients are negative, OMT testing is ultimately cheaper than serum-based testing. (Randall L. Effectiveness of Oral Mucosal Transudate HIV Testing: Findings from Michigan's Evaluation. Abstract #690 in 1999 National HIV Prevention Conference.) 70 correctional facilities in New York State currently use OMT. For more information, contact the Infectious Disease Coordinator at the New York Department of Corrections (518) 457-7072.

Rifampin and Pyrazinamide vs. Isoniazid TB Prevention in HIV-infected patients

In the March 2000 issue of *HEPP News*, Elsa Villarino of the CDC described the two-month daily regimen of rifampin and pyrazinamide (PZA) as treatment of tuberculosis in HIV-infected persons. The March 15 issue of the *Journal of the American Medical Association* published results from an international study that compared a two-month regimen of daily rifampin and pyrazinamide with a 12-month regimen of daily isoniazid to prevent tuberculosis (TB) in HIV-positive patients. Clinics in the United States, Mexico, Haiti, and Brazil recruited a total of 1,583 HIV-positive people aged 13 or over who tested positive for TB. After a follow-up of 37 months, the results showed that a two-month course of daily rifampin and pyrazinamide is similar in terms of safety and efficacy to the 12-month isoniazid treatment for preventing TB in HIV patients. Gordin, et. al., note the shorter regimen is an effective alternative that has advantages for patients and TB control efforts, especially in poorer areas with drug-resistant patients. (Gordin F et al. *JAMA*. 3/15/00; 283(11): 1445.)

SPOTLIGHT

Remembering Dr. Armond Start 1931-2000

by Dr. Joseph Paris, M.D., Georgia Department of Corrections Medical Director, President, Society of Correctional Physicians

In 1987, I was a very green correctional physician giving my first national presentation at an NCCHC meeting. I felt under scrutiny by the several seasoned correctional veterans I saw in the audience. I plowed through my topic, PPD testing of refusing inmates. In my inexperienced exuberance, I proposed to be in favor of public health considerations and test aggressively. Armond startled a roomful of attendees with a loud "I do not like what I am hearing here." His concern for the welfare and dignity of incarcerated persons knew no bounds. Later in life, Armond and I met dozens of

It was his leadership that brought us all together to work for the causes he held so dear, and this organization is a lasting tribute to his dedication. He was one who truly cared about his fellow human being, especially those that our society incarcerates. Correctional Health Care has lost a giant of a man, a strong advocate and a warm humane caring individual with Dr. Start's passing.

times, became the best of friends, and sought one another at correctional meetings and social functions. I consider him a most important mentor and adviser. At the New Orleans NCCHC Meeting this March, we shared memories of the old times and laughed at his putting me in my place a long time ago. Upon reflecting about his long professional life in corrections, he wished he had done more. I reassured him that few people have done so much for inmate health care as he did. I am privileged to have had Armond's friendship and guidance.

Dr. Armond Start passed away unexpectedly on March 30, 2000 in Tulsa, Oklahoma. With his passing, modern correctional health care lost one of its founding fathers and strongest advocates.

Dr. Start began his career as a private pediatrician in Oklahoma City, OK. In 1975, he moved into the Communicable Disease Department for the State of Oklahoma, and in 1977, became the Medical Director of the Oklahoma Department of Corrections. From there, Dr. Start went on to fill the same position for the States of Texas and Wisconsin while consulting for the Department of Justice and many others in cases of litigation and program improvement.

In 1991, in an attempt to improve the quality of healthcare in correctional facilities, Dr. Start established the National Center for Correctional Health Care Studies at the University of Wisconsin-Madison Medical School. This was the first program in the country to offer a fellowship in the area of correctional healthcare.

Over the years, Dr. Start received many awards and accolades, including the Award of Merit from the National Commission on Correctional Health Care. In 1998, the Society of Correctional Physicians honored him by naming our first Award in his name, the Armond Start Award.

