

## THE CSTE WASHINGTON REPORT

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November 30, 2006

Volume 10, Number 24

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**EDITOR'S NOTE:** -- Fall-related death rates for men and women 65 years and older increased significantly from 1993 to 2003, according to a report released November 16 in the Centers for Disease Control and Prevention's (CDC) Morbidity and Mortality Weekly Report (MMWR). In 2003, more than 13,700 older adults died from falls, making them the leading cause of injury deaths among people 65 and older. From 1993 to 2003 fatal falls increased by more than 55 percent - with more men (46.2 percent) dying from falls than women (31.1 percent). The report also indicates that in 2003 almost 1.8 million seniors were treated in emergency departments for nonfatal injuries from falls and more than 460,000 were hospitalized. In 2000, the direct medical costs for falls among older adults were approximately \$19 billion.-- additional details are provided in this *Washington Report*.

The *CSTE Washington Report* is provided as an information resource for members of the Council of State and Territorial Epidemiologists on federal legislation and regulation affecting public health and epidemiology in the U.S. Legislation cited in the report can be

accessed via <http://www.thomas.loc.gov> Regulations cited can be accessed via <http://www.gpo.gov>

**CONGRESS NOT EXPECTED TO FINISH SPENDING BILLS** – Various trade publications have quoted key House and Senate Members as confirming that the 109th lame duck Congress will not finish pending FY 2007 appropriations bills. The House plans to adjourn on December 8th and the Senate on the 14th or 15th after dealing with nominations such as the Gates nomination for Defense Secretary. Another Continuing Resolution is expected to be taken up and passed before the current one expires on December 8th and reports differ on whether it will extend until either early February, early March, or through all of FY 2007. The latter possibility has surfaced in rumors indicating Democrats may want to enact a year long continuing resolution to honor campaign promises to exercise fiscal discipline, including pay-as-you-go rules. Some reports have said that the majority of programs in the remaining appropriations bills will be funded at the lower of the House-passed, Senate-passed, or FY 2006 enacted levels, as in the current and previous continuing resolutions. However, appropriators are reportedly considering additional funding above the "lower-level" formula for certain programs such as veterans health care. The Labor-HHS-Education Appropriations bill has not been passed by either the House or Senate and so programs within the bill have been funded at the FY 2006 level to date, but there is some speculation that some programs in the bill may be treated differently particularly if a year long continuing resolution is likely. In sum, the situation is quite fluid except for the certainty that unfinished FY 2007 appropriations bills, including the Labor-HHS-Education Appropriations bill will not be passed by the 109<sup>th</sup> lame duck Congress.

**HHS BUYS ADDITIONAL VACCINE FOR POTENTIAL USE IN AN INFLUENZA PANDEMIC** -- HHS Secretary Mike Leavitt November 20 announced the purchase of additional vaccine that could be used in the event of a potential influenza pandemic.

The department has awarded contracts totaling \$199.45 million to three vaccine makers to manufacture 5.3 million 90-microgram doses of influenza vaccine designed to protect against the H5N1 influenza virus strain. The three awards include a \$117.9 million contract to sanofi pasteur for 3.7 million doses, a \$40.95 million contract to Novartis for 800,000 doses and a \$40.6 million to GlaxoSmithKline for 800,000 doses.

"Having a stockpile of influenza vaccine that may offer protection against the H5N1 virus is an important part of our pandemic influenza preparedness plan," Secretary Leavitt said. "These contracts are a continuation of our aggressive multi-pronged approach to a potentially critical public health challenge."

At two 90-microgram doses per person, these purchases provide enough courses to vaccinate nearly 2.7 million people. Initial clinical studies of H5N1 vaccine in humans have shown that two 90-microgram doses of the vaccine are required to stimulate a level of immune response that researchers anticipate would provide protection for an individual against the H5N1 strains that have been spreading among birds in Asia. However, further clinical testing is underway, including the evaluation of techniques that

may reduce the amount of antigen (active ingredient) per dose needed to achieve effective individual protection.

