Does a Flu Vaccine Protect The Elderly for Long Enough?

The flu vaccine is less protective for elderly patients, and just how long the protection lasts is unclear. Does it last beyond a typical seasonal epidemic? That’s important to know for patients in climates where the virus activity is frequent, even year-round, say researchers from Tan Tock Seng Hospital (Singapore), National University of Singapore, and Nagasaki University.

They compared findings from 15 randomized, controlled trials and four cohort studies involving 2,565 patients. One of the cohort studies was designed to investigate antibody persistence, and another was an observational study of booster influenza vaccine at 12 weeks in elderly travelers.

Their meta-analysis found “robust evidence” to support the conclusion that, in adults older than 65 years of age, antibody responses after vaccination with inactivated trivalent vaccine do not reliably persist year-round. Protection began to decline from days 21–42 through day 360. In one analysis of the data, seroprotection fell below 60% for all serotypes by day 360. A second analysis found the same thing: by day 360, titers were similar to prevaccination levels.

The researchers say the immunological evidence suggests that elderly patients in countries with biannual and year-round influenza epidemics would benefit from an alternative to the currently recommended annual vaccination. An alternative, they suggest, is to vaccinate more often, such as before each season in countries with biannual epidemics.

Source: Vaccine, January 2017

New NCI Formulary May Help Streamline Cancer Clinical Trials

Normally it can take as long as 18 months for clinical trial investigators to negotiate the use of drugs in preclinical studies and clinical trials. But the National Cancer Institute’s (NCI’s) new drug formulary will allow investigators at NCI-designated cancer centers quicker access to approved and investigational agents, which could help make more effective treatments available sooner.

The NCI Formulary, a public–private partnership between NCI and pharmaceutical and biotechnology companies, is one of NCI’s efforts in support of the Cancer Moonshot (former Vice President Biden’s call for greater collaboration and faster development of new therapies). It enables NCI to act as an intermediary between investigators at cancer centers and participating pharmaceutical companies, streamlining arrangements for access to and use of drugs.

The formulary launched with 15 targeted agents from six pharmaceutical companies: Bristol-Myers Squibb, Eli Lilly and Company, Genentech, Kyowa Hakko Kirin, Loxo Oncology, and Xcovery Holding Company LLC.

Source: National Institutes of Health, January 2017

Pregnancy After Cervical Surgery: What Are the Risks?

Surgeries for cervical intraepithelial neoplasia (CIN) have been linked to preterm birth, low birth weight, and pregnancy loss, among other adverse outcomes. But the mechanisms haven’t been entirely explained. Are the outcomes due to the surgery, to immunological factors, or to risk factors associated with CIN?

The greater risk of pregnancy problems derives primarily from the treatment, not from characteristics of human papillomavirus or CIN, say researchers from Kaiser Permanente Northwest and Duke University. They compared 322 women who had undergone excisional and ablative cervical surgery with 4,307 women who had not, and, separately, to 847 women who had undergone only diagnostic or biopsy procedures.

Of the treated women, 163 had a live birth within one year of treatment. Women who had undergone thick excisional surgical procedures (1 cm or greater) had approximately double the risk of preterm birth and low-birth-weight infants, compared with the other two groups. The risk was higher if the baby was born within one year of surgery.

The risk of cesarean delivery rose 20% with excisional surgery. The treated women did not have a substantially higher risk of dysfunctional labor.

Among the women who had cervical surgery, 21% lost the pregnancy (25% of those with ablative and 19% of those with excisional surgery). In contrast, 18% of the unexposed women and 20% of the diagnostic-only group experienced pregnancy loss. The researchers say the positive association between pregnancy loss and ablative surgical treatment has not been previously reported.

Efforts to minimize excision thickness in cervical surgeries are “prudent,” the researchers advise.

Source: PLoS One, January 2017

Hearing Loss Is Getting Less Common in Adults

The number of older Americans is growing, but the number of those with hearing loss is declining, according to data from the National Health and Nutrition Examination Survey. Researchers compared two time periods (1999–2004 and 2011–2012) and found overall annual prevalence of hearing loss dropped from 16% to 14% in 1999–2004, to 28 million adults, then dropped further to 27.7 million in 2011–2012.

