



by CATHERINE Y. SPONG, MD

## Vaccination: Protecting our most vulnerable

For more than 70 years, vaccination has been a public health strategy for disease mitigation. Even in populations often considered “vulnerable”—children and pregnant women—vaccination is strongly recommended and commonly embraced. Vaccinations for measles, mumps, rubella, and pertussis, to name a few, are routinely administered to children. Influenza and tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis (Tdap) vaccines should be administered in pregnancy, as recommended by professional organizations including the American College of Obstetricians and Gynecologists and the Advisory Council on Immunization Practices. Both vaccines are standard inoculations in pregnancy, decreasing the risk of influenza and pertussis in pregnant women and their infants.

COVID-19 vaccination is also recommended for pregnant women; however, to date, vaccinations lag in this group (Figure 1). Because of the Omicron surge, infection in pregnancy has skyrocketed. We are seeing a more than 500% increase in COVID-19 diagnoses. Thankfully, the severity with Omicron is much lower than with the Delta variant.<sup>1</sup> It is not, however, without an impact on our field, as the donning and doffing of personnel protective equipment and the deluge of patients are not insignificant and are further taking a toll on providers—both physicians and nurses. With this

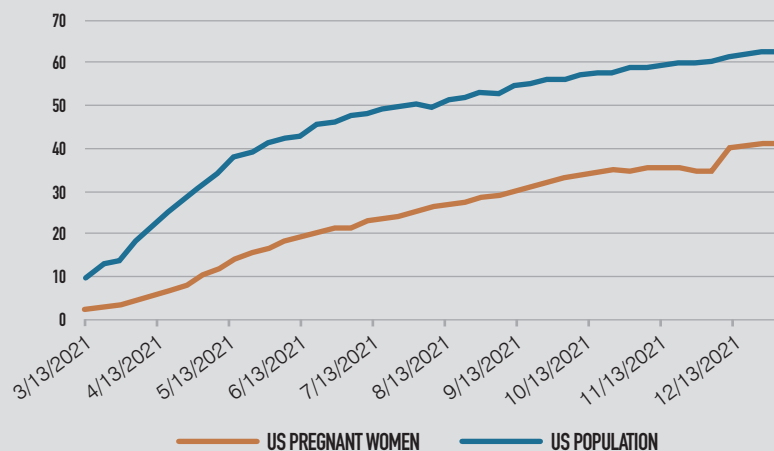
new surge in cases, the light at the end of the tunnel for this pandemic seems more distant than ever.

The latest COVID-19 vaccination numbers from the Centers for Disease Control and Prevention (CDC) reveal that, as of this writing, 62.5% of the US population are fully vaccinated, 74.3% have received at least 1 dose, and 36.3% have received booster doses.<sup>2</sup> This is in contrast to pregnant women (aged 18-49 years), who are at less than one-third the rate, with just 41.5% fully vaccinated; of these, about half received their vaccinations prior to pregnancy.<sup>3</sup>

Despite demonstrated effectiveness and—for Tdap—benefits that extend to the infant, a 2021 survey by

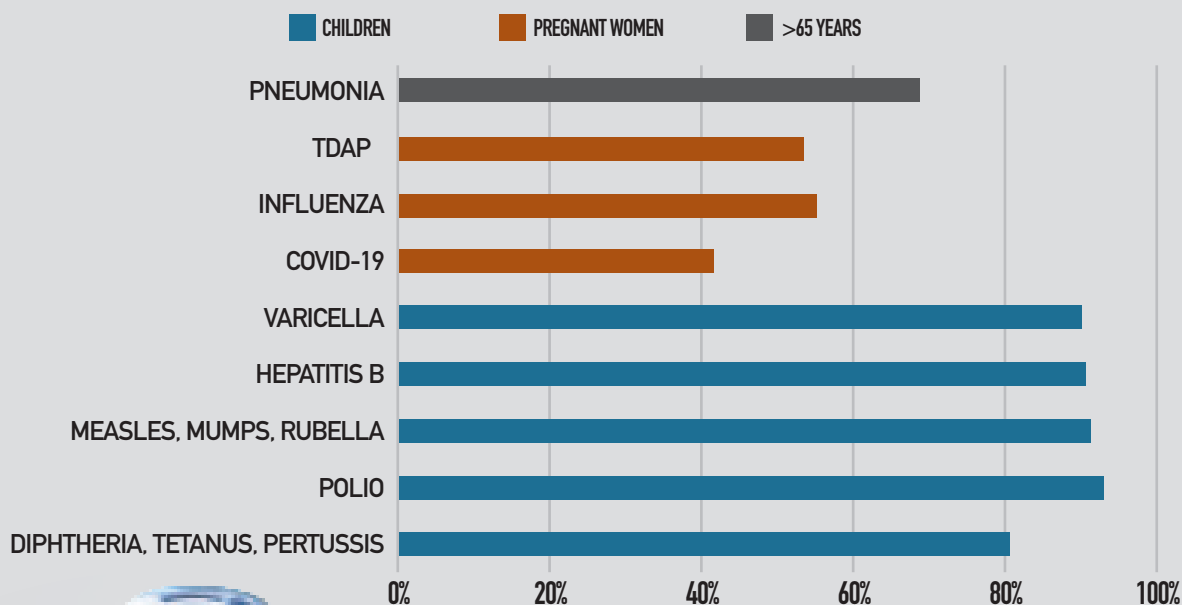
the CDC reports disappointing uptake of even non-COVID-19 vaccination in pregnancy.<sup>2</sup> Of 1795 pregnant women between October 2020 and January 2021, just 55% received influenza and 53.5% received Tdap vaccinations. Furthermore, just 30.7% received both influenza and Tdap vaccines. These rates are relatively stagnant, as data from 2017 report Tdap vaccination in pregnancy at 50.4%.<sup>4</sup> These rates pale in comparison with vaccinations in children: More than 80% are vaccinated for diphtheria, tetanus, and pertussis, and more than 90% are vaccinated for polio, measles, mumps, rubella, hepatitis B, and chickenpox.<sup>5</sup> Further-

