

THE CSTE WASHINGTON REPORT

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INSIDE THIS ISSUE

- ... HEALTHCARE ASSOCIATED INFECTIONS
RECEIVING INCREASED CONGRESSIONAL
ATTENTION
 - ... CDC REPORT POINTS TO NEED FOR NEW
FOODBORNE ILLNESS STRATEGIES
 - ... SCIENTISTS FIND ANTIBODY THAT CAN
POTENTLY NEUTRALIZE TWO VIRUSES
 - ... PREGNANCY RATE DROPS FOR U.S.
WOMEN UNDER AGE 25
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EDITOR'S NOTE: -- Pregnancy rates for females under age 25, including teenagers, in the United States declined in 2004 compared to 1990, according to a report released April 10 by the Centers for Disease Control and Prevention (CDC). The report says nearly 38 percent of pregnancies in 2004 were to women under age 25, down from nearly 43 percent in 1990. The proportion of pregnancies among teens under age 20 dropped from 15 percent in 1990 to 12 percent in 2004-- 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.

HEALTHCARE ASSOCIATED INFECTIONS RECEIVING INCREASED CONGRESSIONAL ATTENTION – The House Committee on Oversight and Government Reform held a hearing earlier this week on the topic: “Healthcare-Associated Infections: A Preventable Epidemic.” Testimony was provided by Don

Wright, MD, MPH, Principal Deputy Assistant Secretary for Health, the U.S. Department of Health and Human Services (DHHS); Cynthia Bacetta, Director of Health Care Issues, Government Accounting Office; Peter J. Pronovost, MD, PhD; Medical Director, Center for Innovation and Quality and Patient Care, Johns Hopkins University's School of Medicine, among others. The focus of the hearing was findings of the GAO that the DHHS is not providing the necessary leadership to assist hospitals in implementing the most important infection control practices, and is not coordinating the collection of data from hospitals to avoid duplication and unnecessary burden.

In his opening statement, Chairman Henry Waxman noted, "Thanks to the work of one of our witnesses, Dr. Peter Pronovost, and the efforts of Michigan hospitals, we know that by taking simple steps, hospitals can significantly reduce the number of patients who become infected while they are receiving treatment for another condition. These steps are not expensive. Healthcare workers should wash their hands before inserting a catheter into a blood vessel. If a patient is going to undergo a surgical procedure, the hair around the surgical site should be removed with clippers, not a razor so as to avoid nicks and cuts that can be routes of infection. Catheters should be withdrawn as soon as they are no longer necessary."

Legislation has been introduced which would require hospitals to report information about community and healthcare-associated infections to the CDC National Healthcare Safety Network to be used by the CDC to develop a national database of infection rates in hospitals. *The Community and Healthcare-Associated Infections Reduction Act of 2007* S. 2278/H.R. 4214 was introduced, respectively, by Sen. Durbin (D-IL) and Rep. Cummings (D-MD). The Senate HELP Committee is preparing to mark up a food safety measure that may incorporate features of the Durbin-Cummings bill as well as S. 2313, a bill introduced by Sen. Sherrod Brown (D-OH) addressing antimicrobial resistance via education and awareness enhancements. Below is a Congressional Research Service summary of the Durbin-Cummings bill:

Community and Healthcare-Associated Infections Reduction Act of 2007 - Directs the Agency for Healthcare Research and Quality (AHRQ), in collaboration with the Centers for Disease Control and Prevention (CDC), to develop best-practices guidelines for internal infection control plans to prevent, detect, control, and treat community and healthcare-associated infections at hospitals.

Requires AHRQ to: (1) establish best practices with supporting justification, including the establishment of an infection control oversight committee; (2) collaborate with other agencies and organizations whose area of expertise is the identification, treatment, and prevention of infectious disease; (3) publish proposed guidelines; (4) provide for a comment period of not less than 90 days; and (5) establish final guidelines.

Directs the Administrator of the Centers for Medicare and Medicaid Services to: (1) consult best practices guidelines in evaluating hospitals' infection control plans as a condition of participation in the Medicare program; and (2) report to

Congress on the feasibility of reducing healthcare-associated infection rates through a Quality Improvement Payment Program.