These newest vaccine purchases supplement the existing stockpile of 5.9 million doses of H5N1 vaccine and build on the department's plans to buy enough vaccine for 20 million people. This additional vaccine will be placed in the nation's Strategic National Stockpile where they will be available for use should an influenza pandemic occur.

HHS' effort to stockpile vaccine is part of a broader effort by the department to accelerate the development and production of new technologies for influenza vaccines within the U.S. Earlier this year, HHS announced a \$1 billion investment to support the advanced development of cell-based production technologies for influenza vaccines and will help to modernize and strengthen the nation's influenza vaccine production by creating an alternative to producing influenza vaccines in eggs.

The H5N1 strain of avian flu has spread to more than 40 countries and has led to the deaths of hundreds of millions of additional birds, which has heightened concern about the possibility of a human flu pandemic. Furthermore, the number of avian flu cases in humans has reached more than 250 cases in 10 countries. More than half of those persons infected have died. To date, H5N1 avian influenza has remained primarily an animal disease, but should the virus acquire the ability for sustained transmission among humans, the potential for an influenza pandemic would have grave consequences for global public health.

More information on pandemic preparedness including information on vaccines can be found online at <http://www.pandemicflu.gov/vaccine/index.html>.

**FALLS HAVE BECOME THE LEADING CAUSE OF INJURY DEATHS FOR SENIORS** -- Fall-related death rates for men and women 65 years and older increased significantly from 1993 to 2003, according to a report released November 16 in the Centers for Disease Control and Prevention's (CDC) Morbidity and Mortality Weekly Report (MMWR).

In 2003, more than 13,700 older adults died from falls, making them the leading cause of injury deaths among people 65 and older. From 1993 to 2003 fatal falls increased by more than 55 percent - with more men (46.2 percent) dying from falls than women (31.1 percent). The report also indicates that in 2003 almost 1.8 million seniors were treated in emergency departments for nonfatal injuries from falls and more than 460,000 were hospitalized. In 2000, the direct medical costs for falls among older adults were approximately \$19 billion.

"Fall death rates have increased faster than fall injury rates. In large part, this is because people are living longer, and many of our seniors now are older and frailer. They need our help to prevent potentially fatal fall injuries," said Dr. Judy Stevens, an epidemiologist in CDC's Injury Center and author of the report.

### **Other highlights in the report are:**

- . From 1993 to 2003, fatal fall rates increased for both sexes and all races, but they remained consistently higher for men.  
In contrast to fatal falls, rates for nonfatal fall-related injuries were, on average, 48% higher for women than for men.
- .
- . The decline in women's hip fracture injury rates from 2001 to 2004 may be a result of prevention efforts such as osteoporosis screening combined with widespread education about treatments to rebuild bone mass.
- . As they age, men become more susceptible to hip fractures if they fall. Osteoporosis screening and treatment may also benefit them.

"Injuries from falls and the fear of falling, lead older adults to limit their activities, which can interfere with independent living. But we know that falls are not inevitable. CDC and its partners have simple strategies that can help seniors and caregivers," said Dr. Ileana Arias, director of CDC's Injury Center. "Working with the CDC Foundation and MetLife Foundation, we have updated and revised information that we believe can play a critical role in reversing the trend in fall deaths and injuries among our nation's older adults."

Two brochures help older adults and their families and caregivers understand fall risks and ways to prevent falls. What YOU Can Do to Prevent Falls explains steps that older adults can take to reduce their risk of falling.

### **These steps include:**

- . Exercising regularly; exercise programs like Tai Chi that increase strength and improve balance are especially good.
- . Asking their doctor or pharmacist to review their medicines-both prescription and over-the-counter-to reduce side effects and interactions.
- . Having their eyes checked by an eye doctor at least once a year.
- . Making their homes safer by eliminating fall hazards and improving lighting.

**Check for Safety:** A Home Fall Prevention Checklist for Older Adults offers a room-by-room list of hazards to look for in the home that can increase the risk of falling and tips for reducing these hazards.

