

Report to the Boards of Health
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Mid-Michigan District Health Department, Wednesday, June 28, 2023
Central Michigan District Health Department, Wednesday, June 28, 2023
District Health Department 10, Friday, June 30, 2023

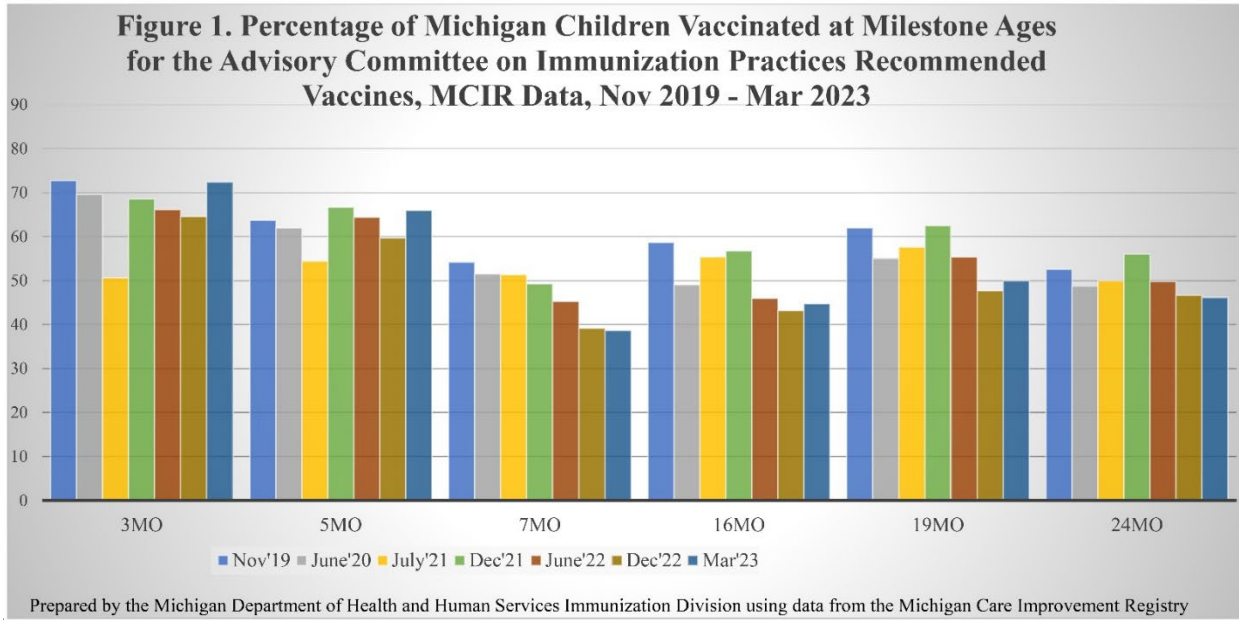
Decline in Routine Vaccinations

By the time they enter kindergarten, a child can be protected from 15 different infectious diseases. The reduction in number of illnesses and deaths in the United States caused by these germs has dropped dramatically, as shown below (not included in the table: rotavirus, influenza, COVID-19; in the table but not part of routine vaccines: smallpox).

