

TOPIC 10: VIRUS STRAINS



AGENDA

- **Introductions**
- **Virus Strains**
 - **Understanding and protecting yourself from variants**
 - **Communicating about variants**
 - **Vaccine and Variants Presentation by NDSU**
- **Reflection & Next Steps**

ACKNOWLEDGEMENT

This Project Firstline Presentation is brought to you by the North Dakota Department of Health (NDDoH), Division of Infectious Diseases and Epidemiology, and presented by NDDoH COVID-19 Nurse Consultants. All presenters have been trained on Project Firstline materials in correlation with the Centers for Disease Control and Prevention (CDC).

LEARNING OBJECTIVES

- Describe one (1) way that new virus strains develop.
- Discuss why the infection control actions recommended for COVID-19 work for new strains of SARS-CoV-2, and why they are even more important.

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INTRODUCTIONS

- What is your current role in Healthcare?
- Has COVID-19 changed your role?
- If anyone has ever asked you about virus variants?



INTRODUCTIONS



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- ICAR Facilitator
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INTRODUCTIONS



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POLL QUESTION

Which of the following are examples of viruses with variant strains? Check all that apply.

- Influenza (flu) viruses
- Rhinoviruses
- Coronaviruses
- Enteroviruses

CLARIFYING TERMS

You may hear different words used to describe new variants of SARS-CoV-2:

- Mutations
- Variants
- Strains

- **Mutation** describes the process through which the SARS-Cov-2 virus *changes*.
- **Variants** describes the version of the virus that has changed, through mutation, from the original virus.
- **Strains** is used in the same way as the word variants.

Understanding and Protecting Yourself from Virus Strains

As you watch the video,
write down three
interesting or important
takeaways that stand
out to you.



INSIDE INFECTION CONTROL

WHAT DO NEW COVID-19 STRAINS MEAN FOR INFECTION CONTROL?

EPISODE 19



Poll Question

New strains of SARs-CoV-2 have the same basic structure, so infection control actions for COVID-19 still work.

