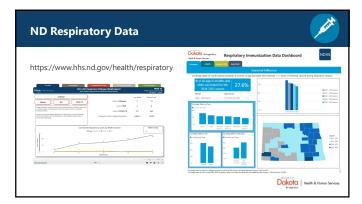
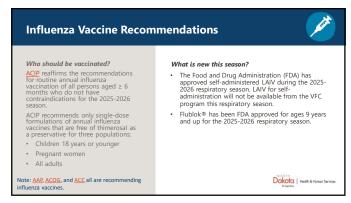


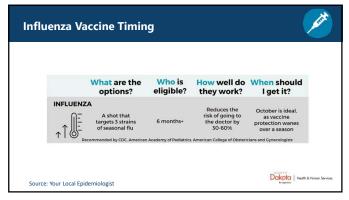


# The 2024-2025 influenza season saw the deadliest season for our children since the CDC began collecting influenza associated pediatric death data. 279 pediatric deaths 90% of reported pediatric deaths occurred in children who were not fully vaccinated. Influenza vaccination rates amongst children have declined in North Dakota from prepandemic levels. 6 months – 4 years: 53.5% down to 34.6%









#### **Publicly Supplied Influenza Vaccine**



Sanofi Pasteur Fluzone® 0.5 IIV4 PFS – 2,910 (53%)

Fluarix® 0.5 IIV4 PFS - Fully allocated as of 8/25

<u>Seqirus</u> Flucelvax® 0.5 IIV4 PFS – 6,070 (74%) Afluria ® IIV4 PFS - 60 (46%)

AstraZeneca Flumist® - 530 (47%)

- Publicly supplied influenza vaccine has begun to ship from McKesson
- Vaccine orders are being placed on behalf of facilities based on vaccine prebooks placed earlier in the year.
- Providers will receive automated emails when publicly supplied influenza vaccine has been ordered on their behalf.
- All influenza multi-dose vials were replaced with pre-filled syringes.



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#### **Methylmercury vs Ethylmercury**



Mercury is a naturally occurring element found in the earth's crust, air, soil and water. Since the earth's formation, volcanic eruptions, weathering of rocks and burning of coal have caused mercury to be released into the environment. Once released, certain types of bacteria in the environment can change mercury to methylmercury. Methylmercury makes its way through the food chain in fish, animals and humans. At high levels, it can be toxic to people.

Thimerosal contains a different form of mercury Thimerosal contains a different form of mercury called ethylmercury. Studies comparing ethylmercury and methylmercury suggest that they are processed differently in the human body. Ethylmercury is broken down and excreted much more rapidly than methylmercury. Therefore, ethylmercury (the type of mercury in the influenza vaccine) is much less likely than methylmercury (the type of mercury in the object than methylmercury (the type of mercury in the environment) to accumulate in the body and cause harm.

https://www.chop.edu/vaccine-education-center/vaccine-safety/vaccine-ingredients/thimerosal



# Is Thimerosal Still In Vaccines?

Thimerosal was removed from vaccines after an amendment to the Food and Drug Administration (FDA) Modernization Act was signed into law on Nov. 21, 1997.

Thimerosal, as a preservative, is no longer contained in any childhood vaccine, with the exception of the influenza vaccine.

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# **Thimerosal and Autism** Centers for Disease Control and Prevention (CDC): Cites multiple studies it has conducted or funded since 2003 that found no link between thimerosal-containing vaccines and autism spectrum disorders (ASD). The CDC also notes that autism rates continued to rise even after thimerosal was removed from most childhood vaccines.

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#### Thimerosal and Autism, cont.

World Health Organization (WHO): After an independent review, the WHO concluded that thimerosal in vaccines poses no health

the WHU concluded that thimerosal in vaccines poses no health risks and is safe for global usue. Johns Hopkins University: Public health experts state that 16 large, well-conducted, population-based studies from different countries have found no relationship between thimerosal in vaccines and autism

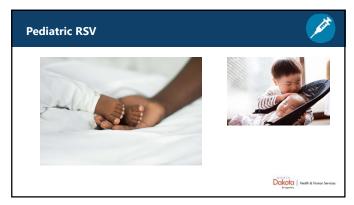
autism.