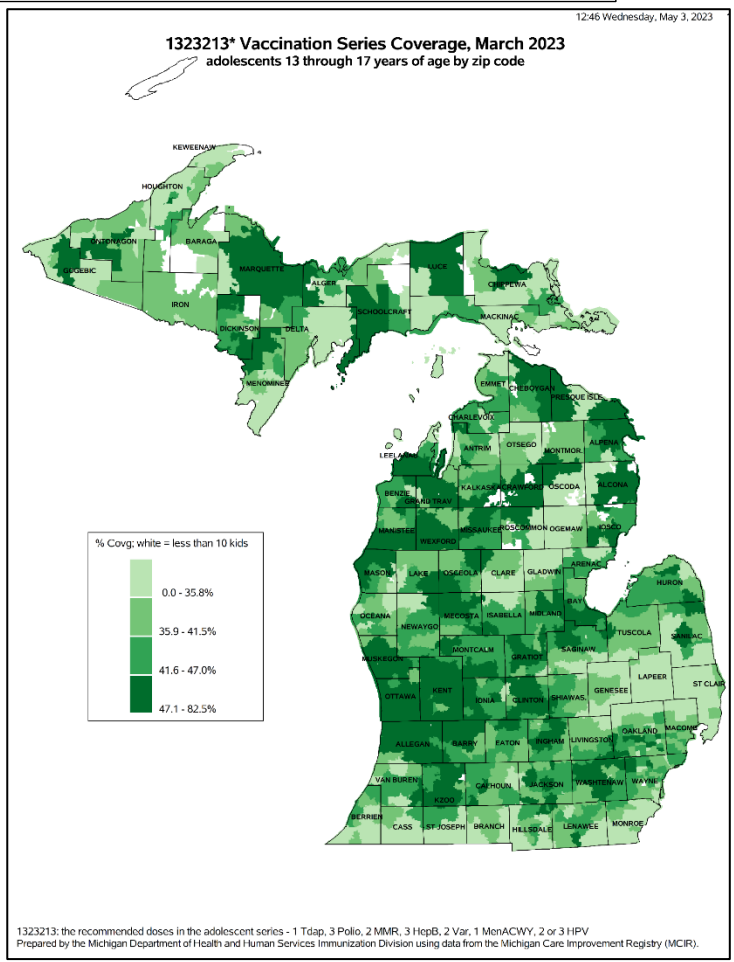
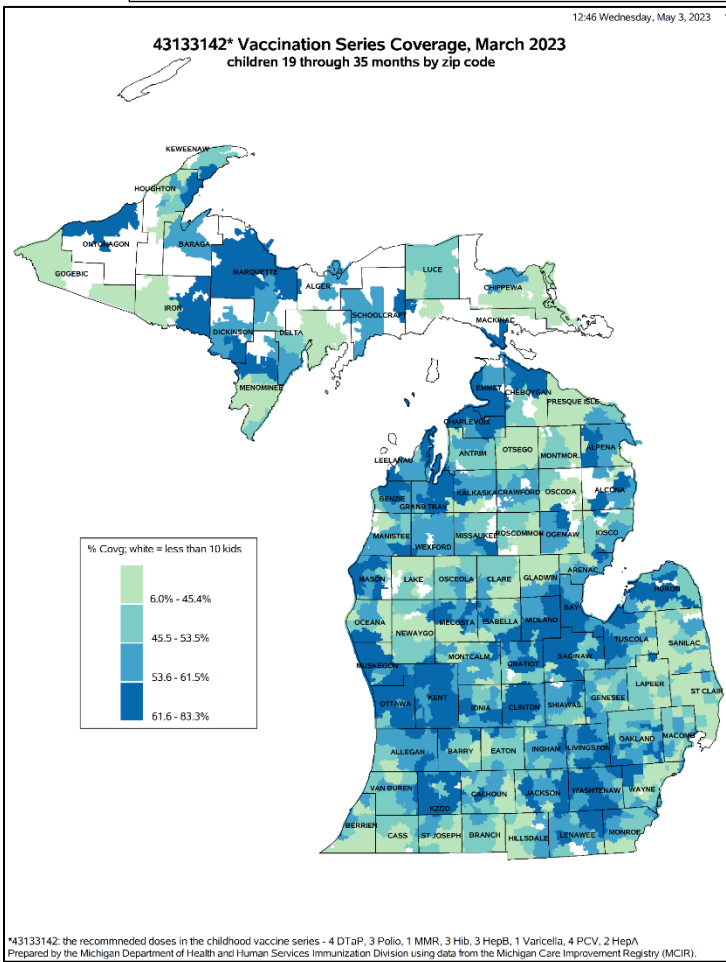


The COVID-19 pandemic caused disruptions in routine health care, including vaccinations. A review of studies around the world found decreased childhood vaccination rates in most countries during the pandemic, some up to 80%. Initially, this was due to delays put on nonurgent health care, shortages in healthcare providers, parent

