



PARENTS PACK

MONTHLY UPDATES ABOUT
VACCINES ACROSS THE LIFESPAN

FEATURE ARTICLE: EMPTY CHAIRS AT DINNER TABLES

June 2024

Like people, the arrival of some infectious diseases is more noticeable than the arrival of others.

When smallpox existed, its disfiguring, lifelong pockmarks identified those who had been affected and survived. In fact, mirrors were often removed from the homes of survivors so they were not regularly reminded of their survivor status. Empty chairs at the dinner table reminded families of the 1 in 3 who hadn't survived.

Polio also left outward reminders of survival in the form of leg braces, wheelchairs and iron lungs. Fewer empty chairs were left at dinner tables compared with smallpox, but they were there — in 2 to 5 of 100 homes with affected young children and more in homes of those infected as adolescents and adults (15 to 30 of 100).

Respiratory infections tend to be less noticed, but they, too, leave empty chairs at dinner tables. Respiratory syncytial virus (RSV) kills up to 10,000 people over 65 and up to 300 children each year. Influenza leaves up to 50,000 empty chairs each year, up to 200 previously filled by children.

COVID-19, caused by SARS-CoV-2 virus, is another respiratory infection, and although most would agree that it arrived with fanfare in the U.S. in early 2020, its presence in communities now (a few years later) is more like that of influenza and RSV — generally disregarded. In some ways, this makes sense because its earliest arrival was met with a population completely unprepared: We did not know about this virus. We did not know how to treat this virus, and most importantly, none of our immune systems were ready to defend against this virus. As a result, it left empty chairs at many dinner tables across the U.S. — about 350,000 in 2020 alone.

Over time, we learned about the virus that causes COVID-19. But, what we have learned from COVID-19 is worth understanding because SARS-CoV-2, like influenza and RSV, is still killing people in our communities, and it will continue to do so for years to come.

At the beginning ...

When SARS-CoV-2 entered the U.S., healthcare providers did not have experience treating it. They did not know the full spectrum of symptoms or complications. They did not know what medications, if any, would work against it, and they did not know who was most at risk for infection or for complications or death as a result of that infection. In the spring of 2020, during the early months of the pandemic, about 1 in 5 people hospitalized with COVID-19 died.

The governmental response was to save as many lives as possible using the blunt-edged tools available at the time — keeping people away from one another, masking when we couldn't separate, and isolating those known to be infected. And that worked, but not without cost; we paid economically, socially, and mentally. It was imperative that science move as quickly and safely as possible to understand this new virus.

Pandemic progress

Over time, many answers came as scientists, clinicians and public health officials learned more. Tools for diagnosis improved. Treatments and vaccines became available. But, the virus was not to be outdone, changing from one variant to another. Some variants were more transmissible. Some better able to avoid pre-existing immunity. Some more fatal.

In 2022, COVID-19 created almost 245,000 empty chairs at dinner tables, but the likelihood of dying from COVID-19 had decreased. Many people had pre-existing immunity either from vaccination, previous infection or both. More treatments were available. Healthcare providers had a better understanding of how to help those hospitalized with COVID-19. By some estimates, people in the U.S. with COVID-19 were 90% less likely to die from their infection during the summer of 2022 compared with the early months of the pandemic and about half as likely to die from their infection in 2022 compared with 2021.

And now?

After surviving the raucous arrival of this virus and the isolation and stress of the blunt-edged tools used early on, and now with more targeted technologies in hand, it is easy to think we are individually invincible and collectively insulated from the deleterious effects of COVID-19. But, whether feeling secure or simply trying to ignore this pesky interruption to life, the reality is SARS-CoV-2 remains. While more subdued in its presence and slower in building its body count, the virus continues to empty chairs at dinner tables — almost 44,000 from October 2023 to mid-May 2024. *Think about that a moment — about eight families per hour have lost a loved one to COVID-19 during each hour of each day of the last 7 1/2 months.*

Recently, a study evaluated the comparative risk of death when hospitalized with COVID-19 or influenza. The analysis was completed using data from the U.S. Department of Veterans Affairs, so the study population was older (average ages of 70-74 years) and mostly male (about 94%). The population was more likely to be vaccinated against COVID-19 (about 85% had at least one dose) than against influenza (less than 50% had received their annual flu shot), but the investigators did not evaluate relative timing of vaccination prior to infection nor did they evaluate co-existing conditions that could increase risk of severe outcomes for either disease. Despite these limitations, the study is still instructive. After the scientists adjusted for differences between the influenza- and COVID-19-positive populations, they found that more people were hospitalized for COVID-19 than for influenza and those with COVID-19 were more likely to die from their infection.