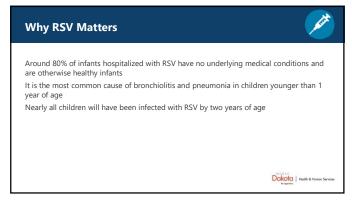
Danish studies: One major study looked at all children born in Denmark between 1990 and 1996, comparing children vaccinated with a thimerosal-containing vaccine to those who received a thimerosal-free version. The study found no significant difference in autism risk between the two groups. Researchers also found that autism rates increased in Denmark and Sweden even after thimerosal was removed from vaccines in the early 1990s.

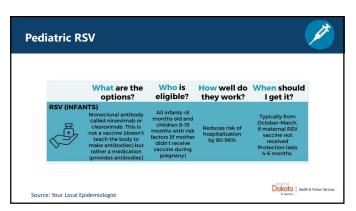


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#### **Infant RSV Antibody Recommendations**



Administer RSV Antibody to infants October 1st – March 31st.

• There may be special circumstances where the doses should be administered outside of this timeframe based on positivity rate of RSV in a specific region or state. Those extended recommendations would be communicated by the Immunization Unit.

Doses should be given to all infants less than 8 months during their first RSV season. **Preferably before they are discharged from birthing hospital.** 

-Only 54% of ND Medicaid newborns see a provider within seven days of life. Children 8 – 19 months of age who have certain high-risk conditions. This includes American Indian Children.

Consider plans for children who need their second dose.

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#### **Infant RSV Monoclonal Antibody Products**



Nirsevimab (Beyfortus®)

- Manufactured by Sanofi Pasteur
  Two different dosages depending on current weight.
- 0.5 mL and 1.0 mL
   Licensed for 0 24 months

Clesrovimab (Enflonsia®)

- Manufactured by Merck
- One dosage regardless of age or weight, 105 mg/0.7 mL
   Not approved for use in older age group during their second RSV season
   Will be available through the VFC program but is not currently

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Adult Immunization Manager



#### Respiratory Syncytial Virus (RSV)



- RSV is a common respiratory virus that generally causes mild, cold-like symptoms including runny nose, coughing, sneezing, fever, wheezing, and decreased appetite.
- RSV season is generally during the fall and winter months, October March .
- Most people recover in 1-2 weeks.
- People may have recurrent infections throughout their lifetime.



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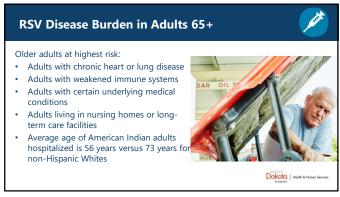
#### **RSV Disease Burden in Adults 65+**

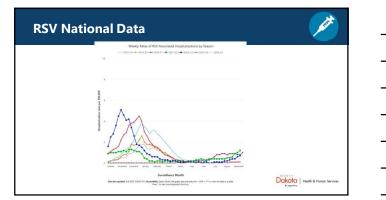




- RSV is a major cause of hospitalization and mortality for adults 65+.
- Estimated 60,000-160,000 hospitalizations annually in the US.
- Estimated 6,000-10,000 deaths annually in the US.

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#### **RSV Disease Underlying Conditions**



Adults aged 50-74 years who are at increased risk of severe RSV:

- · Chronic lung disease
- Chronic cardiovascular disease
  Diabetes with end-organ damage
- Severe obesity
- Neurologic or neuromuscular conditions
   Chronic kidney disease, advanced
- · Decreased immune function (ie., immunocompromising
- Liver disorders

- Frailty
   Hematologic disorders
- Residence in a nursing home or other long-term care facility
   Other chronic medical conditions that a healthcare provider determines increases risk of severe disease due to
- respiratory infection



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#### **RSV Prevention – Maternal**



Maternal RSV vaccine (Abrysvo™)

- Given to pregnant woman between 32-36 weeks gestation between Sept-Jan to protect
- If received at least 14 days prior to birth, infant generally will not need to receive nirsevimab.
- Currently only recommended for one lifetime dose. Infants in subsequent pregnancies should receive a monoclonal antibody.



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#### **Maternal RSV Vaccine - Safety**



Conclusions from 2023–2024 respiratory season findings

- \* RSVpreF vaccine not associated with increased risk for
  - Acute safety outcome
     Preterm birth
     SGA at birth
     Stillbirth

RSVpreF vaccine associated with small but statistically increased risk for HDP .
 Potential residual confounding or outcome misclassification .
 Severity of HDP similar between vaccinated and unvaccinated women based on rates of c-section, admission following birth hospitalization, and length of stay.