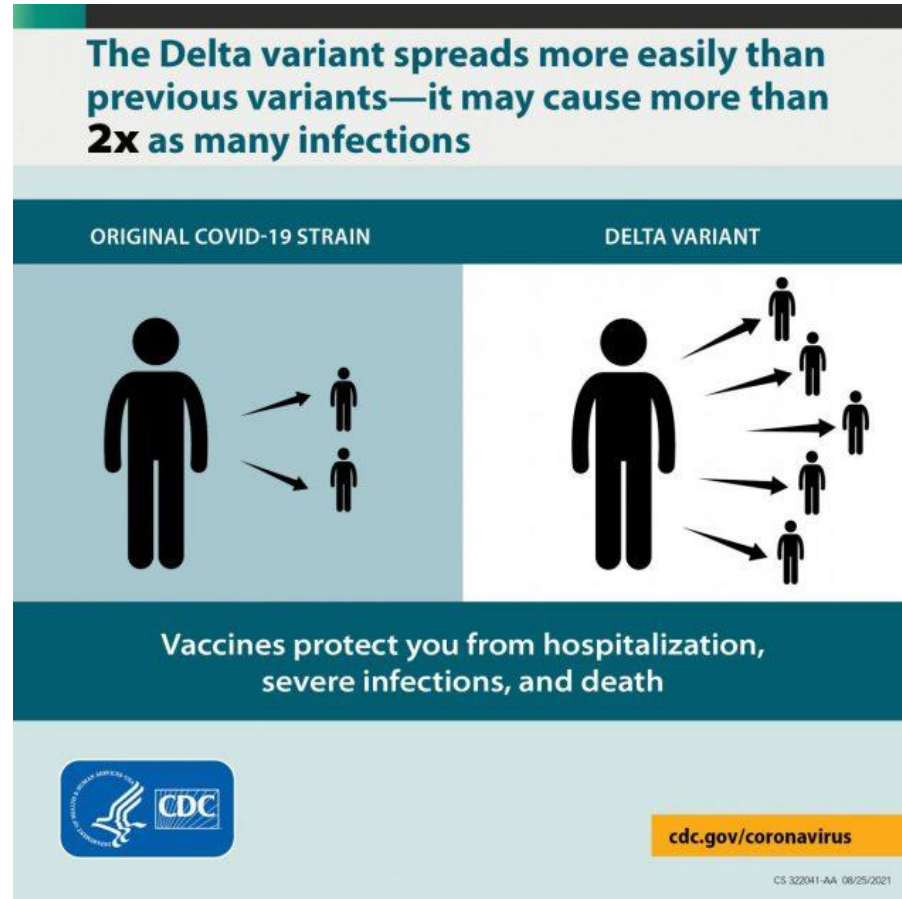
- True
- False



VIRUSES REGULARLY CREATE NEW STRAINS

- Viruses **regularly create new strains.**
- New strains are created when viruses make copies of themselves. When replicating, sometimes mistakes are made. Those **mistakes create a slightly different version of the virus – the variant.**

DELTA VARIANT



The Delta variant causes more infections and spreads faster than earlier forms of the virus that causes COVID-19. It might cause more severe illness than previous strains in unvaccinated people.

INFECTION CONTROL ACTIONS WORK

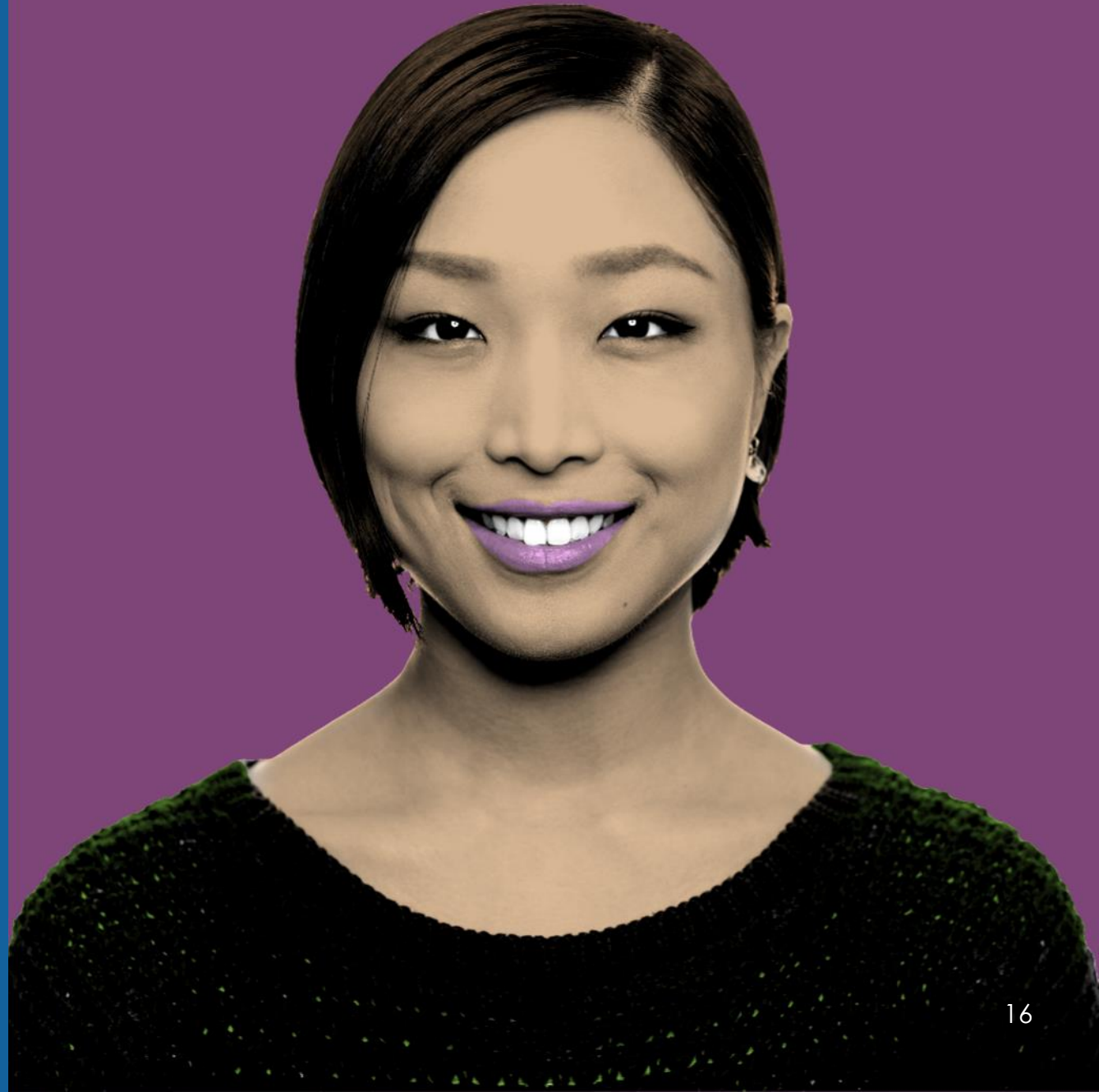
Infection control actions work, and they work against the new strains of SARS-CoV-2.

