

# UPDATES FROM HEALTH AGENCIES WORLDWIDE

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Recent activity in government and non-government agencies

may affect readers of *Ethnicity & Disease* and other healthcare

professionals working with ethnic minority and under-served

populations. Below are some current items of interest.

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## FROM THE NATIONAL INSTITUTE OF MENTAL HEALTH

### Posttraumatic Stress Disorder, Depression Epidemic Among Cambodian Immigrants

More than two decades after they fled the Khmer Rouge, most Cambodian refugees who resettled in the United States remain traumatized, a study funded by the National Institutes of Health's (NIH) National Institute of Mental Health (NIMH) and National Institute on Alcohol Abuse and Alcoholism (NIAAA) has found. Sixty-two percent suffered from posttraumatic stress disorder (PTSD) and 51% from depression in the past year, a number that is 6–17 times the national average for adults.

An estimated three million of Cambodia's seven million people died during the repression and civil wars of the 1970s, and most of those who survived suffered multiple traumas. Moreover, even after two decades in the United States, most refugees speak little or no English, are at income levels below poverty, and rely on public assistance.

On average, refugees reported experiencing 15 of 35 types of premigration traumas assessed. For example, 99% nearly starved to death, 96% were enslaved into forced labor, 90% had

a family member or friend murdered, and 54% were tortured. Even after arriving in the United States, 34% said they had seen a dead body in their neighborhood.

Fewer than a third were spared from the psychiatric disorders assessed. Rates of PTSD and depression tended to be highest among those who were older, poorer, weaker English speakers, and unemployed. Forty-two percent had both disorders, and severity of the disorders increased with trauma exposure. The risk factors that predicted depression were so similar to those that predicted PTSD that the researchers suggest that both disorders may, in

fact, reflect "a single continuum of posttraumatic stress."

The 62 percent of those surveyed who had PTSD in the past year compares to a prevalence rate of 3.6% in the general adult population. The 51% who met criteria for major depression compares to a rate of 9.5% of US adults. Rates of alcohol abuse among the refugees were much lower than in the general population and were not associated with PTSD, which likely reflects the influence of cultural factors. The study did not assess the extent to which participants sought treatment for their disorders, but the interviewers gave them information about local mental health clinics.

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## FROM THE NATIONAL INSTITUTE ON DRUG ABUSE

### Methamphetamine Abuse, HIV Infection Cause Changes in Brain Structure

New research published in the August 2005 issue of the *American Journal of Psychiatry* indicates that methamphetamine abuse and HIV infection cause significant alterations in the size of certain brain structures, and in both cases the changes may be associated with impaired cognitive functions, such as difficulties in learning new information, solving problems, maintaining attention and quickly processing information. Concomitant

methamphetamine abuse and HIV infection appears to result in greater impairment than each condition alone.

"Methamphetamine abuse is linked with HIV, hepatitis C, and other sexually transmitted diseases, not only by the use of contaminated injection equipment, but also due to increased risky sexual behaviors," says Dr. Nora D. Volkow, director of the National Institute on Drug Abuse (NIDA), National Insti-

tutes of Health, which helped support the research. "These findings show that methamphetamine abuse and HIV infection each cause significant changes in the volume of brain gray matter structures and cognitive function."

Scientists led by Dr. Terry Jernigan of the HIV Neurobehavioral Research Center of the University of California-San Diego conducted brain scans to analyze structural volume changes in 103 adults divided among four populations: methamphetamine abusers who were

HIV-positive, methamphetamine abusers who were HIV-negative, nonabusers who were HIV-positive, and nonabusers who were HIV-negative. They also assessed the ability to think and reason using a detailed battery of tests that examined speed of information processing, attention/working memory, learning and delayed recall, abstraction/executive functioning, verbal fluency, and motor functioning.

The researchers observed that methamphetamine abuse is associated with increases in the volume of the brain's parietal

cortex (which helps people to understand and pay attention to what's going on around them) and basal ganglia (linked to motor function and motivation). HIV infection is associated with prominent volume losses in the cerebral cortex (involved in higher thought, reasoning, and memory), basal ganglia, and hippocampus (involved in memory and learning).

"In HIV-infected people, the cognitive impairments are associated with decreased employment and vocational abilities,

difficulties with medication management, impaired driving performance, and problems with general activities of daily living, such as managing money," says Dr. Jernigan. "The impact of methamphetamine on daily functioning is less well studied, although it is known that abusers of the drug have impaired decision-making abilities. These could potentially affect treatment and relapse prevention efforts, as well as things like money management and driving performance."

The brain volume changes associated with methamphetamine abuse did not correlate with the amount of the drug a person ingested. However, the study results suggest that younger methamphetamine abusers showed larger effects in some brain regions. Among HIV-infected individuals, the researchers noted a direct association between the severity of the infection and greater loss of brain matter.