Four posters, designed for use in health care facilities, senior centers, and other community organizations, highlight each of the prevention messages in the brochures. All of these products are available in English, Spanish, and Chinese.

Electronic and print copies of the brochures and posters are available free of charge at [www.cdc.gov/ncipc/duip/fallsmaterial.htm](http://www.cdc.gov/ncipc/duip/fallsmaterial.htm). For more information about falls among older adults, or injury in general, visit the CDC Injury Center's website at [www.cdc.gov/injury](http://www.cdc.gov/injury).

### **NEW REPORT SHOWS TEEN BIRTHS DROP TO LOWEST LEVEL EVER --**

The teen birth rate in the United States fell to its lowest level ever in 2005, according to the latest birth statistics for the nation, released today by the Centers for Disease Control

and Prevention (CDC).

The report, "Births: Preliminary Data for 2005," includes figures from over 99 percent of birth certificates filed in the U.S. and reveals that between 2004 and 2005, the birth rate for teenagers aged 15-19 fell 2 percent, to 40.4 births per 1,000 - a 35 percent decrease from the peak of 61.8 births per 1,000 in 1991.

The decline in teen childbearing was especially pronounced for non-Hispanic black teens ages 15-17 - the birth rate for this group fell 6 percent in 2005 compared to 2004 and 59 percent since 1991. In total, there were 421,123 births to females under age 20 in 2005.

"The decline in teenage childbearing has been documented across all race and ethnic populations, but most impressive has been the decline in these rates for non-Hispanic black teenagers," said Brady Hamilton, a researcher at CDC's National Center for Health Statistics and lead author of the report.

Among other key findings:

- \* There was another increase in unmarried childbearing in 2005. The number of births to unmarried mothers of all ages rose 4 percent from 1.47 million in 2004 to 1.52 million in 2005; while the rate increased to 47.6 births per 1,000 unmarried females aged 15-44 in 2005, up from 46.1 in 2004. The percentage of births to unmarried mothers also increased in 2005, from 35.8 to 36.8 percent.

- \* The total number of U.S. births increased by 1 percent in 2005 to 4,140,419. The general fertility rate (number of births per 1,000 women ages 15-44) also increased slightly to 66.7 from 66.3 in 2004.

- \* Childbearing by women in their early 20s increased slightly in 2005, and also continued to increase among women in their 30s and 40s. Birth rates for women aged 20-24 and 30-34 rose less than 1 percent between 2004 and 2005, while rates for women aged 35-44 years rose by 2 percent.

- \* The Caesarean delivery rate rose 4 percent in 2005 to 30.2 percent of all births, a record high. The C-section rate has risen 46 percent since 1996.

- \* The preterm birth rate (percentage of infants delivered at less than 37 completed weeks of gestation) rose from 12.5 in 2004 to 12.7 in 2005. This rate has increased 20 percent since 1990.

- \* The percentage of babies born at low birth weight also increased in 2005, to 8.2 percent of all births (up from 8.1 in 2004). The percentage of low birth weight babies has increased more than 20 percent since the mid 1980's.

"Births: Preliminary Data for 2005" is available at [www.cdc.gov/nchs](http://www.cdc.gov/nchs).

**INEXPENSIVE TEST DETECTS H5N1 INFECTIONS QUICKLY AND ACCURATELY** -- Scientists from the University of Colorado at Boulder and the Centers for Disease Control and Prevention (CDC) have developed an inexpensive "gene

chip” test based on a single influenza virus gene that could allow scientists to quickly identify flu viruses, including avian influenza H5N1. The researchers used the MChip to detect H5N1 in samples collected over a three-year period from people and animals in geographically diverse locales. In tests on 24 H5N1 viral isolates, the chip provided complete information about virus type and subtype in 21 cases and gave no false positive results, report the scientists. They say the MChip could provide a significant advantage over available tests because it is based on a single gene segment that mutates less often than the flu genes typically used in diagnostic tests. As a result, the MChip may not need to be updated as frequently to keep up with the changing virus.

