



Project Firstline **Session Plans**

Topic Six: Multi-Dose Vials

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Overview of Sessions

The following Session Plans for **Topic Six: Multi-Dose Vials** are to help guide you, as a provider of the Project Firstline training, with the necessary support to use Project Firstline materials to create well-rounded training events and educate your audience about infection control.

Facilitator Instructions

Choose Your Session

There are three different session lengths for you to choose from based on time available for training:

- 60 minutes (e.g., dedicated training session)
- 20 minutes (e.g., “Lunch and Learn” or agenda add-on)
- 10 minutes (e.g., “micro-learning” or agenda add-on)

Due to time constraints, the 10- and 20-minute sessions will have less opportunity for interactive discussion. We invite you to extend sessions for greater engagement whenever possible. We have also provided recommendations for using chat functions and other activities to draw your audience into the materials when you are limited to only a short amount of time.

These time lengths are not intended to be prescriptive and are instead provided simply as a tool that you may tailor to best match your specific audience and needs. When you schedule your session, use your knowledge of your audience’s availability and learning needs to adapt these materials as needed.

Session Materials

- Three different Session Plans: 60 minutes, 20 minutes, and 10 minutes
- Corresponding PowerPoint slide decks: 60 minutes, 20 minutes, and 10 minutes
- Links to *Inside Infection Control* by CDC’s Project Firstline videos: Episodes 8a and 8b, *How Do I Safely Use a Multi-Dose Vaccine Vial? Parts 1 and 2*
- Link to an animated video
- Copies, links, or PDF files of the handout, *How Do I Safely Use a Multi-Dose Vaccine Vial?*

Using the Materials

The sample materials are presented in sequence. You may, however, mix and match content to meet participant needs. Things to know:

- Use the plans and slides as guides for your presentation.
- The slide numbers in the Session Plans correspond to the companion slide decks provided.
- We encourage you to customize the look and feel of the presentations and to adapt the facilitator script to better match your own voice and audience.
- The time recommendations are provided simply as a guide for the minimum amount of time needed for each section. We encourage you to take more time, as needed, with specific sections.

Conducting a Session

Schedule and announce the sessions according to your organization's needs and requirements.

Each session should include, at a minimum:

- Specific learning objectives
- Presentation of core content
- Opportunities to understand and engage with the key messages for each topic

Each session should also give participants the opportunity to learn more, to understand and connect internally with the content, and to act on their learning and engage with others.

Additional guidance for facilitators and information about other topics covered in the series is provided in the Project Firstline Facilitator Toolkit Guide.

Educational Content Outline

Topic Six: Multi-Dose Vials

Content Summary: Multi-dose vials are different from single-dose vials in several ways. There are important injection safety actions to take when using them to keep them from being contaminated and to make sure you're using them safely for a patient.

Inside Infection Control Videos:

[Part 1: How Do I Safely Use a Multi-Dose Vaccine Vial?](#)

[Part 2: How Do I Safely Use a Multi-Dose Vaccine Vial?](#)

Inside Infection Control Video Content Outlines: For reference, content outlines for the videos presented in this session are provided as an appendix to this document.

Handout: *How Do I Safely Use a Multi-Dose Vaccine Vial?*

Learning Objectives

- Discuss two (2) reasons why injection safety actions are important when using multi-dose vials.
 - ▶ Multi-dose vials are accessed more than once to pull out individual doses for separate patients, which creates an opportunity for spreading infections.
 - ▶ If a needle or syringe is reused or gets dirty and goes into the vial, anything that is on or in the needle or syringe can end up in the vial and contaminate it. If the vial is contaminated, it must be thrown away.
 - If it's not thrown away, patients who get an injection from that vial after the contamination occurs could get sick or die from diseases that spread this way, like hepatitis or HIV.
 - Any time a vial that is possibly contaminated is used for a patient, public health authorities must be immediately notified and everyone who got a dose from that vial has to be contacted and followed so they can be tested to find out whether they got infected.
 - ▶ We don't want to waste vaccine by contaminating it; we want it to be available for patients.
- Describe at least four (4) injection safety steps to take when using a multi-dose vial.
 - ▶ Always prepare a multi-dose vial in a space that is clean and away from patients where you can safely draw up the doses and prepare the vaccine.

- ▶ Clean your hands before you touch the vial.
- ▶ Check the label to make sure that it is a multi-dose vial and that it isn't expired or beyond its use date.
- ▶ Look at the vaccine and make sure it looks how the vaccine maker says it should look.
- ▶ Always use a brand-new, sterile needle and a brand-new, sterile syringe for every vaccine dose.
- ▶ Always disinfect the top of the vial thoroughly with an alcohol prep pad, and let it dry before you stick the needle in to draw up a dose of vaccine.
- ▶ Follow the vaccine maker's instructions for how long you can use the vaccine after you first access the vial, and when it should be thrown away.
 - If there is a full extra dose in the vial, you can use that dose on another patient.
 - If there is extra vaccine in the vial, but not enough for a full extra dose, throw the vial away: do not combine vaccine from multiple vials into one dose for a patient.
- ▶ Follow the vaccine maker's instructions for how to store vaccine.

Sessions at a Glance

Topic Six:

Multi-Dose Vials

Session Plans and When to Use:

- 60 minutes (e.g., dedicated training session)
- 20 minutes (e.g., “Lunch and Learn” or agenda add-on)
- 10 minutes (e.g., “micro-learning” or agenda add-on)

Format:

- Online, synchronous

Special Supplies:

- Registration list
- Participant booklet
- Session feedback form
- Timekeeper
- Handout: *How Do I Safely Use a Multi-Dose Vaccine Vial?*



60-Minute Session Plan

1. Session Start



Slide 1: Opening Slide

Participants log in and get settled.

2. Agenda, Learning Objectives, and Introductions



10 minutes



Slide 2: Agenda



Facilitator Notes

- Welcome
- Housekeeping, either orally or via chat
 - ▶ If needed, additional notes specific to the platform you're using (e.g., how to "raise your hand," how to post questions)
- Overview of agenda
- If this session is part of an ongoing series, you may choose to say, "welcome back," "thank you for joining us again," etc.