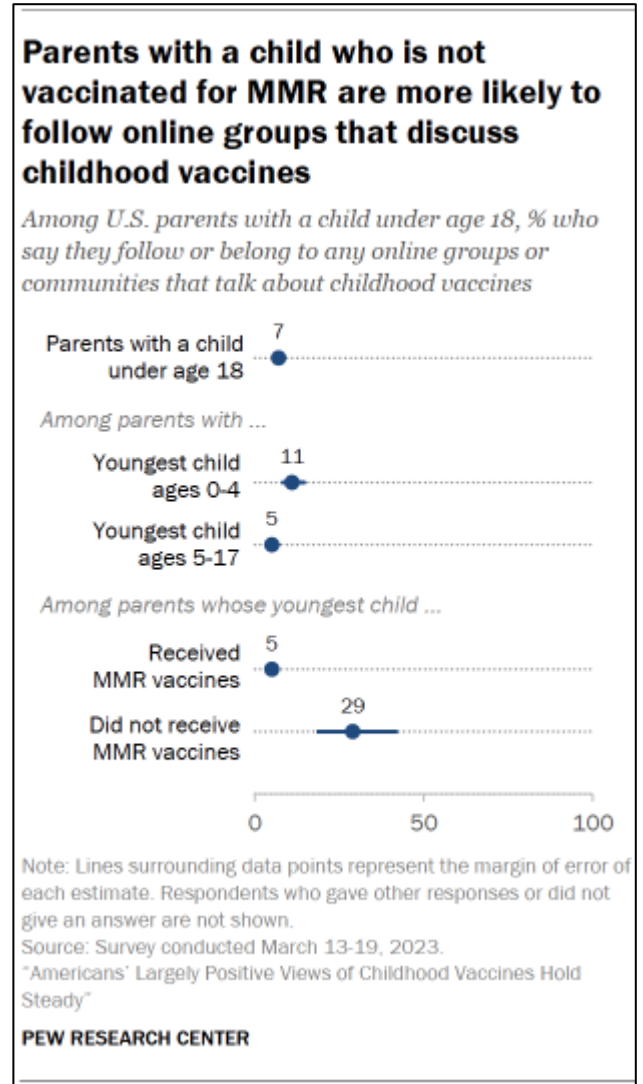
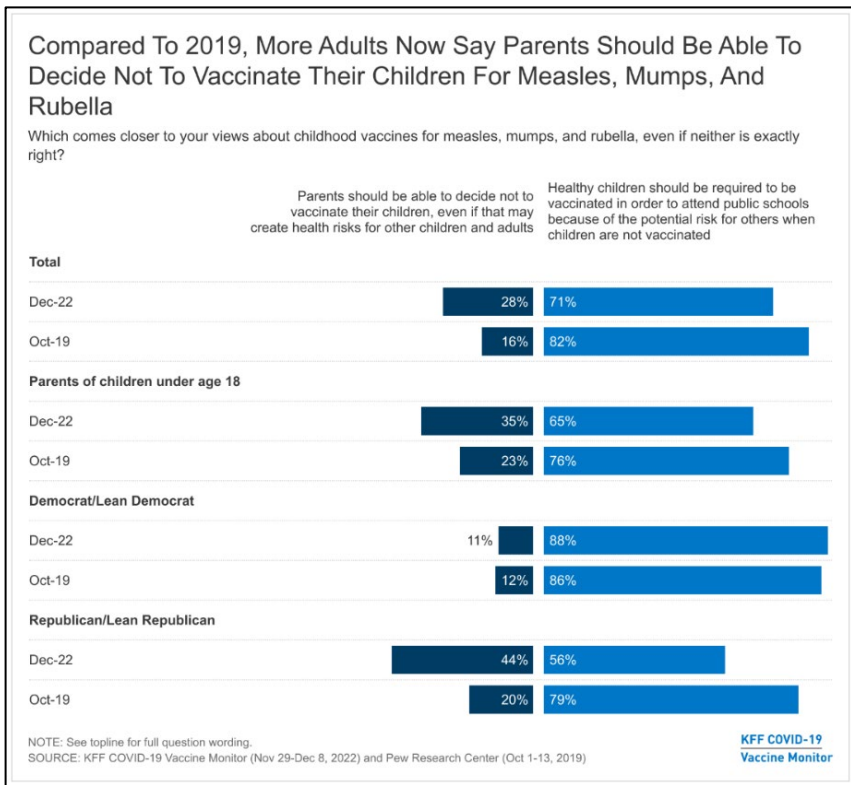
concern for the safety of their children in healthcare settings, social distancing, and quarantine orders. These initial issues have passed but vaccination coverage for children in Michigan is still near or below pre-pandemic levels for all age groups under 2 years except the 3- and 5-month-olds. This means that children born during the pandemic have not gotten fully caught up on their immunizations.



