

# TOPIC 6: MULTI-DOSE VIALS



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Division of Infectious Disease and Epidemiology  
Tuesday November 16th 12:00pm

# AGENDA

- Introductions
- Why Injection Safety Matters for Multi-Dose Vials
- Infection Control Actions for Using Multi-Dose Vials
- Reflection

# LEARNING OBJECTIVES

- **Discuss** two (2) reasons why injection safety actions are important when using multi-dose vials.
- **Describe** at least four (4) injection safety steps to take when using a multi-dose vial.

# ACKNOWLEDGEMENT

- This Project Firstline Presentation is brought to you by Division of Infectious Diseases and Epidemiology and presented by Covid-19 Infection Prevention Consultants
- All presenters have been trained on Project Firstline materials in correlation with Centers for Disease Control (CDC).

# INTRODUCTIONS



- Morgan Messer, ASN, RN
- Jamestown, ND
- COVID-19 Nurse Consultant
- Project First Line Facilitator

# INTRODUCTIONS



- Eric Akosah Appiah, BSN
- Bismarck, ND
- COVID-19 Nurse Consultant
- Project First Line Facilitator

# NOW LET'S GET TO KNOW YOU!

- What is your professional role?
- What is your healthcare setting that you currently work in?

What do you  
**know, right now,**  
about multi-dose  
vials?





# DEFINITIONS

## Multi-dose vials

A multi-dose vial is a vial of liquid medication intended for parenteral administration (injection or infusion) that contains more than one dose of medication.

Multi-dose vials are labeled as such by the manufacturer.

**Source:** CDC Website. “Questions about multi-dose vials”. Retrieved from: [https://www.cdc.gov/injectionsafety/providers/provider\\_faqs\\_multivials.html](https://www.cdc.gov/injectionsafety/providers/provider_faqs_multivials.html)

What do you  
**want to know**  
about multi-  
dose vials?



# WHY INJECTION SAFETY MATTERS FOR MULTI-DOSE VIALS



PROJECT  
**FIRST LINE**

CDC's National Training Collaborative  
for Healthcare Infection Prevention & Control



**Rx for Safe Injections  
in Healthcare**

**1 Needle  
1 Syringe  
+ 1 Time**

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**0 Infections**

Injection safety, or safe injection practices, are practices intended to prevent transmission of infectious diseases. Patients and healthcare providers must both insist on nothing less than ***One Needle, One Syringe, Only One Time*** for each and every injection.

For more information, please visit:  
[www.ONEandONLYcampaign.org](http://www.ONEandONLYcampaign.org)

**1 ONE NEEDLE,  
ONE SYRINGE,  
ONLY ONE TIME.**

The One & Only Campaign is a public health campaign aimed at raising awareness among the general public and healthcare providers about safe injection practices.

Safe Injection Practices Coalition  
[www.ONEandONLYcampaign.org](http://www.ONEandONLYcampaign.org)

# INSIDE INFECTION CONTROL

## HOW DO I SAFELY USE A MULTI-DOSE VACCINE VIAL?

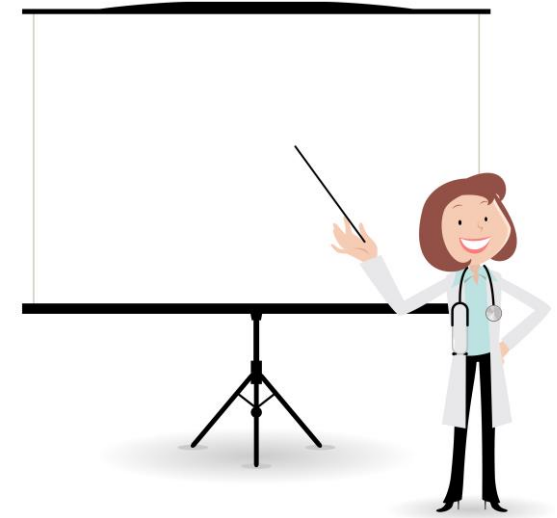
**EPISODE 8** **PART 1**



# MULTI-DOSE VIALS ARE DIFFERENT

## Multi-dose vials are different.

Multi-dose vials are different from single-dose vials in several ways and require important injection safety actions.