Dr. Start was one of the principal organizers and founders of Society of Correctional Physicians. It was his leadership that brought us all together to work for the causes he held so dear, and this organization is a lasting tribute to his dedication. He was one who truly cared about his fellow human being, especially those that our society incarcerates. Correctional Health Care has lost a giant of a man, a strong advocate and a warm, humane caring individual with Dr. Start's passing. We will miss him dearly.

HEPPIGRAM

Review of Published Reports of Telemedicine (TM) Use in Corrections in the U.S.

| Correctional Jurisdiction | California DOC* (3) | Dade County, FL Prison Medical Services (4) | Georgia DOC (5) | North Carolina DOC (6,7) | Ohio Department of Rehabilitation and Corrections (8, 9) | Virginia DOC (10) | Texas Department of Criminal Justice (11) |
|---|--|---|---|--|---|--|---|
| Reasons TM considered | Access to specialty care, cost of travel and security for healthcare | TM, addition of PNP's***, and onsite specialty consultation were parts of a plan to impact cost and quality of care | TM in prisons was part of statewide TM network designed to bridge gaps in health care in remote and rural areas | Cost and risk of inmate transportation, access to specialty care | Cost of transportation and security for healthcare, access to specialty care | Improved healthcare, cost of transportation for healthcare | Access to specialty care, cost of transportation and security for healthcare |
| Year TM initiated | 1997 | 1975 | 1977 | 1991 | 1995 | 1994 | 1992 |
| # of encounters | NR** | NR | 95 | 138 Dermatology consultations conducted between 8/92 and 10/94 | 131 encounters during 1995 | 165 HIV + inmates seen between 10/94 and 4/95 | 1,715 patients seen between October 1994 and November 1995 |
| Specialties/subspecialties participating | Psychiatry, Gastroenterology + 14 others | NR | Dermatology | Dermatology + 37 other specialties | NR | HIV, cardiologists, others | All medical and surgical subspecialties, Dermatology, Neurology |
| Academic affiliation of specialists | NR | University of Miami | Medical College of Georgia | East Carolina University School of Medicine | Ohio State University Medical Center | Medical College of Virginia (MCV) | The University of Texas Medical Branch at Galveston |
| Medical outcomes reported | NR | Unscheduled return visits, patient disability, and mortality did not change after system changes | NR | NR | NR | NR | |
| Provider satisfaction | NR Other note: Tele-communication equipment being used for grand rounds | NR | > 77 % of physicians satisfied with the encounter, video, and sound | Formal assessment not done, but most consultants confident of their diagnosis and treatment plan | 24 providers who were surveyed reported that TM was adequate for patient encounters | NR | NR |
| Patient satisfaction reported | No | NR | NR | NR | Patient survey completed in 1996. 221/299 completed survey and all satisfied with information exchanged and patient comfort | NR | 576 inmates interviewed following a TM encounter; 69 % prefer TM over travel for healthcare; 14 % have no preference; and 17 % would rather travel for healthcare |
| Financial impact of TM reported? | No | Addition of PNP's to staff reduced cost; TM increased costs since MD involved in care | NR | Start up costs and time to maximize efficiency of system delayed financial rewards for several years | During 1995, telemedicine encounters reduced inmate travel for healthcare by 98 % | Cost of healthcare decreases from \$497 per encounter prior to TM, \$256 per encounter after TM begins | 95 % of telemedicine encounters prevent an onsite visit; cost per encounter declines and number of TM encounters increases |

*DOC = Department of Corrections **NR = not reported ***PNP = Primary Nurse Practitioner

SAVE THE DATES

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Pulmonary Complications of HIV Infection
June 6, 2000, 12:00-3:30pm
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Email: santosm@mail.amc.edu

HIV Prevention Strategies for Incarcerated Populations

June 20, 2000
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Email: sholland@medicine.umaryland.edu
Fee: \$20

A Strategy Meeting for Improving HIV and Hepatitis Care in Prisons and Jails

June 17, 2000
Washington DC
Contact Jackie Walker at the *National Prison Project of the ACLU*.
Call: 202-234-4830
Fax: 202-234-4890
Email: jckiewalk@aol.com

5th New England Correctional Health Care Conference: Integrating Correctional and Public Health

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2000 American Correctional Association (ACA) Summer Congress

August 14-16, 2000
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Call: 800.222.5646, ext. 1922
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HIV/AIDS Behind Bars

Call for Abstracts.