Sample Script

"Welcome to Project Firstline. Thank you for joining us! Before we begin, a few housekeeping notes. We'll meet today for one hour. Please keep your videos on, to the extent possible, and keep your microphone muted when you are not contributing to the discussion. It's great to see you all here today!

"Today, we're going to be talking about multi-dose vials. We'll talk specifically about why injection safety is so important, and about the things you can do to make sure you're using multi-dose vials safely."



Slide 3: Learning Objectives



Facilitator Notes

Provide an overview of the session's learning objectives.



Sample Script

"After today, you'll be able to recognize and describe the injection safety actions to take when you're using a multi-dose vial, and you'll understand why the actions are so important."



Slide 4: Introductions



Facilitator Notes

- These questions will give you a better understanding of your participants' backgrounds, experience, and level of knowledge.
- Tailor your slide delivery for the virtual format and platform, and the number of participants:
 - ▶ You may wish to add role- or facility-specific questions to the introductions.
 - ▶ If your virtual platform has poll functionality, you may use a poll for the third bullet on the slide, which asks about participants' experience with multi-dose vials. This approach is advised if you have more than 15 participants.
 - ▶ If you have a large group, you may decide to skip introductions and use the chat or poll feature for introductions.
- Be sure to introduce yourself and anyone who is assisting you.



Sample Script

"Please share in 30 seconds or less your name, your role, and your experience with multi-dose vials."



Slide 5: What do you know, right now, about multi-dose vials?



Facilitator Notes

- As you invite participants to share their responses to this question, use a method for writing down their responses, such as typing responses in a new slide, or recording them in the chat.
- Likely answers could include: the currently available SARS-CoV-2 vaccines come in multi-dose vials; you have to use a new needle and new syringe for every vaccine you draw; some vials have an extra dose of vaccine depending on how you draw them up; multi-dose vials can be more dangerous than single-dose vials; if you don't use all the vaccine in a multi-dose vial, you may end up wasting some because it can't be stored once it's prepared.



Sample Script

"Let's first share what you already know about multi-dose vials."

(Pause for participants to share their responses and to document them.)



Slide 6: What do you want to know about multi-dose vials?



Facilitator Notes

- As you invite participants to share their responses to this question, use a method for writing down their responses, such as typing responses on a new slide or recording them in the chat.
- Responses will likely be connected to participants' work duties. This question is intended to help them connect and apply the training content to their real-life work.



Sample Script

"That was great. Now I'd love to learn more about what you want to know, or what you wonder, about multi-dose vials."



Slide 7: Why injection safety matters for multi-dose vials



Facilitator Notes

- Acknowledge responses to questions and link the responses to the next content: definitions and video.
- Note that this session will answer many of their questions and consider explaining that any questions that aren't answered will receive follow-up.



Sample Script

"Thank you so much for sharing this. We'll be able to answer most, or all, of your questions by the end of this training. We're going to begin by talking about why injection safety matters so much for multi-dose vials."

3. Video #1 and Discussion



15 minutes (video 6:08)



Slide 8: Definitions



Facilitator Notes

- Either allow time for participants to read the definitions themselves, or read them aloud.
- **CDC source for the definition: Multi-dose vials:** https://www.cdc.gov/injectionsafety/providers/provider_faqs_multivials.html



Sample Script

"But first, let's start with some vocabulary. Here are definitions from the CDC for multi-dose vials."



Slide 9: Why is injection safety important for multi-dose vials?



Facilitator Notes

- Ask participants about their familiarity with the definitions.
- Play Episode 8, Part 1 of *Inside Infection Control: How Do I Safely Use a Multi-Dose Vaccine Vial?*



Sample Script

“Did you already know these definitions? Or was anything in the definitions new to you?”

(Acknowledge responses.)

“To begin, we’re going to watch a CDC Project Firstline video from Dr. Abby Carlson. She’s going to explain why injection safety is so important for multi-dose vials.”



Slide 10: Video: How Do I Safely Use a Multi-Dose Vaccine Vial? Part 1



Facilitator Notes

- Access the video here:
CDC Website: <https://www.cdc.gov/infectioncontrol/projectfirstline/videos/EP8a-MDVP1-LowRes.mp4>



- OR
Project Firstline YouTube Playlist: https://www.youtube.com/watch?v=bRt_FWrpEuQ&list=PLvrp9iOILTOZQQtDnSDGViKDdRtlc13VX&index=9



Slide 11: Multi-dose vials are different



Facilitator Notes

- This slide has animations for the second column. When you advance to the slide, only the first column will appear.
- After you introduce the message that multi-dose vials are different from single-dose vials, ask participants to share answers to the question, **“Why?”**
- After they provide responses, use the animation to reveal the answers.



Sample Script

“Multi-dose vials are different from single-dose vials in several ways and require important injection safety actions. **Can you share some of the reasons you heard?”**

(Pause for responses, then advance to reveal second column.)

“Thank you. That’s right. Multi-dose 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. It is important to take injection safety actions to reduce the chance of contamination and protect patients.”



Slide 12: Contaminated vaccines cannot be used



Facilitator Notes

- This slide has animations for the second column. When you advance to the slide, only the first column will appear.
- After you introduce the Key Message, ask participants to share answers to the question, **“Why?”**
- After they provide responses, use the animation to reveal the answers.



Sample Script

“One of the other key messages that we heard from Dr. Carlson is that contaminated vaccines cannot be used. If a needle or syringe is reused or dirty and goes into the vial, anything that’s on the needle or syringe will get into the vial and contaminate the rest of the vaccine inside. If the vaccine is contaminated, it can’t be used anymore, and it has to be thrown away. **Why does this matter?”**

(Pause for responses.)