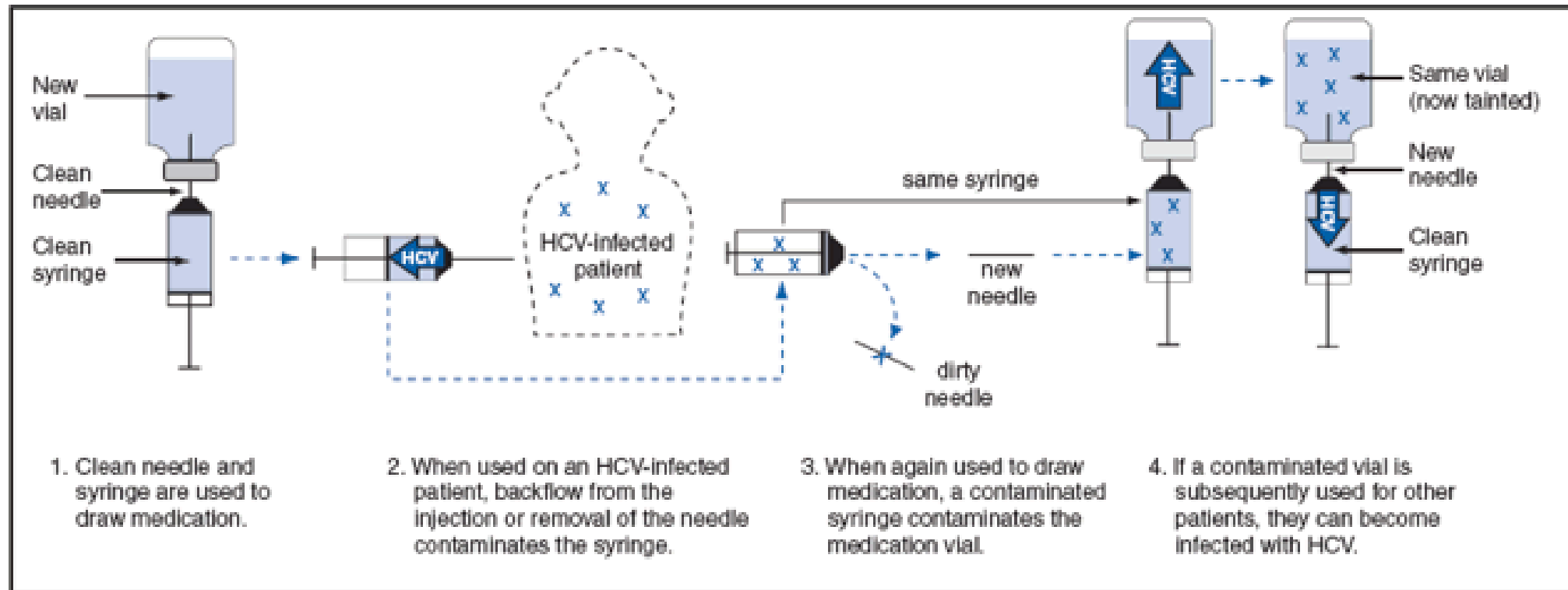


### Why?

- Multi-dose vaccine vials are accessed by a new needle and syringe more than once, to pull out individual doses for separate patients.
- Accessing the vial more than once can be an infection control issue.

# INJECTION SAFETY IS SO IMPORTANT!

**FIGURE 2. Unsafe injection practices and circumstances that likely resulted in transmission of hepatitis C virus (HCV) at clinic A — Nevada, 2007**



# CONTAMINATED VACCINES CANNOT BE USED

## Contaminated vaccines cannot be used.

- If a needle or syringe gets dirty and goes into the vial, it will contaminate the rest of the doses of vaccine inside the vial.
- If the vaccine is contaminated, it cannot be used anymore and must be thrown away.

### Why?

- If contaminated vaccine is used on a patient, the patient could get sick or die.
- We don't want to throw away vaccines that could be given to patients.

# INJECTION SAFETY ACTIONS ARE IMPORTANT FOR MULTI-DOSE VIALS

How to implement injection safety actions for multi-dose vials.



## INSIDE INFECTION CONTROL

# HOW DO I SAFELY USE A MULTI-DOSE VACCINE VIAL?

**EPISODE 8** **PART 2**



# INJECTION SAFETY

Injection safety actions are important for multi-dose vials.



**LEARN ABOUT  
MULTI-DOSE VIAL  
SAFETY WITH  
PROJECT FIRSTLINE.**

# PREPARE THE VIAL

## Injection safety actions are important.

**Q:** Where should multi-dose vials be prepared?

**A:** Prepare the vial in a quiet, private space. Never bring multi-dose vials into patient care spaces.

# CHECK THE VIAL

## Injection safety actions are important.

**Q:** What do you want to check before using the vial?

**A:** Check the label to make sure it is a multi-dose vial, and it is not expired. Also check to make sure the vaccine looks the way it is supposed to.

# DISINFECT THE TOP OF THE VIAL

## Injection safety actions are important.

**Q:** Why should you disinfect the top of the vial before inserting the needle?

**A:** Disinfect the top of the vial with an alcohol prep pad to kill any germs on the top, so you don't push germs into the vial when you insert the needle. Let the top dry before you insert the needle.

# ACCESS THE VIAL

## Injection safety actions are important.

**Q:** What do you need to do the first time you open a multi-dose vaccine vial?

**A:** How long you can use the vaccine after you first access the vial varies by product. Writing the date and time the vial was opened on the label helps prevent vaccine from being given to a patient beyond its use date.