HEPP News is sponsoring a pre-conference colloquium at the NCCHC conference listed below that will discuss the outcomes of HIV education and prevention interventions in correctional settings.

Accepting 500-word abstracts until August 7. Please fax or e-mail questions to Matt Stark: fax: 401-863-1243; matthew_stark@brown.edu.

NEWS FLASHES

GAO Reports Inadequate HIV Care for Minorities

In an assessment of The Ryan White Care Act and other AIDS assistance programs, government auditors in the General Accounting Office (GAO) concluded that Blacks with AIDS are receiving inferior care compared with whites. The GAO said that Blacks, Hispanics and women with AIDS make up the vast majority of people served by local AIDS groups funded by a government program. That statement must be qualified, however, by recognizing that the federal government emphasized distribution of funds based on the number of full-blown AIDS cases, instead of on the number of HIV-infected people. This observation indicates that federal dollars should be redirected to include funding for AIDS prevention, which accounted for less than 10 percent of the \$10 billion in federal AIDS spending last year. The findings come as research shows that the AIDS epidemic is hitting minorities and women hard. Blacks, who make up about 13 percent of the U.S. population, accounted for 49 percent of AIDS deaths in 1998, according to the Centers for Disease Control.

Thirty-two percent of deaths were among whites and 18 percent were among Hispanics. The GAO audit also found that rural areas may offer more limited medical and social services than cities because urban areas generally receive more money per AIDS case. According to the audit, the Department of Health and Human Services, which administers the Ryan White Care Act grants, agreed with most aspects of the GAO report. The full report is available at www.gao.gov. (HIV/AIDS: Use of Ryan White CARE Act and Other Assistance Grant Funds. General Accounting Office Report: GAO/HEHS-00-54, Mar. 1, 2000).

Intergenerational Transmission of Violence: Research Summary

In a recent *Lancet* article, Richard Neugebauer reviewed the latest literature concerning the links between childhood physical and sexual abuse and the long-term effects on emotional development and social functioning. According to Neugebauer, some studies have found that childhood neglect (excluding abuse), nearly doubled the risk of arrest for a violent offense in adulthood. Research has shown that mistreatment in childhood, whether it is neglect or physical or sexual abuse, is associated with aggressive and criminal behavior as well as a number of clinical syndromes and personality disorders

in adulthood. Neugebauer urges further research on adults as well as immediate implementation of focused intervention programs for children and adolescents. (Neugebauer R. *Lancet*, April 1, 2000; 355: 1117).

In other news, a report released on the same date in the April issue of the *American Journal of Public Health* provides data on sexual abuse and women at risk or infected with HIV. Cohen et. al. found that the prevalence of any domestic violence among the 1,600 at-risk women studied was 66 percent among those with HIV and 67 percent among those without the virus. The abused women were more likely to have used drugs at some time, to have had a partner at risk for HIV, to have had over 10 lifetime male partners, to have traded sex for money or drugs, and to have had forced sex with an HIV-positive individual. (Cohen M, Deamant C, Barkan S, et al. Domestic violence and childhood sexual abuse in HIV-infected women and women at risk for HIV. *American J Public Health*, April 2000; 90 (40): 560. (www.apha.org/news/publications/journal)).

"Increased Susceptibility to Pulmonary Emphysema Among HIV-Seropositive Smokers"

In the March 7 issue of *Annals of Internal Medicine Online*, researchers from Ohio State University published their findings on risk for emphysema among HIV-infected patients who have not developed AIDS-related pulmonary complications. The researchers compared 114 HIV-infected individuals to a group of 44 HIV-negative controls matched for smoking history and age. Seventeen of the 114 HIV-positive subjects presented emphysema, versus only one of the HIV-negative individuals. The researchers suggest that HIV infection seems to directly accelerate the process of smoking-induced parenchymal lung damage. (Diaz PT, King MA, Pacht ER, et al. *Annals Int Medicine Online* March 7, 2000; 132; 369. (www.acponline.org/journals/annals)).