“That’s right. If a multi-dose vial is contaminated by a used needle or syringe, every patient who gets an injection from that vial after the contamination occurs could get a disease like hepatitis or HIV. Some patients have even died from hepatitis after getting a contaminated injection. If a contaminated vial is used, public health authorities need to be notified right away. That’s because everyone who got a dose from that vial has to be contacted and followed so that they get the information about what happened and so they can be tested to find out whether they got infected. And finally, of course – we don’t want to throw away vaccine that could have been given to patients.”

4. Video #2 and Discussion



15 minutes (video 8:38)



Slide 13: Infection control actions for using multi-dose vials



Sample Script

“Now that we understand why injection safety actions for multi-dose vials are so important, let’s dive deeper into what those actions are. We’re going to hear again from Dr. Abby Carlson from the CDC for Part 2 of *Inside Infection Control: How Do I Safely Use a Multi-Dose Vaccine Vial?*”



Slide 14: Video: How Do I Safely Use a Multi-Dose Vaccine Vial? Part 2



Facilitator Notes

- Access the video here:



CDC Website: <https://www.cdc.gov/infectioncontrol/projectfirstline/videos/EP8b-MDVP2-LowRes.mp4>

OR

Project Firstline YouTube Playlist: bit.ly/MultiDoseVialPt2

- If you would prefer to show a shorter (3.5-minute) video, you can show this animated video about using multi-dose vials safely:



CDC Website: <https://www.cdc.gov/infectioncontrol/projectfirstline/videos/MultiDoseVial-LowRes.mp4>

OR

Project Firstline YouTube Playlist: <https://bit.ly/MDVSafetyTips>



Slide 15: Injection safety actions are important for multi-dose vials



Sample Script

“As you heard from Dr. Carlson, there are a few things to remember for injection safety when you’re using multi-dose vials.”



Slide 16: Prepare the vial



Facilitator Notes

- The next few slides are an opportunity to interact with your group, and to reinforce the reasons why the injection safety actions are important.
- You may ask participants to come off mute to answer, or respond in the chat, or a combination of both.
- If your group is large, consider asking participants to respond in the chat.
- These slides use animations to allow the answer to appear after participants have had the chance to share their responses.



Sample Script

“Let’s review some of these actions. **First, where should multi-dose vials be prepared?**” *(Pause for responses. Trigger animation.)* “That’s right. Always prepare a multi-dose vial in a space that is clean and away from patients where you can safely draw up the doses and prepare the vaccine. Never bring multi-dose vaccine vials into patient care spaces, like a vaccination station where the patient is getting the shot or into a patient room.

“**Why is that?**” *(Pause for responses.)* “Yes, because bringing a multi-dose vial into a patient care space increases the chances that someone might mistakenly put a used needle or syringe into the vial and contaminate the vial without realizing it.

“Remember that, before you touch any vials, clean your hands with alcohol-based hand sanitizer or soap and water. This keeps the germs on your hands from getting into the vial, especially the top area where you’re going to stick the needle in.”



Slide 17: Check the vial



Sample Script

“**What do you want to check before using the vial?**” *(Pause for responses. Trigger animation.)* “That’s right. Check the label to make sure the vial is a multi-dose vial, and that it is not expired or beyond-use. If it’s expired or beyond its use date, do not use it.

“It’s also important to look at the vaccine to make sure it looks right. If it doesn’t or you are not sure, do not use it. You can check the instructions from the vaccine maker to find out what the vaccine is supposed to look like. Any unusual color or cloudiness is concerning.”



Slide 18: Disinfect the top of the vial



Sample Script

“Why should you disinfect the top of the vial before inserting the needle?” *(Pause for responses. Trigger animation.)* “That’s right. 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.”



Slide 19: Access the vial



Sample Script

“What do you need to do the first time a vial is opened?” *(Pause for responses. Trigger animation.)* “Yes. Make sure you write the time and date in the appropriate space on the label. Follow the vaccine maker’s instructions for how long you can use the vaccine after you first access it, and when it should be thrown away.”



Slide 20: Vaccine in the vial



Sample Script

“What do you do if there is a little bit of vaccine left in a vial, but it’s not enough for a full dose?” *(Pause for responses. Trigger animation.)* “That’s right. You have to throw it away. We can never combine doses from different vials to make a full dose for someone or give someone less than a full dose.”



Slide 21: Handout: *How Do I Safely Use a Multi-Dose Vaccine Vial?*



Facilitator Notes

- Depending on the delivery of this training, you may share the handout with participants in one of several ways: emailing PDF copies, providing a link to the PDF hosted on your organization’s website or Project Firstline’s website, or downloading the document through your webinar platform.



Sample Script

“This is for you to keep, use, and share!”

(Distribute the handout, How Do I Safely Use a Multi-Dose Vaccine Vial?)

“Take another minute to make sure all of these steps make sense to you. **Are there any questions about any of the steps?**”

(Address any questions.)

5. Small Group Breakout and Discussion



10 minutes



Slide 22: Breakout Groups: Using the Checklist



Facilitator Notes

- Use breakout rooms appropriate to your virtual platform to divide participants into groups of approximately three.
 - ▶ As needed, provide instructions related to the breakout room format, such as how to ask questions.
 - ▶ Inform the groups that they have 5 minutes to make their lists.
 - ▶ Ask each group to identify a spokesperson who will be willing to share the items on the group’s list when everyone reconvenes.
- The slide has animations. Before participants go into breakout groups, only show the first column.
- After the small groups have gathered, depending on your virtual platform, you may use the broadcast message feature or another means to send reminders of the task, how much time is remaining, etc. You may also choose to “visit” each group to encourage conversation and to hear their thoughts.
- Use your chime or timekeeper to warn participants when they have 1 minute remaining.
- When you reconvene participants after the breakout, have each group share one item from their list until they have finished listing materials.
- Then show the second column on the slide to confirm the materials they list.
- The groups may list items and materials that are not on the slide, such as PPE that they might use, alcohol prep pads, a sharps disposal container, a pen, and gauze or an adhesive bandage.



Sample Script

“Great! Now let’s think a little bit more about what materials you will need to have, other than the multi-dose vial, of course, to do these injection safety actions. Let’s break up into small groups to review your handout and think about the materials that you will need to work safely. You will have 5 minutes, and I’ll give you a warning when you have 1 minute left.”