Up to Date at 3 months: 2 HepB, 1 Rota, 1 DTaP, 1 Hib, 1 PCV, 1 IPV; **at 5 months:** 2 HepB, 2 Rota, 2 DTaP, 2 Hib, 2 PCV, 2 IPV; **at 7 months:** 2 HepB, UTD Rota, 3 DTaP, UTD Hib, 3 PCV, 2 IPV; **16 months:** 2 HepB, 3 DTaP, UTD Hib, 4 PCV, 2 IPV, 1 MMR, 1 Var; **19 months:** 3 HepB, 4 DTaP, UTD Hib, 4 PCV, 3 IPV, 1 MMR, 1 Var; **24 months:** 3 HepB, 4 DTaP, UTD Hib, 4 PCV, 3 IPV, 1 MMR, 1 Var, 2 HepA



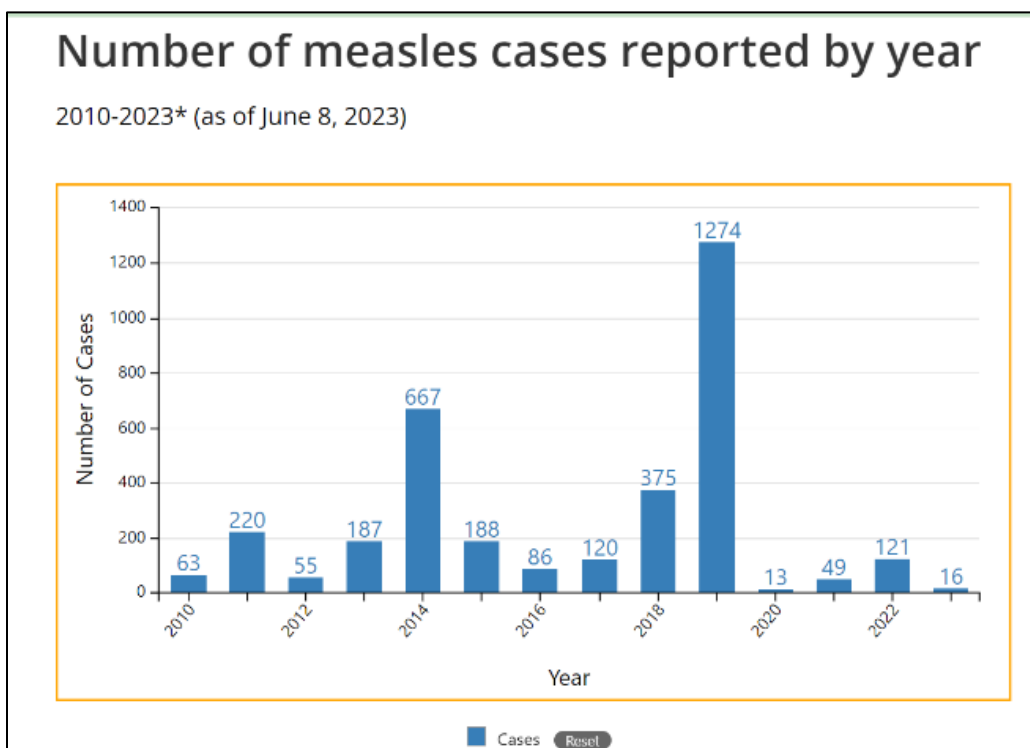
There is concern that vaccination rates continue to struggle as collateral damage to issues surrounding COVID-19 vaccines. Vaccination rates in the United States had been slowly increasing since 2001 until the pandemic. The pandemic brought very complicated topics of science, research, and vaccine development to the forefront. Much of the information changed rapidly and wasn't shared with the public in the best way. This, along with social media platforms, gave a perfect opportunity for science and vaccine deniers to sow mis- and disinformation, causing hesitation in all vaccines and distrust in science and medicine. Parents of unvaccinated children are more likely to follow social media and online groups that discuss vaccines. In addition, surveys and studies continue to find acceptance of vaccines and vaccine requirements, along with trust in science, health systems, and public health, increasingly and persistently follow political party lines.



In addition to those choosing not to vaccinate, some have a hard time accessing vaccinations. This includes those at a socioeconomic disadvantage, such as uninsured, underinsured, and living in rural areas. The vaccination rates of children with no insurance or with Medicaid have been slower to rebound since the pandemic compared to children with private insurance.