- \* 2024–2025 season analysis pending



#### **RSV Prevention – Maternal**



Both nirsevimab and the maternal RSV vaccine provide short-term protection to infants through their first RSV season when they are at highest risk of severe RSV infection.

- The maternal RSV vaccine was 76% effective in studies at preventing severe medically attended RSV-associated lower respiratory tract infections in infants from birth through 180 days.
- The maternal RSV vaccine may be administered at the same time as other recommended immunizations

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#### **RSV Prevention – Maternal**



The maternal RSV vaccine is

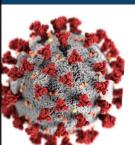
- Covered by private insurance.
- Included in the North Dakota Vaccines for Children (VFC) Program for those ages 18 years and younger.

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#### COVID-19





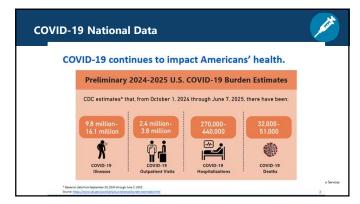
COVID-19 is very contagious and spreads quickly when an infected person breathes out small droplets and particles and sometimes from contact with contaminated

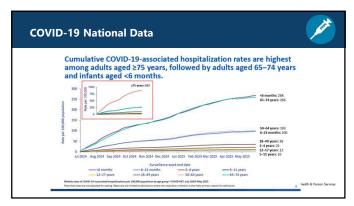
COVID-19 can spread when people are asymptomatic It can cause mild or severe illness.

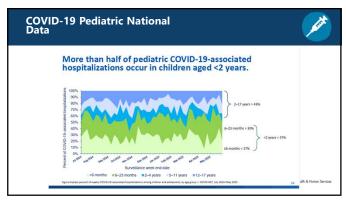
It causes respiratory symptoms, but can also impact other parts of the body.

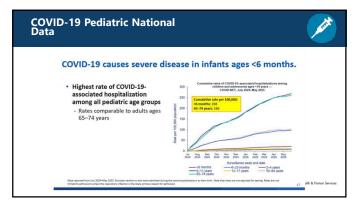
People who are older, immunocompromised, have certain disabilities, or certain health conditions are at increased risk of more severe infection.

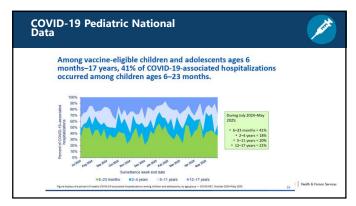
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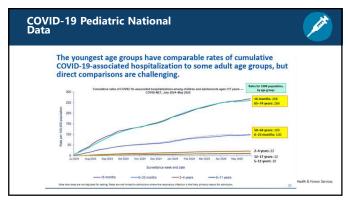