(Allow 5 minutes for the groups to make their lists, giving a warning when there is 1 minute left. Reconvene the groups from their breakout rooms.)

“All right, let’s see what we’ve got! **Group One, can you please share one item on your list?**”

(When groups have finished contributing, reveal the second column on the slide.)



Slide 23: One Needle, One Syringe, Only One Time



Facilitator Notes

Share additional CDC injection safety resources.



Sample Script

“That was great – you did a great job! If you would like more information or resources about the importance of using a brand-new, sterile needle and syringe, explore CDC’s resources about injection safety and their “One and Only” injection safety campaign. These include FAQs, checklists, patient handouts, posters, and videos about injection safety in clinical practice.”

6. Reflection and Wrap-Up



10 minutes



Slide 24: Reflection



Facilitator Notes

Encourage participants to reflect on the content of the session, and how they will put their knowledge into practice.



Sample Script

“Let’s use our last few minutes together to reflect on what we’ve learned and think about how we can put what we’ve learned into practice.”



Slide 25: Key Takeaways



Facilitator Notes

- Review key takeaways.
- You may choose to revisit discussion points or questions that arose during the session.



Sample Script

“I hope you enjoyed today’s conversation. I’ve captured some key takeaways here, which you can review at your leisure after the session today.”



Slide 26: What did you learn today?



Facilitator Notes

- Invite participants to share what they learned during the session.
- Invite additional, remaining questions.
- If the answers are information that is already included in this session, please respond.
- If the questions address content that is not covered in this session, please do not attempt to answer the question. Instead, take note of the questions and consult with CDC resources to follow up with answers after the session.



Sample Script

“I’d love to hear from you about what you learned today. **Would anyone like to share?**”

(Acknowledge and address responses.)

“Thank you for sharing! **Does anyone have any questions still remaining?**”

(Address questions as appropriate.)

“Thank you for sharing those questions. Project Firstline is actively collecting your questions to help inform more training resources as they’re developed. I’ve written them down, and I will get back to you with responses.”



Slide 27: Applying What You Learned



Facilitator Notes

- Encourage participants to describe how they will use multi-dose vials safely. They may come off mute and speak, or type in the chat, or both.
- As appropriate, make connections between participants’ responses and the material from the session, particularly the “why” behind the injection safety actions.



Sample Script

“As we just heard, you’ve learned a lot today. I’d like you to identify one thing you’ll need to do, or continue to do, in your practice to make sure you’re using multi-dose vials safely.”



Slide 28: Resources and Future Training Sessions



Facilitator Notes

- Share additional resources from Project Firstline and CDC.
- Explain how participants can reach you, by the means of your choosing, and how they can reach Project Firstline.
- If this session is part of a series, you may choose to describe the themes of upcoming sessions.



Sample Script

“That’s great, thank you. We covered a lot today, and there is still more to learn. You can keep exploring these topics on your own using the resources on this slide. You can also follow us on social media.”

(If this session is part of a series) “Next time, we will cover [insert next training topic].”



Slide 29: Feedback Form



Facilitator Notes

Explain how to access the feedback form.



Sample Script

“And, finally, please let us know how you enjoyed today’s session by completing the following feedback form. Thanks again for joining us today.”

After the Session



Send list of participant questions compiled during this session to ProjectFirstline@cdc.gov.



20-Minute Session Plan

1. Session Start



Slide 1: Opening Slide

Participants log in and get settled.

2. Agenda and Learning Objectives



1 minute



Slide 2: Agenda



Facilitator Notes

- Welcome
- Housekeeping, either orally or via chat
 - ▶ If needed, additional notes specific to the platform you're using (e.g., how to "raise your hand," how to post questions)
- Overview of agenda
- If this session is part of an ongoing series, you may choose to say, "welcome back," "thank you for joining us again," etc.



Sample Script

"Welcome to Project Firstline. Thank you for joining us! Before we begin, a few housekeeping notes. We'll meet today for 20 minutes. Please keep your videos on, to the extent possible, and keep your microphone muted when you are not contributing to the discussion. It's great to see you all here today!

"Today, we're going to be talking about multi-dose vials. We'll talk specifically about why injection safety is so important, and about the things you can do to make sure you're using multi-dose vials safely."



Slide 3: Learning Objectives



Facilitator Notes

Provide an overview of the session's learning objectives.



Sample Script

"After today, you'll be able to recognize and describe the injection safety actions to take when you're using a multi-dose vial, and you'll understand why the actions are so important."

3. Video #1 and Discussion



9 minutes (video 6:08)



Slide 4: Why injection safety matters for multi-dose vials



Facilitator Notes

Note that this session will answer many of their questions and consider explaining that any questions that aren't answered will receive follow-up.



Sample Script

"We're going to begin by talking about why injection safety matters so much for multi-dose vials."



Slide 5: Definitions



Facilitator Notes

- Either allow time for participants to read the definitions themselves or read them aloud.
- **CDC source for the definitions: Multi-dose vials:** https://www.cdc.gov/injectionsafety/providers/provider_faqs_multivials.html



Sample Script

“But first, let’s start with some vocabulary. Here is the definition from the CDC for multi-dose vials.”



Slide 6: Video: How Do I Safely Use a Multi-Dose Vaccine Vial? Part 1



Facilitator Notes

- Access the video here:

CDC Website: <https://www.cdc.gov/infectioncontrol/projectfirstline/videos/EP8a-MDVP1-LowRes.mp4>



OR

Project Firstline YouTube Playlist: https://www.youtube.com/watch?v=bRt_FWrpEuQ&list=PLvrp9iOILTOZQGtDnSDGViKDdRtlc13VX&index=9

- If you choose, rather than watching the entire video, you may consider not showing it, or showing an excerpt from it, and leading discussion using the next slides and the [Content Outline](#) for Episode 8, Part 1 of *Inside Infection Control*.