These include following recommendations for use of:

- PPE
- Source control
- Physical distance
- Ventilation
- Hand hygiene
- Cleaning and disinfection



Do you feel
confident enough
to explain virus
strains to others?

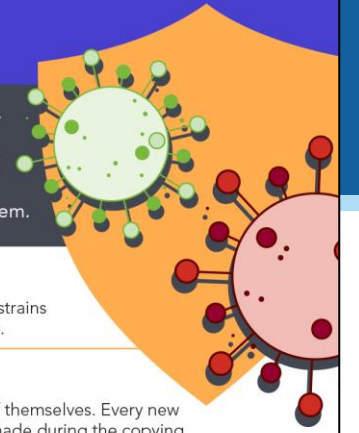


FREQUENTLY ASKED QUESTIONS

Reference the FAQs to prepare to communicate about virus strains.

VIRUS STRAINS

Viruses constantly change through mutation, and new variants, or strains, of a virus are expected to occur over time. The following frequently asked questions and answers can help you understand more about virus strains, including what they mean for infection control and whether you should be doing things differently for them.



Q Are strains common with viruses?

A Viruses have new strains all the time. That's why there are different strains of influenza every year, and why you can get a cold more than once.

Q How are strains created?

A Viruses have genes that carry instructions for making new copies of themselves. Every new copy contains those instructions as well. Sometimes mistakes are made during the copying process. When the instructions are copied wrong, the new viruses come out slightly different, with the mistake included in the instruction genes. Some mistakes make the virus not work anymore, so it's a dead end. When the new virus is still able to function even with the mistake, that's how a new strain is created, since all of the copies from that virus will carry that mistake.

Q What about the new strains of SARS-CoV-2? Do they spread more easily?

A Researchers are working hard to understand how these new strains of SARS-CoV-2 are different. Some of the new strains of SARS-CoV-2 allow the virus to spread more easily or make it resistant to treatments or vaccines, so it is even more important to continue using the recommended infection control actions.

Q What can we do to protect ourselves and our patients from the new strains?

A Even though new strains of SARS-CoV-2 are around, the basic pieces of the virus are still the same. This means that the recommended infection control actions for healthcare still work and are still needed to help stop the spread of COVID-19. This includes the following:



Using PPE. An N95 respirator will prevent you from breathing in virus that's in respiratory droplets, and eye protection keeps respiratory droplets from landing on your eyes. Using gloves and gowns protects you and also keeps you from spreading germs into your work environment.



Source control. Masking keeps respiratory droplets out of the air, so the germs in them can't spread to other people or the environment.



Physical distance. Maintaining physical distance helps people avoid breathing in each other's respiratory droplets.



Cleaning your hands. Soap and water and alcohol-based hand sanitizer break apart the envelope that holds the virus together, so it can't spread.