Lower vaccination rates cause concerns about outbreaks of infectious diseases like chickenpox and measles. We also lose the benefit of community immunity which protects those that are not able to be vaccinated. More cases of illness increase the chances of serious or even deadly complications. At a minimum, it causes up to weeks of missed school and work and can lead to lost income and medical and public health expenses.

Measles, which is one of the most contagious germs in the world, can easily cause outbreaks if vaccination levels drop. Before the pandemic, 2019 saw 1,274 measles cases in 31 states, the highest number seen in the U.S. since 1992. Most cases were in people who were not vaccinated against measles. There were few cases during the pandemic, likely because the prevention measure used to prevent COVID-19 also prevent the spread of measles. In 2020, there were 13 cases of measles in 8 jurisdictions, and in 2021, there were 49 cases in 5 jurisdictions. In 2022, as COVID-19 precautions had essentially ended, there were a total of 121 measles cases reported by 6 jurisdictions. This included an outbreak of 85 cases of measles in Columbus, Ohio. All these cases occurred in children, and 36 had to be hospitalized. Of the 85 cases, none were fully vaccinated: 80 were unvaccinated, 4 under-vaccinated, and the vaccination status of 1 was unknown. Another 22 cases occurred in Minnesota. As of June 8, 2023, a total of 16 measles cases have been reported in 11 jurisdictions this year.



A review of 10 recent measles outbreaks found the average cost per outbreak is \$152,308, ranging from \$9,862 to \$1,063,936. It is estimated the outbreak in Columbus, Ohio last year cost society an estimated \$3.4 million. Most of the costs were for the public health response to the outbreak, followed by loss of productivity, and direct medical costs.

Recently in Michigan, there are signs of recovery. In March 2023, the total monthly number of non-COVID vaccine doses given was near the monthly level before the pandemic. This varies based on age, however:

- For all ages, the total monthly number of vaccines given was 0.3% lower than pre-pandemic levels.
- For ages 0 to 8 years, 8.9% fewer doses were given.
- For ages 9 to 18 years, 7.2% fewer doses were given.
- For adults (ages 19 to 105 years), 15.8% *more* doses were given.

While overall doses of non-COVID vaccine seem to be returning to baseline, our children still are not getting as many doses as they once were, while it appears adults have recently been getting more. Vaccination rates do vary from state to state based on the number and type of exemptions allowed in required vaccination. An exemption is an immunity from the obligation of legally required vaccination for a specific reason. Vaccine exemptions typically come in three types, medical, religious, or personal/philosophical. In general, states with more exemptions have lower vaccination rates. Michigan allows for all 3 exemptions.