Sample Script

“Now that we’ve defined multi-dose vials, let’s begin by watching a CDC Project Firstline video from Dr. Abby Carlson. She’s going to explain why injection safety is so important for multi-dose vials.”



Slide 7: Multi-dose vials are different



Facilitator Notes

- This slide has animations for the second column. When you advance to the slide, only the first column will appear.
- After you introduce the message that multi-dose vials are different from single-dose vials, ask participants to share answers to the question “**Why?**”
- After they provide responses, use the animation to reveal the answers.



Sample Script

“Multi-dose vials are different from single-dose vials in several ways and require important injection safety actions. **Can you share some of the reasons you heard?**”

(Pause for responses, then advance to reveal second column.)

“Thank you. That’s right. Multi-dose 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. It is important to take injection safety actions to reduce the chance of contamination and protect patients.”



Slide 8: Contaminated vaccines cannot be used



Facilitator Notes

- This slide has animations for the second column. When you advance to the slide, only the first column will appear.
- After you introduce the Key Message, ask participants to share answers to the question “**Why?**”
- After they provide responses, use the animation to reveal the answers.



Sample Script

“One of the other key messages that we heard from Dr. Carlson is that contaminated vaccines cannot be used. If a needle or syringe is reused or dirty and goes into the vial, anything that’s on the needle or syringe will get into the vial and contaminate the rest of the vaccine inside. If the vaccine is contaminated, it can’t be used anymore, and it has to be thrown away. **Why does this matter?**”

(Pause for responses.)

“That’s right. If a multi-dose vial is contaminated by a used needle or syringe, every patient who gets an injection from that vial after the contamination occurs could get a disease like hepatitis or HIV. Some patients have even died from hepatitis after getting a contaminated injection. If a contaminated vial is used, public health authorities need to be notified right away. That’s because everyone who got a dose from that vial has to be contacted and followed so that they get the information about what happened and so they can be tested to find out whether they got infected. And finally, of course – we don’t want to throw away vaccine that could have been given to patients.”

4. Video #2 and Discussion



7 minutes (video 3:28)



Slide 9: Injection Safety for Using Multi-Dose Vials



Facilitator Notes

- Introduce short, animated video on using multi-dose vials safely.
- You may choose, if time permits, to view Episode 8b of *Inside Infection Control*.



Sample Script

“Now that we understand why injection safety actions for multi-dose vials are so important, let’s dive deeper into what those actions are. Now we’re going to watch a short, animated video: How Do I Safely Use a Multi-Dose Vaccine Vial?”



Slide 10: Video: Use multi-dose vials safely



Facilitator Notes

- Show this 3.5-minute video about how to use multi-dose vials safely at one of the following links:



CDC Website:

<https://www.cdc.gov/infectioncontrol/projectfirstline/videos/MultiDoseVial-LowRes.mp4>

OR

Project Firstline YouTube Playlist: <https://bit.ly/MDVSafetyTips>

- If you would prefer a longer video, you can access the *Inside Infection Control* video with Dr. Abby Carlson here:



CDC Website:

<https://www.cdc.gov/infectioncontrol/projectfirstline/videos/EP8b-MDVP2-LowRes.mp4>

OR

Project Firstline YouTube Playlist: bit.ly/MultiDoseVialPt2



Slide 11: Injection safety



Facilitator Notes

Link the content from the video to the next discussion.



Sample Script

“As you just heard, there are a few things to remember for injection safety when you’re using multi-dose vials.”



Slide 12: Prepare the vial



Facilitator Notes

- The next few slides are an opportunity to interact with your group, and to reinforce the reasons why the injection safety actions are important.
- You may ask participants to come off mute to answer, or respond in the chat, or a combination of both.
- If your group is large, consider asking participants to respond in the chat.
- These slides have animations. When you advance to the slide, only the prompt will appear.
- After you introduce the question/prompt, ask participants to share their answers to the question, “**Why?**”
- After they share responses, use the animation to reveal the answers.



Sample Script

“Let’s review some of these actions. **First, where should multi-dose vials be prepared?**”

(Pause for responses. Trigger animation.)

“That’s right. Always prepare a multi-dose vial in a space that is clean and away from patients where you can safely draw up the doses and prepare the vaccine. Never bring multi-dose vaccine vials into patient care spaces, like a vaccination station where the patient is getting the shot or into a patient room.

“**Why is that?**” *(Pause for responses.)* “Yes, because bringing a multi-dose vial into a patient care space increases the chances that someone might mistakenly put a used needle or syringe into the vial and contaminate the vial without realizing it.

“Remember that, before you touch any vials, clean your hands with alcohol-based hand sanitizer or soap and water. This keeps the germs on your hands from getting into the vial, especially the top area where you’re going to stick the needle in.”



Slide 13: Check the vial



Sample Script

“What do you want to check before using the vial?”

(Pause for responses. Trigger animation.)

“That’s right. Check the label to make sure the vial is a multi-dose vial, and that it is not expired or beyond-use. If it’s expired or beyond its use date, do not use it.”

“It’s also important to look at the vaccine to make sure it looks right. If it doesn’t or you are not sure, do not use it. You can check the instructions from the vaccine maker to find out what the vaccine is supposed to look like. Any unusual color or cloudiness is concerning.”



Slide 14: Disinfect the top of the vial



Sample Script

“Why should you disinfect the top of the vial before inserting the needle?”

(Pause for responses. Trigger animation.)

“That’s right. 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.”



Slide 15: Access the vial



Sample Script

“What do you need to do the first time a vial is opened?”

(Pause for responses. Trigger animation.)

“Yes. Make sure you write the time and date in the appropriate space on the label. Follow the vaccine maker’s instructions for how long you can use the vaccine after you first access it, and when it should be thrown away.”



Slide 16: Vaccine in the vial



Sample Script

“What do you do if there is a little bit of vaccine left in a vial, but it’s not enough for a full dose?”

(Pause for responses. Trigger animation.)

“That’s right. You have to throw it away. We can never combine doses from different vials to make a full dose for someone or give someone less than a full dose.”