COMING NEXT MONTH . . .

June HEPP News

Main Article: Correctional Doctors' Dilemma: HCV & HIV Co-infection
HIV 101: Treatment Courses for HCV & HIV
Spotlight: The Role of Public Health in HCV Treatment in Prisons and Jails
HEPPigram: An Algorithm for HCV Diagnosis

Antibody Tests Commonly Used in HIV Diagnosis and Management

| | |
|--|--|
| <p>DETECTION OF ANTIBODY IN SERUM OR PLASMA (Lancet 348: 176, 1996; Med Lett 29:81, 1997)</p> | |
| <p>1. Enzyme immunoassay (EIA) followed by Western blot for confirmation. Current assay detects antibodies to both HIV-1 and HIV-2.</p> <p><i>Sensitivity: 99.9% Specificity: 99.9%</i></p> <p><u>Purpose:</u> For all high-risk groups; antibody becomes positive approximately two mos. post-disease acquisition in majority; six mos. after infection, 95% pts. antibody-positive (AJM 102: 117, 1997)</p> <p><u>Comments:</u> Detects IgG, IgA & IgM antibody. EIA repeated for all pos. tests: repeated positives need Western blot confirmation. False positive EIAs rare; false positives reported in pts with autoimmune disease (positive ANA), EBV antibody, pos. syphilis serology, and presence of antibodies to HTLV I/II.</p> <p>Western blot positive requires detection of two or more antibodies to HIV; p24, Gp41, Gp 120/160. Rare false positives; 0.004% of all blood donors (JAMA 280: 1080, 1998); if uncertainty, order plasma quant. of HIV RNA by PCR ("viral load").</p> <p>False neg. EIA antibody test occurs in 1/500,000 units of donated blood. Causes: 1) window between HIV acquisition and antibody response (2-6 mos.), 2) pts with agammaglobulinemia, 3) disease due to genetic variant HIV, HIV-1 divided into types: M for major (10 subtypes) and O for others. GpO strains are not detected by current standard antibody tests (Nature Med 4: 1032, 1998). Ref. for GpO: Emerg Inf Dis 12:39, 1998.</p> | |
| <p>2. Rapid detection methods: results available in 30 minutes or less.</p> <p><i>Sensitivity: 99.9% Specificity: 99.6%</i></p> <p><u>Examples:</u> Single use diagnostic systems (SUDS)</p> <p><i>Cost: Approx. \$9/test</i></p> <p><u>Purpose:</u> When quick answer needed, e.g. test blood of source pt in occupational exposure. Pts. who may not comply with return visit; ER, STD clinics.</p> <p><u>Comments:</u> High temperatures and inadequate centrifugation can cause false-positives. Need to confirm positive test with standard serology. Does not detect HIV, GpO, or HIV-2. Refs. AnIM 124:471 & 509, 1996; J Clin Micro 33: 2899, 1995.</p> | |
| <p>3. Home test kits, e.g. Home Access (JAMA 280: 1699, 1998).</p> <p><i>Sensitivity: 100% Specificity: 99.95%</i></p> <p><u>Purpose:</u> Encourage individuals at risk to determine their antibody status.</p> <p><i>Cost: Approx. \$35-50, 3-7 days</i></p> <p>Convenient, Anonymity maintained.</p> <p><u>Comments:</u> Better described as home specimen collection systems. Patient pricks fingertip and blood spotted on filter paper. Positives confirmed with standard antibody. Counseling included. Ref: Arch Int Med 157; 309, 1997.</p> | |
| <p>DETECTION OF HIV-1 ANTIBODY IN OTHER BODY FLUIDS</p> | |
| <p>1. Antibody in oral mucosal transudate (OraSure) (Ref: JAMA 277: 254, 1997)</p> <p><i>Sensitivity: 99.9% Specificity: 99.9%</i></p> <p><u>Purpose:</u> Major advantage is avoidance of need for a needlestick. Easy to use; collected by health care worker.</p> <p><i>Cost: \$99 for 3-test kit. Takes 3 days.</i></p> <p><u>Comments:</u> Test pad placed between cheek and gum for 2-5 mins. Collects oral mucosal transudate containing IgG antibody. Confirmatory test is OraSure HIV-1 Western blot.</p> | |
| <p>2. Antibody in urine (Sentinel or Calypte): HIV-1 Urine ELISA</p> <p><i>Sensitivity: 99.7% Specificity: 100%</i></p> <p><u>Purpose:</u> Rapid-results in 2.5 hours. Like rapid tests, could be used on source blood if occupational exposure or in ERs, STD clinics.</p> <p><i>Cost: 192-test kit \$816</i></p> <p><u>Comments:</u> Non-invasive and rapid turnaround time attractive. Positives confirmed with urine Western blot. Rare pt serum antibody neg. & urine antibody pos. (Lancet 342: 1458, 1993).</p> | |