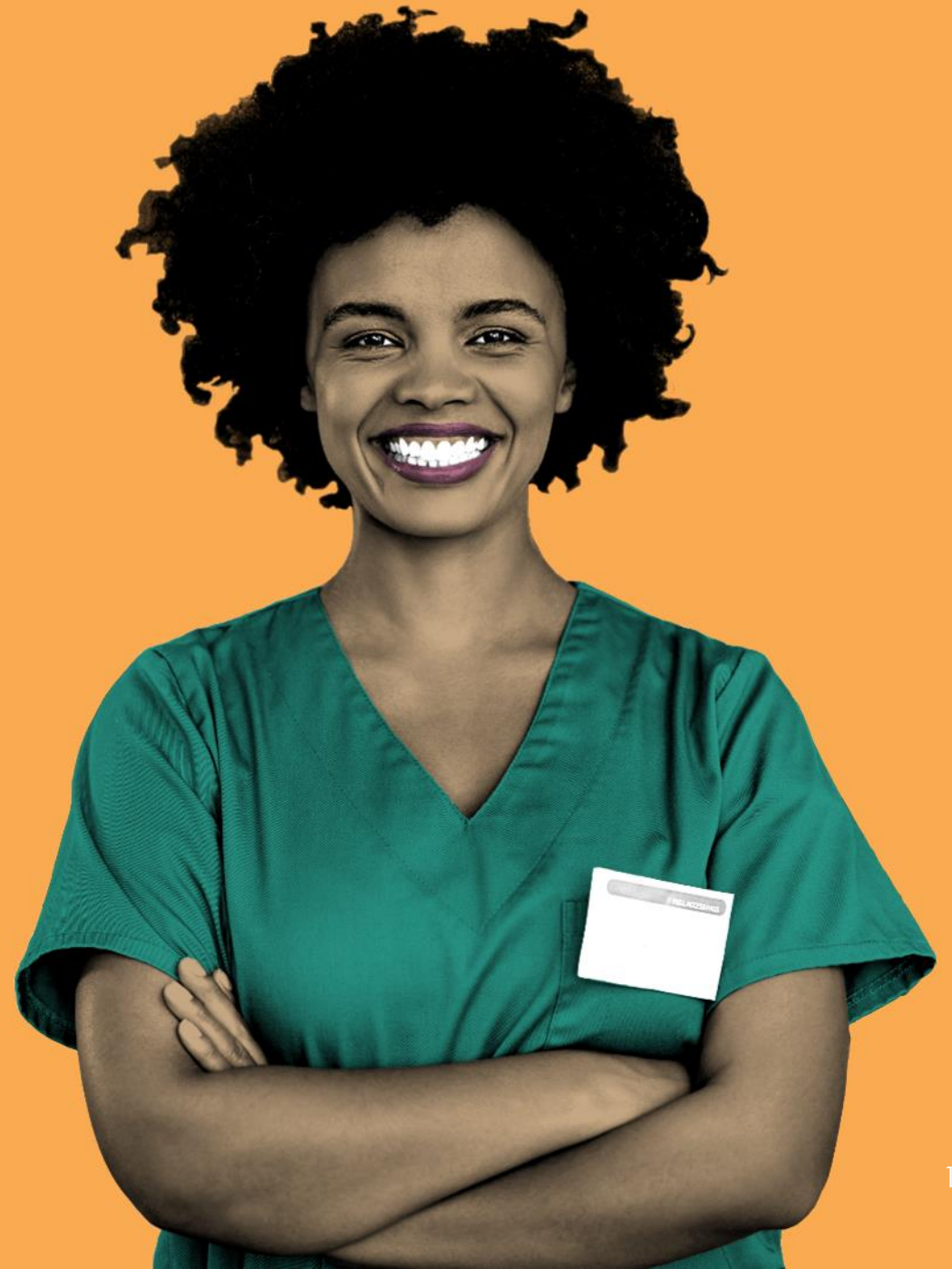
Ventilation. Good indoor ventilation is important for clearing air that might have respiratory droplets in it.



Cleaning and disinfection. Disinfecting products on the EPA's [list N](#) are known to kill SARS-CoV-2, including the new strains.

NDSU Vaccine Presentation

NDSU will now be presenting on the COVID-19 vaccine and how it will help protect people from new strains of the virus.



REFLECTION: WHAT DID YOU LEARN TODAY?

Questions?

Do you have any
remaining questions
about strains?