Requires: (1) hospitals to report information about community and healthcare-associated infections to the CDC National Healthcare Safety Network, which shall be used by the CDC to develop a national database of infection rates in hospitals; (2) the Director of the CDC to award grants to states to carry out public awareness campaigns; (3) the Director of the National Institutes of Health (NIH) to expand and intensify NIH programs regarding research and related activities concerning such infections; (4) the Secretary of Health and Human Services to establish an interagency working group on community and healthcare-associated infections; and (5) the Government Accountability Office (GAO) to report to Congress on this Act's impact.

CDC REPORT POINTS TO NEED FOR NEW FOODBORNE ILLNESS

STRATEGIES -- A 10-state report released April 10 by the Centers for Disease Control and Prevention (CDC) showed little change in the incidence of some foodborne infections after a period of decline.

The findings are from 2007 data reported to the CDC as part of the agency's Foodborne Diseases Active Surveillance Network, FoodNet. FoodNet monitors foodborne disease and conducts related epidemiologic studies to help health officials better understand the epidemiology of foodborne diseases in the United States. Although the FoodNet population is similar to the U.S. population, the findings are used to detect trends in foodborne illness and should not be generalized for the entire U.S. population.

Campylobacter, *Listeria*, *Salmonella*, *Shigella*, *E.coli* O157, *Vibrio*, and *Yersinia* did not decline significantly, and the estimated incidence of *Cryptosporidium* increased when compared with the previous three years (2004-2006). Although there have been significant declines in the incidence of some foodborne infections since surveillance began in 1996, these declines all occurred before 2004.

"The results show that prevention efforts have been partly successful, but there has been little further progress in the most recent years," said Dr. Robert Tauxe, deputy director of CDC's Division of Foodborne, Bacterial and Mycotic Diseases. "More needs to be done to make our food safer. We are constantly working to help our public health system better detect, investigate and control outbreaks and to understand how to prevent foodborne illnesses from happening in the first place. FoodNet is an important part of our food safety system and is how we measure progress."

"FoodNet is an important public health surveillance tool," according to Faye Feldstein, acting director of the Federal Drug Administration's (FDA) Office of Food Defense. "FDA will continue to support this important endeavor and is committed to pursuing strategies to reduce all foodborne illness. FDA's Food Protection Plan represents a major new initiative that is heavily focused on prevention linked to targeted intervention and rapid response that is taking a production to consumption approach to addressing

protection of the food supply”

Consumers can reduce their risk for foodborne illness by following safe food-handling recommendations and by avoiding the consumption of unpasteurized milk, raw or undercooked oysters, raw or undercooked eggs, raw or undercooked ground beef, and undercooked poultry. The risk for foodborne illness can also be decreased by choosing in-shell pasteurized eggs, irradiated ground meat, and high pressure-treated oysters.

The full report, “Preliminary FoodNet Data on the Incidence of Infection with Pathogens Transmitted Commonly Through Food – 10 States, United States, 2007” appears in this week’s Morbidity and Mortality Weekly Report (April 11, 2008) and is available online at www.cdc.gov/mmwr. To learn more about FoodNet, please visit <http://www.cdc.gov/foodnet/>. To learn more about foodborne infections, visit http://www.cdc.gov/ncidod/dbmd/diseaseinfo/foodborneinfections_g.htm.

PREGNANCY RATE DROPS FOR U.S. WOMEN UNDER AGE 25 -- Pregnancy rates for females under age 25, including teenagers, in the United States declined in 2004 compared to 1990, according to a report released April 10 by the Centers for Disease Control and Prevention (CDC).

The report says nearly 38 percent of pregnancies in 2004 were to women under age 25, down from nearly 43 percent in 1990. The proportion of pregnancies among teens under age 20 dropped from 15 percent in 1990 to 12 percent in 2004.

The report, “Estimated Pregnancy Rates by Outcome for the United States, 1990-2004,” prepared by CDC’s National Center for Health Statistics, shows there were almost 6.4 million pregnancies in 2004 among women of all ages, about 6 percent fewer than the nearly 6.8 million in 1990. The 2004 total included 4.11 million live births, 1.22 million induced abortions, and 1.06 million fetal losses (such as stillbirths and miscarriages). In 1990, there were 4.16 million live births, 1.61 million induced abortions and 1.02 million fetal losses.

“This latest pregnancy outcome report finds that there was little change in births and fetal loss numbers between 1990 and 2004. However, abortions fell 24 percent over this time period,” said Stephanie Ventura, head of the Reproductive Statistics Branch at CDC/NCHS.