RESOURCES

Grant for Life Skills Education for Prisoners

The U.S. Department of Education is offering grants for projects that provide life-skills training for state and local prisoners. The goal of the grant program is to establish and operate projects to reduce recidivism through the improvement of the life skills needed to reintegrate adult prisoners into society. In this round of funding, 15 grants will be awarded, with the maximum grant size of \$475,000. *Application deadline: May 30, 2000.* For complete details, contact Jennifer Arnolds at 202.205.5621.

HIV TREATMENT WEBSITES:

HIV/AIDS Treatment Directory

<http://www.amfar.org/td>

Medscape HIV/AIDS

<http://hiv.medscape.com>

Johns Hopkins AIDS Service

<http://www.hopkins-AIDS.edu>

JAMA HIV/AIDS Information Center

<http://www.ama-assn.org/special/hiv>

International Association of Physicians in AIDS Care (IAPAC)

<http://www.iapac.org>

AEGIS-AIDS Education Global Information System

<http://www.aegis.com>

National Institute of Allergy and Infectious Disease

<http://www.niaid.nih.gov>

SELF-ASSESSMENT TEST FOR CONTINUING MEDICAL EDUCATION CREDIT

Brown University School of Medicine designates this educational activity for 1 hour in category 1 credit toward the AMA Physician's Recognition Award. To be eligible for CME credit, answer the questions below by circling the letter next to the correct answer to each of the questions. A minimum of 70% of the questions must be answered correctly. This activity is eligible for CME credit through June 30, 2000. The estimated time for completion of this activity is one hour and there is no fee for participation.

1. What are some of the challenges that Telemedicine brings to correctional HIV care?
 - a) Increased overall cost
 - b) Reduced patient-provider personal contact
 - c) Increased cost per visit (due to costly technology)
 - d) Insufficient clinical and laboratory data collection

2. The HIV-1 Antibody test with the highest specificity and sensitivity is:
 - a) Enzyme immunoassay/western blot
 - b) Rapid detectin methods
 - c) Home test kits
 - d) Oral mucosal transudate tests such as OraSure
 - e) Sentinel or Calypte

3. Which of the following HIV diagnostic tests has been shown to increase accessibility and acceptability among at-risk populations?
 - a) Enzyme immunoassay/western blot
 - b) Rapid detectin methods
 - c) Home test kits
 - d) Oral mucosal transudate tests such as OraSure
 - e) Sentinel or Calypte

Indicate true or false.

4. ____ A two-month course of daily rifampin and pyrazinamide is similar in terms of safety and efficacy to the 12-month isoniazid treatment for preventing TB in HIV patients.

5. ____ Researchers suggest that HIV infection seems to directly accelerate the process of smoking-induced parenchymal lung damage.

6. ____ Researchers suggest that patients on HAART do not progress to smoking-induced parenchymal lung damage significantly faster than patients who do not have HIV.

HEPP NEWS EVALUATION

5 Excellent 4 Very Good 3 Fair 2 Poor 1 Very Poor

1. Please evaluate the following sections with respect to:

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| HIV 101 | 5 4 3 2 1 | 5 4 3 2 1 |
| Spotlight | 5 4 3 2 1 | 5 4 3 2 1 |
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Why or why not?

3. What future topics should HEPP News address?

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