Slide 17: Handout: *How Do I Safely Use a Multi-Dose Vaccine Vial?*



Facilitator Notes

- Depending on the delivery of this training, you may share the handout with participants in one of several ways: emailing PDF copies, providing a link to the PDF hosted on your organization’s website or Project Firstline’s website, or downloading the document through your webinar platform.
- Invite participants to share what they learned during the session.
- Invite additional, remaining questions.
- If the answers are information that is already included in this session, please respond.
- If the questions address content that is not covered in this session, please do not attempt to answer the question. Instead, take note of the questions and consult with CDC resources to follow up with answers after the session.



Sample Script

“This is for you to keep, use, and share!”

(Distribute the handout, How Do I Safely Use a Multi-Dose Vaccine Vial?)

“Take another minute to make sure all of these steps make sense to you. **Are there any questions about any of the steps?**”

(Address questions as appropriate.)



Slide 18: One Needle, One Syringe, Only One Time



Facilitator Notes

- Share additional CDC injection safety resources.



Sample Script

“That was great – you did a great job! If you would like more information or resources about the importance of using a brand-new, sterile needle and syringe, explore CDC’s resources about injection safety and their “One and Only” injection safety campaign. These include FAQs, checklists, patient handouts, posters, and videos about injection safety in clinical practice.”

5. Reflection



3 minutes



Slide 19: Reflection



Facilitator Notes

- Encourage participants to reflect on the content of the session, and how they will put their knowledge into practice.



Sample Script

“Let’s use our last few minutes together to reflect on what we’ve learned and think about how we can put what we’ve learned into practice.”



Slide 20: Key Takeaways



Facilitator Notes

- Review key takeaways.
- You may choose to revisit discussion points or questions that arose during the session.



Sample Script

"I hope you enjoyed today's conversation. I've captured some key takeaways here, which you can review at your leisure after the session today."



Slide 21: Applying What You Learned



Facilitator Notes

- Encourage participants to describe how they will use multi-dose vials safely. They may come off mute and speak, or type in the chat, or both.
- As appropriate, make connections between participants' responses and the material from the session, particularly the "why" behind the injection safety actions.



Sample Script

"You've learned a lot today. I'd like you to identify one thing you'll need to do, or continue to do, in your practice to make sure you're using multi-dose vials safely."



Slide 22: Resources and Future Training Sessions



Facilitator Notes

- Share additional resources from Project Firstline and CDC.
- Explain how participants can reach you, by the means of your choosing, and how they can reach Project Firstline.
- If this session is part of a series, you may choose to describe the themes of upcoming sessions.



Sample Script

"That's great, thank you. We covered a lot today, and there is still more to learn. You can keep exploring these topics on your own using the resources on this slide. You can also follow us on social media."

(If this session is part of a series) "Next time, we will cover [insert next training topic]."



Slide 23: Feedback Form



Facilitator Notes

Explain how to access the feedback form.



Sample Script

“And, finally, please let us know how you enjoyed today’s session by completing the following feedback form. Thanks again for joining us today.”

After the Session



Send list of participant questions compiled during this session to ProjectFirstline@cdc.gov.



10-Minute Session Plan

1. Session Start



Slide 1: Opening Slide

Participants log in and get settled.

2. Agenda and Learning Objectives



Slide 2: Agenda



Facilitator Notes

- Welcome
- Housekeeping, either orally or via chat
 - ▶ If needed, additional notes specific to the platform you're using (e.g., how to "raise your hand," how to post questions)
- Overview of agenda
- If this session is part of an ongoing series, you may choose to say, "welcome back," "thank you for joining us again," etc.



Sample Script

"Welcome to Project Firstline. Thank you for joining us! Before we begin, a few housekeeping notes. We'll meet today for 10 minutes. Please keep your videos on, to the extent possible, and keep your microphone muted when you are not contributing to the discussion. It's great to see you all here today!

"Today, we're going to be talking about multi-dose vials. We'll talk specifically about why injection safety is so important, and about the things you can do to make sure you're using multi-dose vials safely."



Slide 3: Learning Objectives



Facilitator Notes

Provide an overview of the session's learning objectives.



Sample Script

“After today, you’ll be able to recognize and describe the injection safety actions to take when you’re using a multi-dose vial, and you’ll understand why the actions are so important.”

3. Video and Discussion



Slide 4: Definitions



Facilitator Notes

- Either allow time for participants to read the definitions themselves or read them aloud.
- **CDC source for the definitions: Multi-dose vials:** https://www.cdc.gov/injectionsafety/providers/provider_faqs_multivials.html



Sample Script

“Let’s start with some vocabulary. Here is the definition from the CDC for multi-dose vials.”



Slide 5: Multi-dose vials are different



Facilitator Notes

- This slide has animations for the second column. When you advance to the slide, only the first column will appear.
- After you introduce the message that multi-dose vials are different from single-dose vials, ask participants to share answers to the question “**Why?**”
- After they provide responses, use the animation to reveal the answers.



Sample Script

“Multi-dose vials are different from single-dose vials in several ways and require important injection safety actions. **Does anyone know what those might be?**”

(Pause for responses, then advance to reveal second column.)

“Thank you. That’s right. Multi-dose 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. It is important to take injection safety actions to reduce the chance of contamination and protect patients.”



Slide 6: Contaminated vaccines cannot be used



Facilitator Notes

- This slide has animations for the second column. When you advance to the slide, only the first column will appear.
- After you introduce the Key Message, ask participants to share answers to the question “**Why?**”
- After they provide responses, use the animation to reveal the answers.



Sample Script

“Contaminated vaccines cannot be used. If a needle or syringe is reused or dirty and goes into the vial, anything that’s on the needle or syringe will get into the vial and contaminate the rest of the vaccine inside. If the vaccine is contaminated, it can’t be used anymore, and it has to be thrown away. **Why does this matter? Any thoughts?**”

(Pause for responses.)