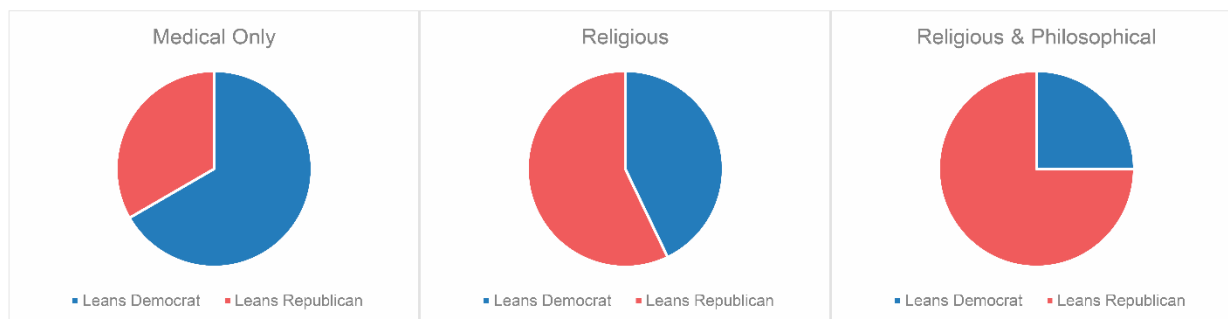
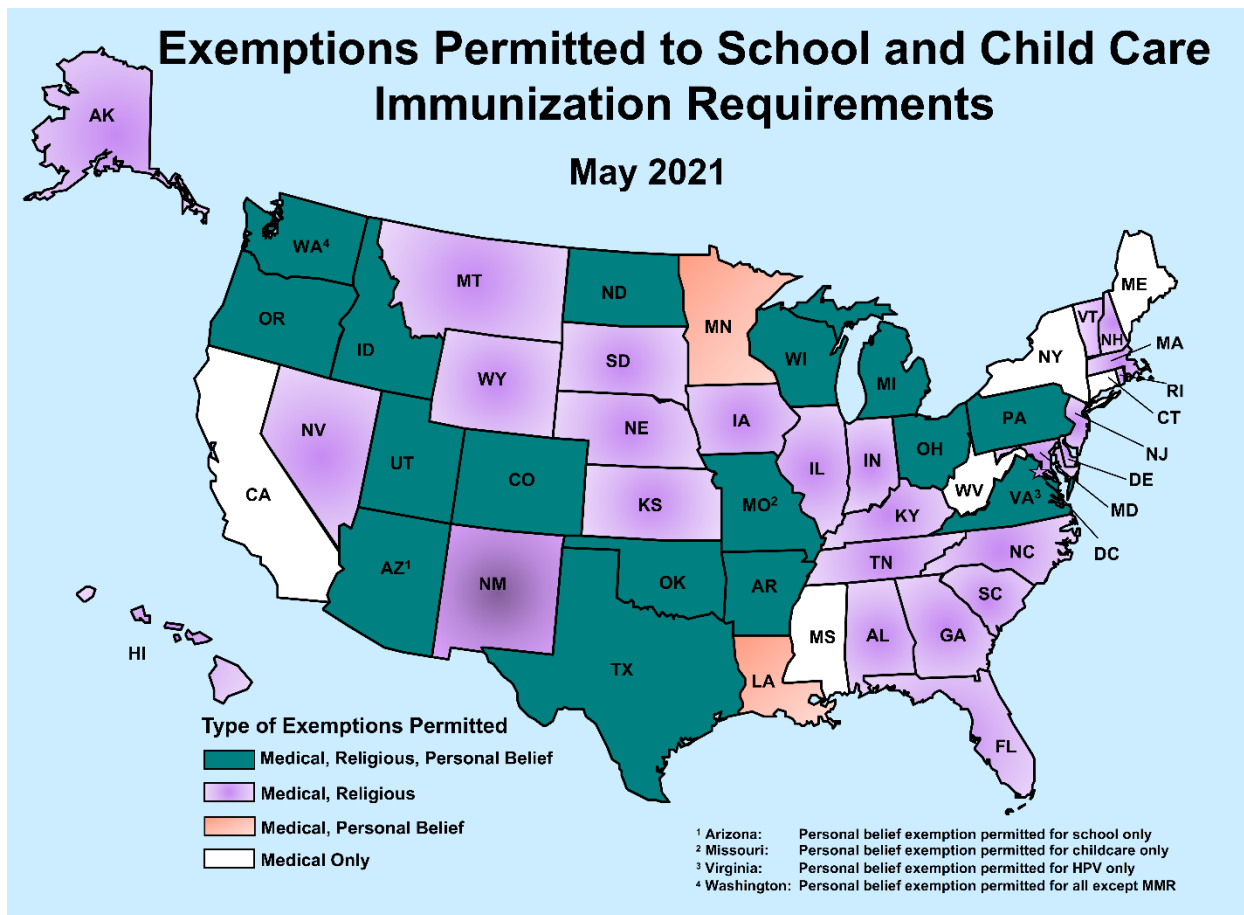


Figure 4: Portion of states in each category of exemptions leaning Democrat vs. Republican. Data from FiveThirtyEight.com, based on the 2020-2021 election cycle.

Recommendations:

1. Continue to support vaccinations, one of the top public health achievements of all time.
2. Take questions or concerns regarding vaccination to trusted sources of information. This site, <https://vaccineinformation.org/diseases/> is an excellent starting point with links to other trusted sources. For concerns specific to vaccine safety and ingredients, <https://www.vaccinesafety.edu/> is a good starting point.
3. Take the [#PledgeToPause](#). Before you forward a message or share something on social media, pause to interrupt your emotional response, take a breath and use your critical thinking, and don't share something if you don't trust it. (from <https://shareverified.com/pledge-to-pause/>)

BEFORE YOU SHARE, THINK:

- ② WHO made it?
- ② WHAT is the source?
- ② WHERE did it come from?
- ② WHY are you sharing this?
- ② WHEN was it published?

#PledgetoPause



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