# VACCINE IN THE VIAL

## Injection safety actions are important.

**Q:** What do you do if there is a little bit of vaccine left in the vial, but it's not enough for a full dose?

**A:** Throw the remaining vaccine away.  
Never combine doses from different vials or give someone less than a full dose.

# HANDOUT: HOW DO I SAFELY USE A MULTI-DOSE VIAL?

## Multi-Dose Vial Infection Control Procedure

Use the checklist to familiarize yourself with the appropriate infection control procedures.

## HOW DO I SAFELY USE A MULTI-DOSE VACCINE VIAL?

You vaccinate patients to protect them. Correctly using multi-dose vials keeps your patients safe from germs that can spread from contaminated vials, needles, and syringes.

**CHECK THAT YOU ARE** USING MULTI-DOSE VACCINE VIALS SAFELY **EVERY TIME.**

- ✓ Always prepare multi-dose vial injections away from patient care spaces in a clean designated area
- ✓ Clean your hands before touching the vial
- ✓ Check the label to make sure it is a multi-dose vaccine vial
- ✓ Check to make sure the vaccine is **not expired** or "**beyond use**"
- ✓ Look and see if the vaccine appears the way the vaccine maker tells you it should
- ✓ Use **brand-new, sterile needles and syringes** for every vaccine dose
- ✓ **Disinfect the top** part of the vial (the vial stopper) with an alcohol prep pad—**every time**
- ✓ Make sure the **top is dry** before sticking the needle in it
- ✓ When you first put a needle in, **write the date and time** on the label
- ✓ Follow the vaccine maker's **instructions for storage**
- ✓ **Never "pool" doses** (combine partial doses from multiple vials to make one dose for a patient)



WHY + HOW



# USING THE CHECKLIST

## How Do I Safely Use a Multi-Dose Vaccine Vial?

- Where should you prepare multi-dose vial injections?
- *What information should you verify on the vaccine label?*
- What information are you responsible for writing on the vaccine label?



Answer the following True or False Questions (if you need help use the *How Do I Safely Use a Multi-Dose Vial* handout):

- T or F: The vial stopper does not need to be disinfected every time.
- T or F: The top of the vial should be dry before sticking the needle in.
- T or F: Pooling doses from multiple vials is acceptable.

# ONE NEEDLE, ONE SYRINGE, ONLY ONE TIME

The CDC has developed resources to support the understanding of the basics of injection safety.

## Resources include:

- FAQs
- Checklists
- Patient handouts
- Videos on clinical practices
- Posters

<https://www.cdc.gov/injectionsafety/one-and-only.html>



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# Reflection



# KEY TAKEAWAYS

- Multi-dose vials require a specific set of safety procedures that are different from those for single-dose vials or multi-dose vials used with only one patient.
- Contaminated vaccines cannot be used.
- Injection safety actions are important.

# RESOURCES

Project Firstline on CDC:

[https://www.cdc.gov/infection\\_control/projectfirstline/index.html](https://www.cdc.gov/infection_control/projectfirstline/index.html)

Project Firstline on Facebook:

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

Twitter:

[https://twitter.com/CDC\\_Firstline](https://twitter.com/CDC_Firstline)

Youtube:

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

CDC's One and Only Campaign:

<https://www.cdc.gov/injectionsafety/one-and-only.html>

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

[https://tools.cdc.gov/campaignproxyservice/subscriptions.aspx?topic\\_id=USCDC\\_2104](https://tools.cdc.gov/campaignproxyservice/subscriptions.aspx?topic_id=USCDC_2104) References

# REFERENCES

- *Acute Hepatitis C Virus Infections Attributed to Unsafe Injection Practices at an Endoscopy Clinic --- Nevada, 2007.* (2008, May 16). Retrieved from CDC: <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5719a2.htm>
- Folkema, A., Wang, H. L., Wright, K., Hirji, M. M., Andonov, A., Bromley, K., Ludwig, C., & MacArthur, A. (2021). An outbreak of hepatitis C virus attributed to the use of multi-dose vials at a colonoscopy clinic, Waterloo Region, Ontario. *Canada communicable disease report = Releve des maladies transmissibles au Canada*, 47(4), 224–231. <https://doi.org/10.14745/ccdr.v47i04a07>
- Injection safety CDC: [References | Injection Safety | CDC](#)

# EVALUATION

Take the end of course evaluation  
for CEU certificate:

**INSERT CUSTOM LINK HERE**

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](mailto:dohpfl@nd.gov) for certificates.

Recordings can be found on:  
[www.health.nd.gov/projectfirstline](http://www.health.nd.gov/projectfirstline)





# QUESTIONS?

Email NDDoH Project Firstline at: [dohpfl@nd.gov](mailto:dohpfl@nd.gov)

Call us: (701)-328-2378