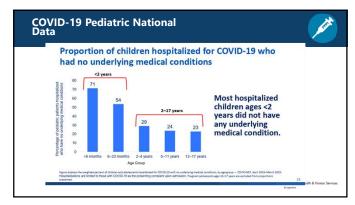


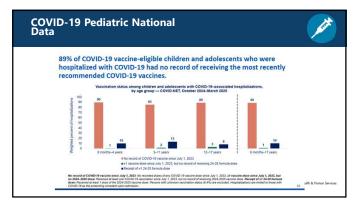


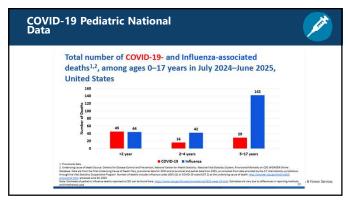


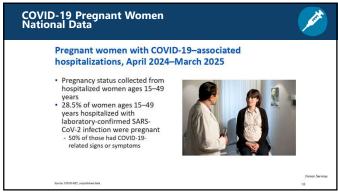


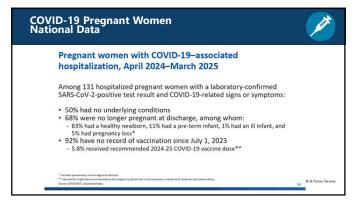


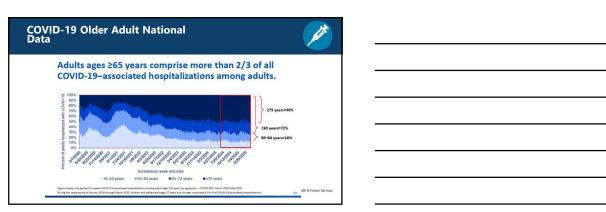


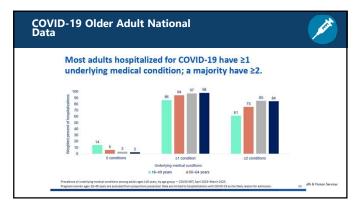


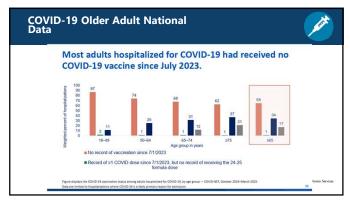


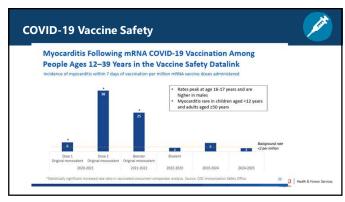


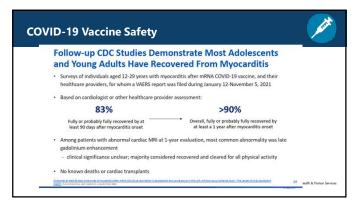


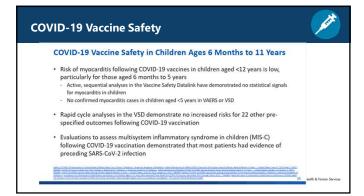


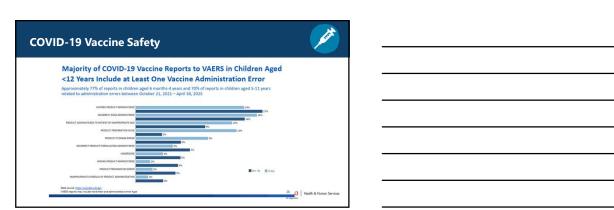


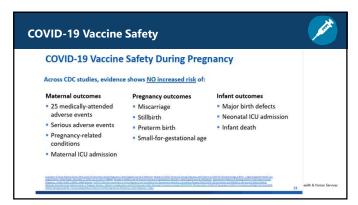


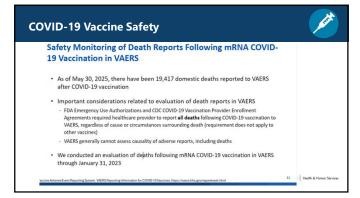


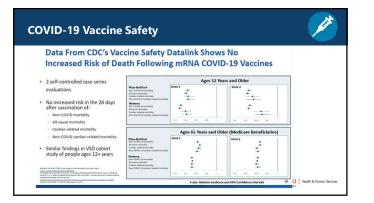












#### **Vaccine Integrity Project**



- Vaccine Integrity Project (VIP): Convened a group of immunization experts to review the latest data regarding epidemiology, vaccine effectiveness, safety, and co-administration for influenza, COVID-19 and RSV immunizations.
- Data presented August 19, 2025.
- Data being utilized by numerous medical associations to make recommendations.
- Key Findings:
- Respiratory viruses, including influenza, COVID-19, and respiratory syncytial virus (RSV) pose a significant threat to the health of all populations studied in this review.

  This initial systematic review and meta-analysis reviewed the evidence for children, immunocompromised adults, and pregnancy, and searched for more than 15 severe adverse events of special interest.
- Immunizations are an effective tool to reduce health risks for all populations from flu, COVID, and RSV, and have a strong safety profile. The studies reviewed since the 2023/2024 Advisory Committee on Immunization Practices (ACIP) meeting found no significantly elevated safety risks from US-licensed immunizations for these conditions.



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#### **COVID-19 Vaccine Recommendations - AAP**



- AAP recommends a COVID-19 vaccine for all children ages 6 through 23 months old to help protect against serious illness.
- AAP also recommends a single dose of age-appropriate COVID-19 vaccine for all children and adolescents 2 through 18 years of age in the following risk groups:
- Persons at high risk of severe COVID-19
- · Residents of long-term care facilities or other congregate settings
- Persons who have never been vaccinated against COVID-19
- Persons whose household contacts are at high risk for severe COVID-19
- AAP also recommends the vaccine be available for children ages 2-18 who do not fall



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#### **COVID-19 Vaccine Recommendations - ACOG**



- ACOG recommends that patients receive an updated COVID-19 vaccine or booster:
- · at any point during pregnancy;
- in the postpartum period;
- · when planning to become pregnant; or
- · when lactating.

