

LIFE & ARTS



FROM LEFT: ANNE TRITT FOR THE WALL STREET JOURNAL (3); RYAN ANGEL MEZA FOR THE WALL STREET JOURNAL

HEALTH & WELLNESS

In Hospitals, Pneumonia Is a Lethal Enemy

Basic nursing care could curb the top hospital-acquired infection in America, a new study says

BY LUCETTE LAGNADO

AT A TIME WHEN the public is concerned with drug-resistant superbugs, researchers have identified another danger of going to the hospital: contracting pneumonia.

Hospital-acquired pneumonia is more pervasive and urgent than most people realize, a new study warns, and hospitals in America aren't adequately addressing prevention. "Given the mortality, hospitals should be doing a lot more," says Dian Baker, lead author of the study, which was published in January in the *American Journal of Infection Control*.

Pneumonia, which typically comes from germs that enter the body through the mouth, is the No. 1 hospital-acquired infection in America, according to the Centers for Disease Control and Prevention. That includes both pneumonia infections that some patients on ventilators catch from bacteria in their breathing tubes as well as the more common non-ventilator variety, the CDC says.

To battle germs and superbugs, hospitals are cleaning rooms and

equipment thoroughly, controlling the use of antibiotics and dispensing hand sanitizer to patients, visitors and staff. But Dr. Baker and her co-author Barbara Quinn contend that hospitals could prevent many pneumonia cases if they stepped up basic, hands-on nursing care.

Experts recommend a combination of techniques, such as making sure patients are elevated in their beds and getting them to move and walk about, so air moves through their lungs and germs don't settle in. Deep breathing exercises can help keep respiratory tracts clear. Toothbrushing also is seen as a strong defense against pneumonia.

At NYU Langone Health in New York City, patients—whether having complex surgery or an outpatient procedure—brush their teeth and gargle before going under anesthesia and throughout their hospital stay. Before Emanuel J. Braxton had vascular surgery there this month, he was given a toothbrush kit and told to brush. Mr. Braxton, a 76-year-old retired postal worker from



NYU Langone Health patients Patricia Rosati, top, and Emanuel J. Braxton, above, cleaned their teeth with a hospital-supplied kit, left, before undergoing surgery.

Staten Island, N.Y., was surprised but agreed. "I thought, what the hell, I will do it," he says.

NYU Langone's pre-surgery tooth-brushing program has been in place for two years. "They go to the operating room within 20 minutes of getting it done," says Dora Castillo, the nurse administrator who launched the effort.

About 15% to 20% of patients with hospital-acquired pneumonia die, researchers have found. "Unfortunately too often when someone goes into the hospital the accepted pathway is let them lie in bed—and that is the problem," says Marin Kollef, Director of Respira-

tory Care Services at Barnes-Jewish Hospital in St. Louis, Mo. Patients with hospital-acquired pneumonia had "8.4 times greater odds of death" than equally sick patients, according to a

Barnes-Jewish study Dr. Kollef co-authored. Such pneumonia cases, the authors wrote, were "associated with significant increases in mortality." But experts noted that the cause of death for pneumonia patients wasn't necessarily pneumonia.

In a separate study, investigators from the CDC and the Pennsylvania Department of Health found that about 31% of adult patients with hospital-acquired pneumonia died. The CDC said the cause of the deaths wasn't known.

The recent study in the *American Journal of Infection Control* was conducted by Dr. Baker, a



Dian Baker, above left, and Barbara Quinn believe nursing care can help contain hospital-acquired pneumonia.

nurse-researcher and professor at the School of Nursing at Sacramento State University, and Ms. Quinn, a clinical nurse specialist at Sutter Health, a 24-hospital system based in Sacramento, Calif. The authors focused on common pneumonia infections, not ones from ventilators. Hospital patients in their 40s and 50s are vulnerable, not simply the elderly, the authors said.

At Sutter Medical Center, Sacramento, Ms. Quinn initiated a program—involving 50,000 toothbrushes—where every patient in the hospital was told to brush several times a day. Using 2010-2011 as a baseline, researchers found that from May 2012 through December, 2014, hospital-acquired pneumonia cases were down by 70%, she said. Sutter Health hopes to order 200,000 toothbrushes and roll out the program in its Northern California hospitals.

Even brushing's boosters acknowledge that more studies and clinical trials are needed to prove that oral care prevents pneumonia. Researchers who question whether more brushing means less pneumonia point out that the malady is difficult to diagnose and treat, let alone prevent. Dr. Baker agrees that more research is needed, but the worst case is "allowing patients to die without trying."

Shannon Munro, a nurse researcher at the Department of Veterans Affairs Medical Center in Salem, Va., launched a campaign in which nurses in two units with a total of 50 beds had patients brush their teeth twice a day. According to Dr. Munro, between October 2016 and December 2017, the number of non-ventilator, hospital-acquired pneumonia cases fell 92%—a decline she attributes to oral care. She expanded the program in her facility and to other VA hospitals, including in Houston, North Carolina and Virginia, and hopes to have it in every VA hospital.

Brian Koll, an infectious-disease specialist, says oral-care initiatives make perfect sense, just like efforts to get patients to wash their hands. "You want to reduce the amount of bacteria in your mouth," said Dr. Koll, a professor of medicine and infectious diseases at the Icahn School of Medicine at Mount Sinai. Still, he believes more data are needed to come up with "evidence-based guidelines."

NYU Langone's Chief Hospital Epidemiologist Michael Phillips says, "I am all about evidence-based intervention, but this idea of brushing your teeth with a plain old brush fits with what we do."

BURNING QUESTION | By Heidi Mitchell

WITH THE FLU, WHAT'S THE BEST WAY TO GET SLEEP?

BEING SICK with the flu, or even just a cold, impairs one of the body's most reliable aids in recovery: sleep. Finding the right position and tools for comfort can seem impossible when battling a pounding head, stuffy nose and body aches. One expert, Aric Prather, a psychoneuroimmunologist and assistant professor of psychiatry at the University of California, San Francisco, explains why the flu makes us lethargic and how to get a restorative night's sleep while fighting off seasonal illness.

Acting Sick

When a person gets sick with a flu or cold, the body's acute immune response includes an increased activation of inflammatory processes, particularly in the nasal passage. The result: lots of mucus that can cause intense pressure in the head and face.

Dr. Prather, who studies how psychological and behavioral factors impact the brain and immune system, says scientists believe those same inflammatory processes affect a person's behavior, too.

"If you inject mice with a toxin

that increases inflammation, these animals take on sickness behaviors: They are lethargic, they are disinterested in sugar-water or sex, they often develop a fever, and they don't spend time around other animals," says Dr. Prather, who also treats patients with insomnia in a clinical setting. "This mimics what happens to humans."

Many immunologists surmise that a sick body needs to conserve energy to provide time for the immune system to fight off a virus, Dr. Prather says. Studies have shown that infected animals not only sleep more, but have an increase in slow-wave sleep, which is believed to be restorative.

Quality Over Quantity

When a person is suffering from a pounding head and a running nose, the continuity of sleep is disrupted. This may mean that to get the required 7 hours of sleep a night, a sick person may need to be in bed for 10 hours. Perhaps just as important as getting the recommended amount of sleep is

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