“That’s right. If a multi-dose vial is contaminated by a used needle or syringe, every patient who gets an injection from that vial after the contamination occurs could get a disease like hepatitis or HIV. Some patients have even died from hepatitis after getting a contaminated injection. If a contaminated vial is used, public health authorities need to be notified right away. That’s because everyone who got a dose from that vial has to be contacted and followed so that they get the information about what happened and so they can be tested to find out whether they got infected. And finally, of course - we don’t want to throw away vaccine that could have been given to patients.

“Now that we understand why injection safety actions for multi-dose vials are so important, let’s dive deeper into what those actions are. We’re going to watch a short, animated video: How Do I Safely Use a Multi-Dose Vaccine Vial?”



Slide 7: Video: Use multi-dose vials safely



Facilitator Notes

- Show this 3.5-minute video about how to use multi-dose vials safely at one of the following links:



CDC Website:

<https://www.cdc.gov/infectioncontrol/projectfirstline/videos/MultiDoseVial-LowRes.mp4>

OR

Project Firstline YouTube Playlist: <https://bit.ly/MDVSafetyTips>

- If you would prefer a longer video, you can access the *Inside Infection Control* video with Dr. Abby Carlson here:



CDC Website:

<https://www.cdc.gov/infectioncontrol/projectfirstline/videos/EP8b-MDVP2-LowRes.mp4>

OR

Project Firstline YouTube Playlist: bit.ly/MultiDoseVialPt2



Sample Script

“Now that we understand why injection safety actions for multi-dose vials are so important, let’s dive deeper into what those actions are. We’re going to watch a short video: *How Do I Safely Use a Multi-Dose Vaccine Vial?*”



Slide 8: Handout: *How Do I Safely Use a Multi-Dose Vaccine Vial?*



Facilitator Notes

- Depending on the delivery of this training, you may share the handout with participants in one of several ways: emailing PDF copies, providing a link to the PDF hosted on your organization’s website or Project Firstline’s website, or downloading the document through your webinar platform.
- Invite participants to share what they learned during the session.
- Invite additional, remaining questions.
- If the answers are information that is already included in this session, please respond.
- If the questions address content that is not covered in this session, please do not attempt to answer the question. Instead, take note of the questions and consult with CDC resources to follow up with answers after the session.



Sample Script

“This handout is for you to keep, use, and share!”

(Distribute the handout, How Do I Safely Use a Multi-Dose Vaccine Vial?)

“Take another minute to make sure all of these steps make sense to you. **Are there any questions about any of the steps?**”

(Address questions as appropriate.)



Slide 9: Key Takeaways



Facilitator Notes

- Review key takeaways.
- You may choose to revisit discussion points or questions that arose during the session.



Sample Script

“I hope you enjoyed today’s conversation. I’ve captured some key takeaways here, which you can review at your leisure after the session today.”



Slide 10: Resources and Future Training Sessions



Facilitator Notes

- Share additional resources from Project Firstline and CDC.
- Explain how participants can reach you, by the means of your choosing, and how they can reach Project Firstline.
- If this session is part of a series, you may choose to describe the themes of upcoming sessions.



Sample Script

“That’s great, thank you. We covered a lot today, and there is still more to learn. You can keep exploring these topics on your own using the resources on this slide. You can also follow us on social media.”

(If this session is part of a series) “Next time, we will cover [insert next training topic].”



Slide 11: Feedback Form



Facilitator Notes

Explain how to access the feedback form.



Sample Script

“And, finally, please let us know how you enjoyed today’s session by completing the following feedback form. Thanks again for joining us today.”

After the Session



Send list of participant questions compiled during this session to ProjectFirstline@cdc.gov.

Appendix: Content Outlines



Episode 8a Title: *How Do I Safely Use a Multi-Dose Vaccine Vial? Part 1*

Content summary: Multi-dose vials are different from single-dose vials in several ways, and there are important infection control actions that must be taken when using them to keep patients safe.

Topic: Injection Safety

Learning Objectives

After viewing this video, participants will be able to:

- Discuss at least two (2) reasons why injection safety actions are important when using multi-dose vials.
 - ▶ Multi-dose vaccine vials are accessed more than once to pull out individual doses for separate patients, which creates an opportunity for spreading infections.
 - ▶ If a needle or syringe is reused or gets dirty and goes into a vial, anything that is on the needle or syringe can end up in the vial and contaminate it. If the vial is contaminated, it must be thrown away.
 1. If it's not thrown away, patients who get an injection from that vial after the contamination occurs could get sick or die from diseases that spread this way, like hepatitis or HIV.
 2. Any time a vial that is possibly contaminated is used for a patient, public health authorities must be immediately notified and everyone who got a dose from that vial has to be contacted and followed so they can be tested to find out whether they got infected.
 - ▶ We don't want to waste vaccine by contaminating it; we want it to be available for patients.

Key Educational Takeaways

- Multi-dose vials are different from single-dose vials in several ways and require important injection safety actions.
 - ▶ Multi-dose vaccine vials are more likely to get contaminated than single-dose vials because needles are usually put into the bottle many times to pull out individual doses for separate patients.
 - ▶ The process of accessing the vial more than once creates an opportunity for spreading infections.
- If a needle or syringe is reused or gets dirty and goes into a vial, anything that is on the needle or syringe can end up in the vial and contaminate it.
- If the vial is contaminated, it can't be used anymore and must be thrown away.
 - ▶ We don't want to waste vaccine by contaminating it; we want it to be available for patients.
 - ▶ If a patient gets an injection from that vial after the contamination occurs, they could get sick or die.

- Diseases like hepatitis and HIV can spread this way.
- This happens each year in the US and can be avoided.
- If a patient gets an injection from a vial that could be contaminated, then public health authorities must be immediately notified, and everyone who got a dose from that vial has to be contacted and followed so they can be tested to find out whether they got infected.