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#### **COVID-19 Vaccine Recommendations - AAFP**



All adults 18 years and older should receive a COVID-19 vaccine. It is especially important to get a COVID-19 vaccine if you are:

- 65 years and older;
- At increased risk for severe COVID-19 infection; and
- Have never received a COVID-19 vaccine.

All children aged 6 – 23 months receive a primary series and risk-based single dose for children and teen 2-18 years

• Recommendations align with the American <u>Academy of Pediatrics (AAP)</u>.

Pregnant women any time during pregnancy and during lactation

• Aligned with the <u>American College of Obstetrics and Gynecologists (ACOG)</u>



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#### **COVID-19 Vaccine – FDA Changes**



- On August 27, 2025, the U.S. Food and Drug Administration approved COVID-19 vaccines for the 2025–2026 season manufactured by Moderna, Pfizer, and Sanofi/Novavax.
- Indicated for use in adults 65+ and <64 with at least one high risk
- Pfizer vaccine for children 6 months 4 years of age was not reauthorized for use in the United States and will not be available for use this fall
- · All other vaccines now have full approval from the FDA
- New this season Moderna product, mNexspike, for ages 12 and older.
- Lower dose (1/5th)

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#### **COVID-19 Vaccine – FDA Changes**



• What is a high-risk condition?

CDC 2025 List of Underlying Medical Condition That Increase a Person's Risk of Severe Covid	HIV (human immunodeficiency virus)				
Asthma	Mental health conditions limited to the following:				
Cancer Hernatologic malignancies	Mood disorders, including depression Schizophrenia spectrum disorders				
Cerebrovascular disease	Neurologic conditions limited to demential and				
Chronic kidney disease <sup>a</sup>	Parkinson's disease				
People receiving dialpias  Chronic lung diseases limited do the following: Briorchiectasis  COPO (chronic obstructive pulmonary disease) tratestatial lung disease  Pulmonary embolism  Pulmonary importemison	Obesity (BMI ≥30 or ≥95th percentile in children)				
	Physical inactivity				
	Pregnancy and recent pregnancy				
	Primary immunodeficiencies				
	Smoking, current and former				
Orronic liver diseases limited to the following: Cirrhosis Nonalcoholic fatty liver disease Alcoholic liver disease	Solid-organ or blood stem-cell transplantation				
	Tuberculosis				
	Use of corticosteroids or other immunosuppressive medications				
Autoimmune hepatitis  Cystic fibrosis					
	medications				
Diabetes melitus, type 1	* Indicates presence of evidence for pregnant and rompregnant women. \$ Underlying conditions for which there is evidence in pediatric				
Diabetes mellitus, type 2*					
Gestational diabetes	patients.				
Disabilities:, including Down's syndrome	1000				
Heart conditions (such as heart failure, coronary artery	Dakota   Health & Human Services				

Description	Moderns (Spikevax) (6 months – 11 years)	Moderna (Spikevax) (12 years+)	Moderna (mNexspike) (12 years) +	Pfizer-BioNTech (6 months - 4 years)	Pfizer-BioNTech (Com/maty) (S-11 years)	Pfizer-BioNTech (Comirnaty) (12 years+)	Housevak (Numberovid) (12 years =)
Age	6 months - 11 years	12+ years	12+ years	6 months - 4 years	5-11 years	12+ years	12+ years
Type of Vaccine	mRNA	mRNA	mRNA	mRNA	mRNA	mRNA	Protein Subunit
Regulatory Decision	Approved	Approved	Approved		Approved	Approved	Approved
Doses in Schedule	2 doses (6 months – 2 years) 1 dose (2 years – 11 years)	1	1		(1)	,	10
Dose Volume	25 mL	0.5 mt	0.2 ml		0.3 mt	0.3 mL	0.5 mt
Diluent needed per vial	N/A	N/A	N/A		N/A	N/A	N/A
FDA Indication	6 months – 11 years with at least one <u>underlying health</u> <u>condition</u> that puts them at high risk for severe outcomes from COVID-19	65 years of age and older Or 12 - 64 years with at least one underhing health condition that puts them at high risk for severe outcomes from COVID-19	65 years of age and older Or 12 - 64 years with at least one <u>underlying health</u> condition that puts them at high risk for severe outcomes from COVID-19	Not reauthorized for use in the United States for the 2025-2026 season	5 years – 11 years with at least one <u>underlying health</u> <u>condition</u> that puts them at high risk for severe outcomes from COVID-19	65 years of age and older Or 12 - 64 years with at least one <u>underlying health</u> <u>condition</u> that puts them at high risk for severe outcomes from COVID-19	65 years of age and older Or 12 - 64 years with at least one <u>underlying health</u> condition that puts them at high risk for severe outcomes from COVID-15
Product Type	Prefilled syringes	Prefilled syringes	Prefilled syringes		Single dose vials	Prefilled Syringes	Prefilled Syringes
Doses Per Syringe	1 dose	1 dose	1 dose		1 dose	1 dose	1 dose
Minimum Package Quantity	10 doses Ov 2 doses	10 doses Or 2 doses	10 doses		10 doses	10 doses	10 doses
NDIIS Vaccine Name	COVID Moderna <12	COVID Moderna 12+			COVID Pfizer 5-11	COVID Pfiper 12+	COVID Novavax 12+
Available on Federal Contract (VFC or VFA)	Yes	Yes	No		Yes	Yes	Yes