TRIVIA CORNER

What U.S. president said going through the process of inoculation was “preferable to living in fear of the disease?”

- A. Thomas Jefferson
- B. Ulysses S. Grant
- C. Andrew Jackson
- D. John Adams

While the group evaluated in this study was not necessarily representative of the overall population, we know from decades of experience that each year influenza causes hundreds of thousands of hospitalizations and thousands to tens of thousands of deaths. During the first years of the COVID-19 pandemic, the new virus (SARS-CoV-2) easily eclipsed the effects of influenza in part because of the populational vulnerability to a novel pathogen and in part because the blunt-edged tools used to contain the spread of SARS-CoV-2 also contained most other annual respiratory viruses, including influenza. Indeed, the rates of influenza could not be calculated for the 2020-2021 season due to lack of influenza activity. However, as we have returned to pre-pandemic activity levels, influenza has also returned. So far this season (October 2023 to mid-May 2024), influenza has led to about 25,000 deaths — or said another way, about four to five families per hour finding an empty seat at the dinner table. While not as many as caused by COVID-19, still sizeable.

So, as we consider our individual and collective risks from these viruses — and whether we want to use targeted technologies like vaccines or take our chances — it is important to remember that respiratory viruses may not always make a big splash when they arrive. You won't necessarily know they are around. But, once present, they stealthily move around communities leaving many empty chairs in their wake. Whether four or five chairs per hour from influenza or eight chairs per hour from COVID-19, these viruses leave families incomplete.

For links to resources in the Feature Article, please visit bit.ly/June2024FA.

DR. HANDY'S CORNER: WHY IS DENGUE VACCINE ONLY GIVEN TO CERTAIN GROUPS OF KIDS?

In this short video, Dr. Handy describes the symptoms of dengue and why people are at increased risk for severe disease during a second dengue infection. She also describes the dengue vaccine and why the recommendations are limited to a specific age group and history of infection.

Watch the video: bit.ly/dengue-video.



NEWS & NOTES

Which vaccine has saved the most infant lives during the last 50 years?

Fifty years ago, a program called the “Expanded Programme on Immunization” (EPI) was started with a goal of vaccinating all children around the globe against several vaccine-preventable diseases, including diphtheria, measles, pertussis, polio, tetanus, tuberculosis and smallpox. Of these, smallpox has since been eradicated, meaning it no longer exists, so it can no longer cause illness. The other six diseases continue to infect people throughout the world.

However on this 50th anniversary of EPI, there is news worth celebrating. An estimated 154 million lives have been saved by vaccination since the inception of the program. That averages to about six lives every minute of every day of every year saved by vaccination! Of these, the measles vaccine is estimated to have had the greatest impact, saving about 60% of those lives — three or four of the six lives saved every minute of every day of every year. Yes, measles kills, but we can protect our babies through vaccination — more than 92 million babies who became adults have demonstrated that.

Coming in June ... the first RRP Awareness Day

Have you heard of RRP? RRP stands for recurrent respiratory papillomatosis. It is a disease of the respiratory tract that is caused by human papillomavirus (HPV). When infected, benign tumors grow along the respiratory tract, often returning after surgical removal and sometimes affecting an individual's ability to speak or even breathe. On occasion, the infected cells transform and become malignant, leading to cancer. About 15,000 to 20,000 people are affected in the U.S., and more than 125,000 people from other countries are also affected.

On June 11, 2024, the first RRP Awareness Day will be held. With the theme of “Giving Voice to Inspire Change,” the goals of this effort, in addition to increasing knowledge and understanding about this disease among the general public, are to bring together patients, caregivers, clinicians and policymakers to provide support and build community for individuals and their families affected by this disease.

Find out more or get resources to support this effort. [rrpawareness.org/]

Find out how climate change can affect our risk for infectious diseases

The Vaccine Education Center's newsletter for educators, *The VMP Chronicle*, recently included an article that may be of interest to larger audiences. The article, titled “The risk of infectious diseases in a changing world,” discussed how changes to the climate force infectious agents to adapt for their continued survival. These adaptations, several of which are discussed in the article, can lead to more risk of disease in people.

For links to resources, please visit bit.ly/Jn2024NN.

TRIVIA ANSWER

The correct answer is D. Before becoming president, James Adams was variolated (a technique used to inoculate a person against smallpox) for smallpox so that he could conduct business in Boston, Massachusetts without fearing the disease.

Go to vaccine.chop.edu/trivia to play Just the Vax, the Vaccine Education Center's trivia game, where you can find this question and others like it.