Age was the greatest predictor of hearing loss; people in the oldest age group surveyed (60–69 years of age) had the most loss. (Although not included in the study, people 70 years of age and older have the highest prevalence of hearing loss of any age group, the authors say.) Men of all ages were twice as likely as women to have hearing loss. Non-Hispanic white adults were more likely to have hearing loss than adults in other ethnic groups. Non-Hispanic black adults had the lowest risk.
The researchers don’t know why hearing loss is becoming less prevalent, but they suggest reasons include fewer manufacturing jobs, increased use of hearing protectors, less smoking, and better medical care to manage risk factors associated with hearing loss. They did find that lower education level and heavy use of firearms were associated with hearing loss.

“Our findings show a promising trend of better hearing among adults that spans more than half a century,” says Howard Hoffman, MA, first author on the paper and director of the National Institute on Deafness and Other Communication Disorders’ Epidemiology and Statistics Program. “The decline in hearing loss rates among adults under age 70 suggests that age-related hearing loss may be delayed until later in life. This is good news because for those who do develop hearing loss, they will have experienced more quality years of life with better hearing than earlier generations.”

Source: National Institutes of Health, December 2016

Diabetes-Related Kidney Failure Drops Among Native Americans

Diabetes-related kidney failure has declined dramatically among Native Americans—54% between 1996 and 2013—thanks largely to team- and population-based approaches begun by the Indian Health Service (IHS) in the mid-1980s.

In addition to lowering the prevalence of kidney failure, those approaches led to other improvements:

- Use of medicines to protect kidneys increased from 42% to 74% in five years.
- Average blood pressure in people with hypertension is well controlled (135/76 mm Hg in 2015).
- Blood sugar control improved by 10% between 1996 and 2014.
- Kidney testing in adults 65 years of age and older was 50% higher compared with the Medicare diabetes population.

Team-based care, the Centers for Disease Control and Prevention (CDC) and IHS advise, should include patient education; community outreach; care coordination; tracking of health outcomes; and access to health care providers, nutritionists, diabetes educators, pharmacists, community health workers, and behavioral health clinicians. For instance, care managers use clinical data to identify people who need to be linked to health care and call patients if they miss appointments. The care model also includes integrating kidney disease prevention and education into routine diabetes care.

Source: CDC, January 2017

The Rural–Urban Gap in Mortality

Americans living in rural areas are more likely than their urban counterparts to die from the five leading causes of death, according to a Centers for Disease Control and Prevention (CDC) study of data from the National Vital Statistics System.

In 2014, 25,000 rural residents died from heart disease, 19,000 from cancer, 12,000 from unintentional injuries, 11,000 from chronic lower respiratory disease, and 4,000 from stroke. The study also found that unintentional injury deaths were about 50% higher in rural areas than in urban areas, partly due to greater risk of death from vehicle crashes and opioid overdoses. The problem is compounded by the fact that the distance between health care facilities and trauma centers can make rapid access to specialized health care difficult.

The study researchers say several factors could influence the rural–urban gap. For instance, many of the deaths are associated with sociodemographic differences. Rural residents tend to be older, poorer, and sicker, with limited physical activity due to chronic conditions. But that “striking gap” in health can be closed, says CDC Director Tom Frieden, MD, MPH, by better understanding and addressing the health threats that put rural Americans at risk.

The CDC suggests, for instance, that health care providers in rural areas:

- Screen patients for high blood pressure and make control a quality improvement goal.
- Increase cancer prevention and early detection—for example, by participating in state-level comprehensive control coalitions, which focus on prevention, education, screening, access, support, and overall good health.
- Encourage physical activity and healthy eating to reduce obesity.
- Encourage patients to stop smoking.
- Promote vehicle safety (rural residents are less likely to use seatbelts).
- Engage in safe prescribing of opioids for pain, and use nonpharmacological therapies.

The report and a companion commentary are part of a new rural health series in the CDC’s Morbidity and Mortality Weekly Report. The Health Resources and Services Administration, which houses the Federal Office of Rural Health Policy, will collaborate with the CDC on the series and help promote the findings and recommendations to rural communities.

Source: CDC, January 2017