#### **COVID-19 Vaccine Recommendations – CDC/ACIP**



- On 05/27/25, the HHS Secretary revised 2024-2025 COVID-19 vaccine recommendations.
- Removed recommendations for healthy children and pregnant women.
- ACIP and CDC have not yet made COVID-19 vaccine recommendations for the 2025-2026 season.
- Anticipating an ACIP meeting September 18-19.
- Per an X post by the HHS Secretary on 08/27/25: "FDA has now issued marketing authorization for those at higher risk: Moderna (6+ months), Pfizer (5+), and Novavax (12+). These vaccines are available for all patients who choose them after consulting with their doctors."



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# What do FDA and potential ACIP changes mean for COVID-19 vaccine access?



- People who meet the label indications should be able to receive vaccines in ways similar to past years - through a pharmacist, physician, nurse or other healthcare providers.
- For those with high-risk conditions, Moderna's SPIKEVAX is approved for those 6
  months and older, Pfizer's COMIRNATY COVID-19 vaccine for those 5 years and
  older, and Novavax's NUVAXOVID for those 12 years and older. All 3 vaccines are
  approved for those 65 and older.

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### What do FDA and potential ACIP changes mean for COVID-19 vaccine access?



For patients who do not meet the "on label" indications:

Physicians will still be able to prescribe and administer vaccines, including "off label,"
as they do for other off-label medications. As with any care they provide, physicians
can use clinical guidelines, like those published by their professional societies (e.g., AAP
and ACOG), to help them follow standards of care. If providers are considering offering
the COVID-19 vaccine outside of the FDA-approved labeling, it's recommended that
they consult with their organizations legal counsel.



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## What do FDA and potential ACIP changes mean for COVID-19 vaccine access?



Pharmacists will likely be more restricted by Advisory Committee on Immunization Practices (ACIP) recommendations. The Immunization Protocol approved by the North Dakota Board of Pharmacy allows pharmacists to prescribe and administer vaccines per the ACIP recommendations. In past years, pharmacists have administered ~90% of COVID-19 vaccines, so restrictions on their ability to administer vaccines to all patients who want them may significantly limit vaccine access. Pharmacies can still administer COVID-19 vaccine off label using a collaborative agreement or an individual prescription/order from a practitioner.

**Local Public health Providers** likely have standing orders that reference ACIP recommendations. Local Public Health officers drafting standing orders that align with guidelines published by professional societies may wish to consult their organization's legal counsel prior to administering any doses "off-label". Additionally, an individual prescription/order from a practitioner could be followed.



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## What do FDA and ACIP decisions mean for insurance coverage?



- The FDA label change does not have a direct effect on whether or how health plans
   source varsings.
- Most minimum coverage requirements are tied to ACIP recommendations rather than FDA licensing/labeling, and payers have broad flexibility to more than this minimum.
- VFC and VFA coverage are tied to ACIP recommendations
- Providers should check with a patient's insurance prior to administration to determine coverage.



#### **Post-Test**

Successfully complete the five-question post-test to receive your certificate for nursing credit using the link below:

 $\frac{https://ndhealth.co1.qualtrics.com/jfe/form/SV\_3rBbofRwXtW2ea}{\underline{O}}$ 

- Credit for this session will be available until October 7, 2025
- This presentation will be posted to our website at: www.hhs.nd.gov/immunizations

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