Dr. Volkow says medications that reduce inflammation might

be useful in treating methamphetamine abusers. "The effects of methamphetamine and HIV on the brain are distinct but may affect the same brain regions, so understanding how the underlying mechanisms interact also may lead to more effective therapies and the information should be useful in guiding future studies," Dr. Volkow concludes.

## FROM THE NATIONAL INSTITUTE ON AGING

### Free Cancer Information Available in Spanish

Cancer strikes people of all ages, but you are more likely to get cancer as you get older. The good news is that the chances of surviving cancer are better today than ever before. When cancer is found early, it is more likely to be treated successfully. You can

safeguard your health by learning the warning signs of cancer and by having regular checkups.

The National Institute on Aging (NIA) is offering a free fact sheet in Spanish with information to help you recognize the symptoms to watch for, find

out about tests to detect cancer early, learn about treatments, and get further help. The science-based information is useful for seniors and their family members.

Call 1-800-222-2225 to order free copies of *La Realidad del Cáncer en Hombres y Mujeres a Partir de los 50 Años*. The

NIA Information Center is open weekdays between 8:30 a.m. and 5:00 p.m. eastern time. An information specialist will be available to respond to calls in Spanish. This and other Spanish publications on healthy aging also are available on the NIA Web site at [www.niapublications.org](http://www.niapublications.org).

## FROM THE NATIONAL INSTITUTE OF GENERAL MEDICAL SCIENCES

### Researchers Model Avian Flu Outbreak, Impact of Interventions

A carefully chosen combination of public health measures, if implemented early, could stop the spread of an avian flu outbreak at its source, suggest two international teams of researchers in *Nature* (August 3) and *Science* (August 5).

The researchers used computer modeling to simulate what might happen if avian flu were

to start passing efficiently between people in Southeast Asia. They found that antiviral treatment is a critical component of any multipronged approach.

The H5N1 strain of the avian flu virus, found in birds throughout Southeast Asia, has infected a number of species, including domestic poultry, pigs, and people. Scientists fear that

a genetic exchange between bird and human flu viruses or the accumulation of H5N1 mutations could soon make efficient person-to-person transmission possible.

The avian flu strain represents a particular threat because it is so deadly, said Neil M. Ferguson, DPhil, a computational biologist at Imperial College in London and lead author of the *Nature* paper. "A large percentage of animals and people infected with

this virus have died," he explained. "The consequences of an H5N1-based pandemic could be catastrophic."

With bird flu continuing to spread in Southeast Asia, the MIDAS network decided to model a hypothetical human outbreak of H5N1 in this region. "The pressing questions are if and how we can contain an outbreak of avian flu at the source before it becomes a pandemic," said Ira M. Longini, Jr,

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PhD, a biostatistician at the Emory University Rollins School of Public Health in Atlanta and lead author of the *Science* paper.

To enhance reliability, both models were based on detailed data for Thailand, such as population densities, household sizes, age distribution, and distances traveled to work. The models also included information about the flu virus, such as the possible contagiousness of an infected person. Ferguson and Longini noted that actual contagiousness would not be known before an outbreak.

Although the models differed in the specific scenarios they simulated and the intervention strategies they tested, the general conclusions were similar and confirm current knowledge of how diseases spread: Preventing a pandemic would require a com-

bination of carefully implemented public health measures introduced soon after the first cases appear.

The model presented in *Nature* simulated 85 million people living in Thailand and bordering regions of neighboring countries. It tested the effectiveness of giving courses of antiviral treatment to everyone, socially or geographically targeting who received them, and combining these drug-sparing approaches with other interventions, such as restricting travel.

The results suggest that an international stockpile of 3 million courses of flu antiviral drugs, combined with other interventions, could contain a pandemic. Treating infected individuals and everyone in their vicinity, along with closing schools and workplaces, could have more than a 90% chance of

stopping the spread of a pandemic virus, according to the model. Ferguson emphasized that successful containment would depend on the early detection of the first cases and the rapid implementation of public health measures.

The model described in *Science* simulated 500,000 people living in rural Southeast Asia and relied on information about how those individuals move within their communities. Containment strategies included giving antiviral medication to people in the same social networks, vaccinating before an outbreak with a vaccine that is not well matched to the strain that emerges, quarantining the houses or neighborhoods of infected people, and combinations of these approaches.

Giving a low-efficacy vaccine to just half the population before

the start of a pandemic would greatly enhance the success of other containment strategies, according to the model. Longini reported that a combination of targeted antiviral treatment and quarantine introduced two weeks after the first case had the potential to successfully contain disease spread, resulting in less than one case per 1,000 people.

Both models demonstrated that the need for additional public health measures greatly increased as the virus became more contagious. "Each measure can have a significant effect, but it can't contain spread on its own," said Ferguson, adding that targeted antiviral treatment was a crucial component of all combined strategies.