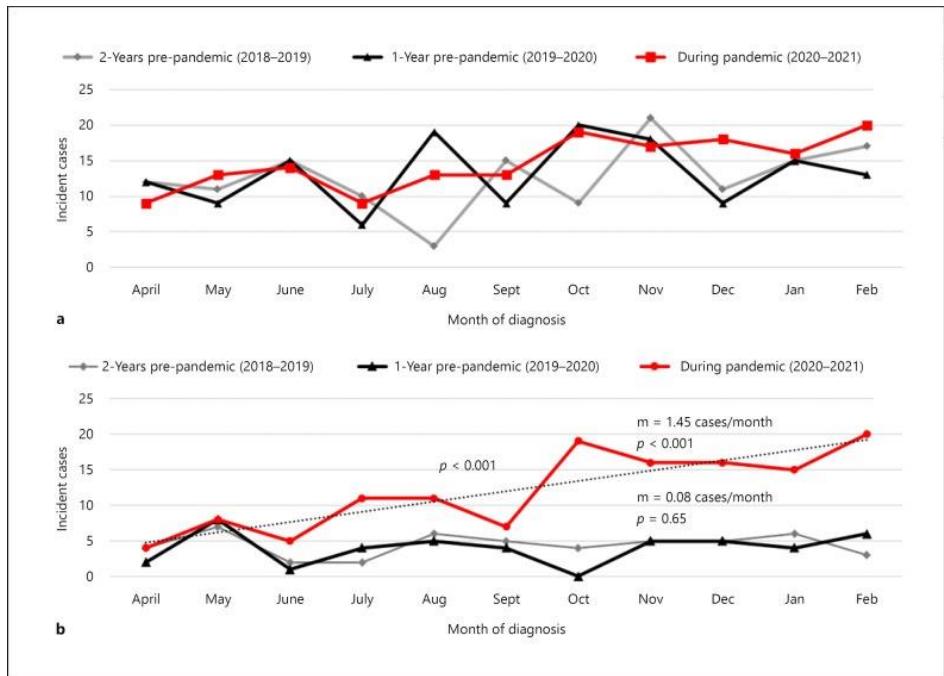


Chairs Message



17 year old children have had at least one COVID19 vaccine dose, and in MA, 60% of children eligible have had at least 1 dose. There are many reasons to support vaccination of children, and a new reason has recently come to attention: [the curious bidirectional relationship of Sars-COV-2 \(virus that causes COVID19\) and diabetes](#).

Early in the pandemic, the observation was made in adults with COVID19 that diabetes was a significant risk factor for severe disease and death. While diabetes does not seem to be associated with an increased risk of infection *per se*, it has been clearly demonstrated that hyperglycemia of any degree predisposes to worse outcomes. Likely mechanisms include the fact that hyperglycemia impairs immune response, and it is well established that diabetes is associated with a low-grade chronic inflammatory state that could lead to an exaggerated inflammatory response and therefore worse disease. We certainly saw that diabetes is a risk factor for [severe disease in adolescents](#) admitted to our hospital and nationally. What is curious and now indisputable after 2 years of this pandemic is the association with COVID19 and the subsequent development of diabetes in kids, both Type 1 (an autoimmune disease that is caused by destruction of the insulin-producing cells in the pancreas) and Type 2 (insulin resistance with subsequent decline in insulin production due to chronic inflammation from metabolic and oxidative stress). The incidence is staggering: T1D increased by ~15% while T2D almost doubled, and there was a nearly 6-fold increase in DKA (acidosis and severe metabolic decompensation). Black youth were disproportionately impacted, raising concern about worsening of pre-existing health disparities during and after the pandemic. [The figure shown from this article](#) illustrates the modest increase in T1D (top panel: red line is pandemic, gray and black lines pre-pandemic) compared to the dramatic increase in T2D (bottom panel). Mechanisms hypothesized to explain this include some evidence that Sars-COV-2 directly injures insulin-secreting pancreatic cells and the “cytokine storm” and prolonged inflammatory state of COVID19 affects insulin production and action. In 2020 before COVID19 really took hold, more than 200,000 children in the US had diabetes, with T1D rising about 2% per year and T2D rising almost 5% per year. This life-threatening and life-long chronic disease is a huge burden for children and their families and is now rising faster; therefore, the new observation that COVID19 increases diabetes incidence is another compelling reason to vaccinate our children against COVID19.

The sharp decline in COVID19 cases locally as well as in children nationally since February has been such a welcome breath of fresh air! Spring is here, masks are off in most places and there is a feeling of both relief and gratitude that maybe the worst is over. Given the good degree of immunity from vaccination and innate infection, maybe that is true, and we just need to adjust to a “new normal” of endemic infection and occasional surges in infection like other respiratory viruses. The omicron variant BA2 is now the most dominant variant and cases are rising (now 3.7% in MA), but it doesn’t seem to be as virulent. I am disappointed that the vaccination rate in children isn’t higher: as of March 30, 34% of 5-11-year old and 67% of 12-