The research was led by University of Colorado scientist Kathy L. Rowlen, Ph.D., and funded by the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health. A paper describing the work, now available online, is scheduled to appear in the December 15 issue of the American Chemical Society’s journal *Analytical Chemistry*.

“Concerns about a possible influenza pandemic make it imperative that we continue to devise reliable and easy-to-use diagnostic tests for H5N1 that can be employed on-site where outbreaks are suspected,” says NIAID Director Anthony S. Fauci, M.D. “The MChip developed by Dr. Rowlen and her colleagues performed extremely well in initial tests and has the potential to be a valuable tool in global influenza surveillance efforts.” The MChip has several advantages over the FluChip, a flu diagnostic previously developed by the same research team, says Dr. Rowlen. While the FluChip is based on three influenza genes — hemagglutinin (HA), neuraminidase (NA) and matrix (M) — the MChip is based on one gene segment. Unlike HA and NA, which mutate constantly and thus are technically difficult to use to develop gene chip diagnostic tests, the M gene segment mutates much less rapidly, Dr. Rowlen explains. “The M gene segment is much less of a moving target than the HA or NA gene. We believe that a test based on this relatively unchanging gene segment will be more robust because it will continue to provide accurate results even as the HA and NA genes mutate over time. The work summarized in our paper strongly supports that idea,” she says.

Another potential advantage is that the MChip would, for the first time, create a way to simultaneously screen large numbers of flu samples to learn both the type and subtype of virus present. Current real-time tests provide information about the type of virus (type A or B) in a sample, but additional tests must be run to determine the virus subtype (for example, H5N1 subtype.)

Working in biosafety-level-3-enhanced labs in Atlanta, CDC scientists, including Catherine B. Smith, M.S., extracted H5N1 genetic material from virus samples derived from human, feline and multiple avian hosts, including geese, chickens and ducks. The samples represented infections that had occurred between 2003 and 2006 over a vast geographic area, including Vietnam, Nigeria, Indonesia and Kazakhstan. Six of the human viral isolates were taken from an Indonesian family in which human-to-human H5N1 virus transmission was suspected. The virus diversity in the samples is important, explains Dr. Rowlen, because any diagnostic tool designed for eventual use on a rapidly

changing virus, such as H5N1, must be able to detect as many variants as possible. Dr. Rowlen and her colleagues tested the ability of the MChip to correctly identify 24 different H5N1 viral isolates, and distinguish those from seven non-H5N1 isolates. The MChip accurately identified and gave complete subtype information (identifying the samples as H5N1) for the 21 out of 24 strains of H5N1. Importantly, notes Dr. Rowlen, the test gave no false positives, meaning that the chip never indicated the presence of H5N1 when none was present. Following exposure to a viral isolate, the MChip displays results as a pattern of fluorescent spots. To automate the process of interpreting this pattern — thus eliminating the possibility of human error — the researchers developed an artificial neural network trained to recognize the distinctive pattern indicative of H5N1. Automating the interpretation of MChip results could allow it to be used more readily by health workers at the site of possible flu outbreaks, notes Dr. Rowlen.

“This new technology, once manufactured and distributed, could have the potential to revolutionize the way laboratories test for influenza,” says Nancy J. Cox, Ph.D., director of the CDC’s influenza division. “The MChip could enable more scientists and physicians, possibly even those working in remote places, to more quickly test for H5N1 and to accurately identify the specific strain and its features. This would greatly increase our ability to learn more about the viruses causing illness and take the best steps to respond.”

The raw materials for the MChip cost less than 10 dollars, Dr. Rowlen says, and discussions are under way to commercialize its manufacture.

For more information on influenza see <http://www3.niaid.nih.gov/news/focuson/flu>. Also visit <http://www.PandemicFlu.gov> for one-stop access to U.S. Government information on avian and pandemic flu.