REFLECTION: USING YOUR KNOWLEDGE

- Our patients and their families may ask questions about new COVID-19 strains. What do you think is important for patients and families to know about virus strains?
- In the chat box, list one action you could take to protect yourself and others.

HANDLING OF MISINFORMATION

- Articles have been published without credible studies or sources supporting them, that are not based on evidence, and that contain false information
- Social media has become a source where many people are getting their information. **Social media should not be considered a trusted source.**
- [Delta Variant: What We Know About the Science | CDC](#)
- [What You Need to Know about Variants | CDC](#)
- <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/index.html>
- [What's New & Updated | CDC](#)

RESOURCES AND FUTURE TRAINING SESSIONS

Project Firstline on CDC:

https://www.cdc.gov/infection_control/projectfirstline/index.html

Project Firstline on Facebook:

<https://www.facebook.com/CDCProjectFirstline/>

Twitter:

https://twitter.com/CDC_Firstline

Project Firstline Delta Variant Resources:

<https://www.cdc.gov/infectioncontrol/projectfirstline/resources.html#PFL-delta>

YouTube:

<https://www.youtube.com/playlist?list=PLvrp9iOILTQZQGtDnSDGViKDdRtlc13VX>

To sign up for Project Firstline e-mails, click here:

https://tools.cdc.gov/campaignproxyservice/subscriptions.aspx?topic_id=USCDC_2104

EVALUATION

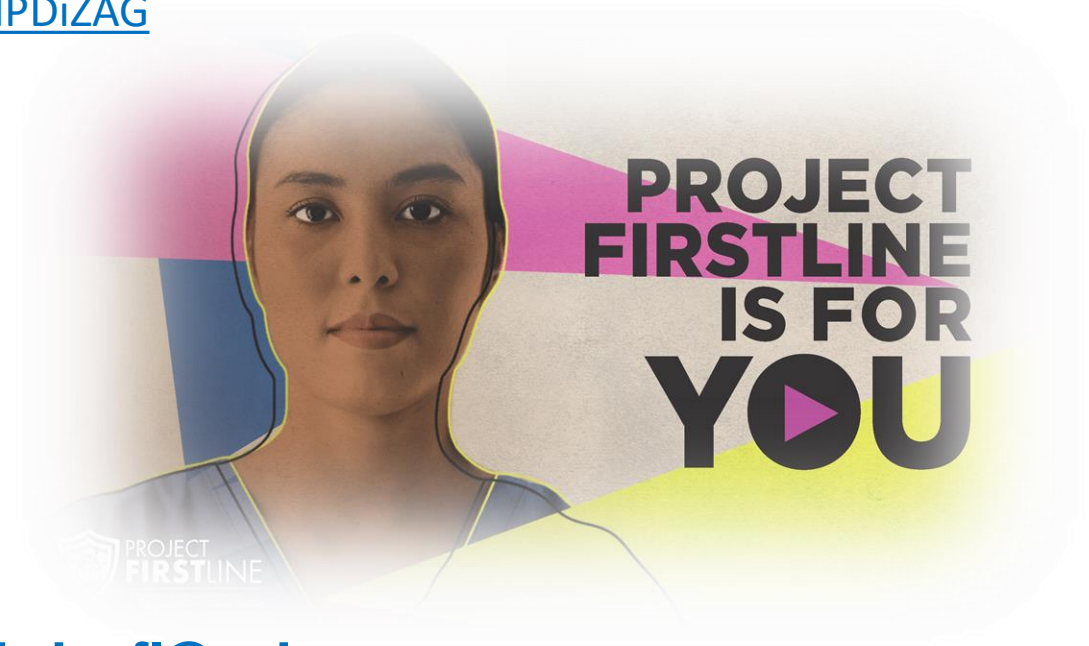
Take the end of course evaluation for CEU certificate:

https://ndhealth.co1.qualtrics.com/jfe/form/SV_2rEYMmJzIPDiZAG

If you are a room moderator for a group in attendance, fill out the Group Attendance Form. EACH attendee will need to complete the evaluation form. Submit all forms to dohpfl@nd.gov for certificates.

Recordings can be found on:

www.health.nd.gov/projectfirstline



Questions? Email us: dohpfl@nd.gov

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