Other findings of the report:

- Nearly half (45 percent) of the 6.4 million pregnancies in 2004 occurred among unmarried women. Pregnancy totals for unmarried women increased from over 2.7 million in 1990 to over 2.8 million in 2004.
- Pregnancy totals among married women declined from 4.1 million in 1990 to 3.5 million in 2004.
- The average U.S. woman is expected to have 3.2 pregnancies in her lifetime at current

pregnancy rates; black and Hispanic women are expected to have 4.2 pregnancies each, compared with 2.7 for non-Hispanic white women.

- Seventy-five percent of pregnancies among married women ended in a live birth in 2004, while 19 percent ended in fetal loss, and 6 percent ended in abortion. For unmarried women, slightly over half of pregnancies (51 percent) ended in live birth, an increase from 43 percent in 1990. Thirty-five percent of these pregnancies ended in abortion and 13 percent ended in fetal loss.
- More than two-thirds of pregnancies for non-Hispanic white (67 percent) and Hispanic women (69 percent) and half of pregnancies to non-Hispanic black women ended in live birth.
- More than a third (37 percent) of pregnancies for black women ended in abortion compared with 12 percent for non-Hispanic white women and 19 percent for Hispanic women.

The full report is available at www.cdc.gov/nchs.

SCIENTISTS FIND ANTIBODY THAT CAN POTENTLY NEUTRALIZE TWO VIRUSES -- In laboratory experiments, scientists at the National Cancer Institute (NCI), part of the National Institutes of Health (NIH), and their colleagues supported by the NIH National Institute of Allergy and Infectious Disease (NIAID), have discovered an antibody that neutralizes two viruses classified as henipaviruses. Nipah virus (NiV) and Hendra virus (HeV) are highly infectious agents that transitioned from infecting flying foxes in the mid-1990s to causing fatal disease in humans and livestock in Australia, Bangladesh, India, Malaysia, and Singapore. Recent outbreaks have resulted in encephalitis and acute respiratory distress, person-to-person transmission, and up to 70 percent fatality rates. The finding appears in the Feb. 15, 2008, issue of *The Journal of Infectious Diseases*.

Antibodies are proteins that are found in blood or other bodily fluids of vertebrates and are used by the immune system to identify and neutralize foreign molecules, including bacteria and viruses. According to study author Dimitar S. Dimitrov, Ph.D., of NCI's Center for Cancer Research in Frederick, Md., "We hope that with further research this antibody can save human lives. The insights offered about how it works also could potentially provide a starting point for the development of tools for targeting other diseases."

The first step in countering infections caused by these viruses is to find antibodies that can neutralize them. Viral neutralization is the process by which an antibody alone or an antibody plus another molecule, called complement, block the infectivity of a virus. Zhongui Zhu, Ph.D., of Dimitrov's group, and their NIAID-supported collaborator Christopher Broder, Ph.D., of the Uniformed Services University of the Health Sciences, Bethesda, Md., had previously identified antibodies to NiV and HeV by panning a large antibody library against a soluble form of the protein that makes up the HeV shell. One of these antibodies, m102, exhibited a strong ability to neutralize both NiV and HeV.

In their current experiment, the researchers created an improved version of m102, called m102.4, by using a complex procedure called in vitro maturation. The m102.4 version is even more potent than its parent antibody, m102, and can neutralize both HeV and NiV without a loss of cross-reactivity, which is the ability of an antibody that is specific for one target, or antigen, to bind to a second antigen. The researchers believe that the m102.4 clone is the first fully human antibody that is capable of potentially neutralizing both HeV and NiV. Their results suggest that m102.4 may prove useful as a therapeutic for treatment of diseases caused by henipaviruses. Their initial experiments in small mammals, called ferrets, found that m102.4 was well tolerated, exhibited no adverse effects, and retained high neutralizing activity, which may point to this antibody's potential for clinical use as a preventive agent, a diagnostic probe, or an antiviral therapeutic.

"The generation of a potent antibody against both HeV and NiV could help control outbreaks in geographical regions susceptible to henipaviruses, and result in a benefit for mankind," said Dimitrov. He also noted that the laboratory technology they used for the maturation of antibodies is being used for the development of antibodies against cancer. This study was a collaboration with investigators Katharine N. Bossart, Ph.D., and Lin-Fa Wang, Ph.D., from Geelong, Victoria, Australia, where there is a high-level safety and security facility for testing the antibody.