**FIGURE 1 COVID-19 Full Vaccination Rates in US and US Pregnant Populations**

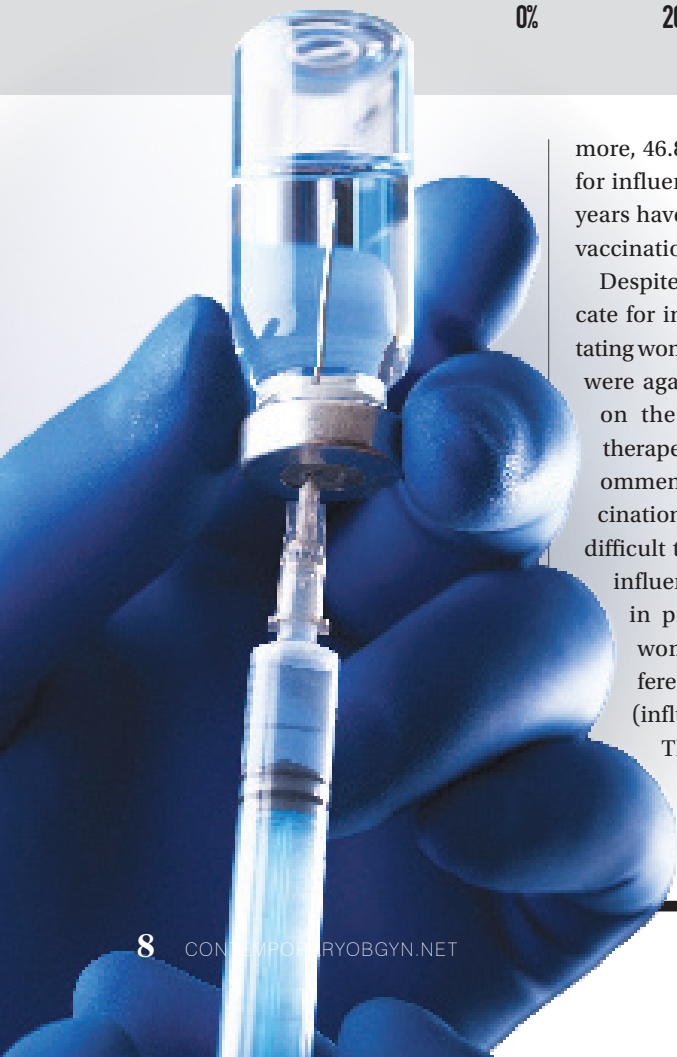


SOURCE: Centers for Disease Control and Prevention

**FIGURE 2** US Immunization Rates in Children, Pregnant Women, and Adults Over 65 Years<sup>6</sup>



SOURCE: Centers for Disease Control and Prevention



more, 46.8% of adults are vaccinated for influenza, and 68.9% over age 65 years have received a pneumococcal vaccination (**Figure 2**).<sup>6</sup>

Despite numerous efforts to advocate for including pregnant and lactating women in research, both groups were again excluded from research on the COVID-19 vaccines and therapeutics. Even with official recommendations for COVID-19 vaccination in pregnancy, it has been difficult to implement. Importantly, influenza and Tdap vaccinations in pregnancy were highest in women when the provider offered or referred for vaccination (influenza, 68.1%; Tdap, 69.9%).<sup>7</sup>

This opens an avenue forward: We as providers can make a difference for our

patients by advocating and encouraging vaccination, providing the data on efficacy and impact on the health of both the woman and her infant. It is imperative that we break through the political issues associated with COVID-19 vaccination and directly provide the guidance to our patients. ■

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