Content Outline

- Many vaccines, including the current vaccines for COVID-19, come in small bottles with more than one dose of vaccine inside.
 - ▶ They are known as multiple-dose vials, or “multi-dose” vials.
 - ▶ Multi-dose vials can be used to vaccinate more than one patient.
- Multi-dose vials are different from single-dose vials.
 - ▶ Multi-dose vaccine vials are more likely to get contaminated than single-dose vials because needles are usually put into the bottle many times to pull out individual doses for separate patients.
 - ▶ Some medicines, like insulin, come in multi-dose vials that only one patient ever uses, so while they are not without risks, the infection control concerns for them are different because you’re not using them for multiple patients.
- The process of accessing a multi-dose vial more than once creates an opportunity for spreading infections.
- If a needle or syringe is reused or gets dirty in any way and goes into a vial, anything that is on the needle or syringe can get into the vial and contaminate the rest of the vaccine inside.
 - ▶ This problem can be avoided by using good injection safety practices.
- If a vial gets contaminated, it has to be thrown away, which is a problem because we don’t want to throw away vaccine that could have been given to patients.
- If a patient gets an injection from a contaminated vial, they could get sick or die.
 - ▶ Diseases like hepatitis and HIV can spread this way.
 - ▶ This concern isn’t just about COVID-19: every year in the US, patients get sick or die from contaminated medication or vaccine from multi-dose vials, and it can be prevented by using good injection safety practices.
- If a vial that is possibly contaminated is used for a patient, then everyone who got a dose from that vial has to be contacted and followed so they can be tested to find out whether they got infected.



Episode 8b Title: *How Do I Safely Use a Multi-Dose Vaccine Vial? Part 2*

Content summary: There are important injection safety actions to take when using multi-dose vials to make sure you're using them safely for patients.

Topic: Injection Safety

Learning Objectives

After viewing this video, participants will be able to:

- Describe at least four (4) injection safety steps to take when using a multi-dose vaccine vial.
 - ▶ Always prepare a multi-dose vial in a space that is clean and away from patients where you can safely draw up the doses and prepare the vaccine.
 - ▶ Clean your hands before you touch the vial.
 - ▶ Check the label to make sure that it is a multi-dose vial, and that it isn't expired or beyond its use date.
 - ▶ Look at the vaccine and make sure it looks like the vaccine maker says it should look.
 - ▶ Always use a brand-new, sterile needle and a brand-new, sterile syringe for every vaccine dose.
 - ▶ Always disinfect the top of the vial thoroughly with an alcohol prep pad, and let it dry, before you stick the needle in to draw up a dose of vaccine.
 - ▶ Follow the vaccine maker's instructions for how long you can use the vaccine after you first access the vial, and when it should be thrown away.
 - If there is a full extra dose in the vial, you can use that dose on another patient.
 - If there is extra vaccine in the vial, but not enough for a full extra dose, throw the vial away: do not combine vaccine from multiple vials into one dose for a patient.
 - ▶ Follow the vaccine maker's instructions for how to store vaccine.

Key Educational Takeaways

- There are several important injection safety actions to take when using multi-dose vials.
- Always prepare a multi-dose vial in a space that is clean and away from patients where you can safely draw up the doses and prepare the vaccine.
- Before you touch any vials, clean your hands with alcohol-based hand sanitizer or soap and water.
- Check the label of the vial to make sure it is a multi-dose vial, and that it is not expired or beyond its use date.
- Look at the vaccine to make sure it looks the way the instructions from the vaccine maker say it's supposed to look.
- Always use a brand-new, sterile needle and a brand-new, sterile syringe for every vaccine dose.
- Always disinfect the top of the vial with an alcohol prep pad before you insert the needle.

- Follow the vaccine maker's instructions for how long you can use the vaccine after you first access it, and when it should be thrown away.
 - ▶ If there is an extra full dose of vaccine left in a vial, and you are still within the time that it can be used, you can use that dose on a patient.
 - ▶ If there's a little bit of vaccine remaining in the vial, but not enough for a full dose, throw the vial away.
- Follow the vaccine maker's instructions for how to store vaccine.

Content Outline

- There are several important injection safety actions to take when using multi-dose vials.
- Always prepare a multi-dose vial in a space that is clean and away from patients where you can safely draw up the doses and prepare the vaccine.
 - ▶ Never bring multi-dose vials into patient care spaces.
 - ▶ Preparing multi-dose vials in a separate space helps ensure they are handled correctly and decreases the chance for mistakes.
 - ▶ Bringing a multi-dose vial into a patient care space increases the chances that someone might mistakenly put a used needle or syringe – one that's already been used on a patient – into the vial and contaminate the vial without realizing it.
- Before you touch any vials, clean your hands with alcohol-based hand sanitizer or soap and water.
 - ▶ This keeps the germs on your hands from getting into the vial, especially the top area where you're going to stick the needle in.
- Check the label to make sure the vial is a multi-dose vial.
- Check the label to make sure the vaccine is not expired or beyond its use date.
 - ▶ If it's expired or beyond its use date, do not use it.
 - ▶ Past those dates, the vaccine could be weaker and not protect your patient as well.
- Look at the vaccine to make sure it looks the way the instructions from the vaccine maker say it's supposed to look.
 - ▶ If it doesn't, or you are not sure, don't use it.
- Always use a brand-new, sterile needle and a brand-new, sterile syringe for every vaccine dose.
 - ▶ Just using a new needle isn't enough: you must use a new needle and a new syringe.
 - Things that are dirty in the syringe can get into the vial when you draw up vaccine.
 - ▶ If you're not sure if a needle or syringe is dirty or used, get a new one.
- Always disinfect the top of the vial before you insert the needle.
 - ▶ Use a sterile alcohol prep pad.
 - ▶ Clean around the entire space where the needle could go in.
 - ▶ Let the alcohol dry before you insert a needle into the vial.
 - ▶ Disinfecting the top of the vial kills any germs on the top, so you don't push germs into the vial when you insert the needle.

- When the vial is stuck with a needle, we call this “accessing the vial.”
 - ▶ Even if it’s just to prepare the vaccine, the first time the vial is accessed, make sure you write the time and date in the appropriate space on the label.
- Follow the vaccine maker’s instructions for how long you can use the vaccine after that first access, and when it should be thrown away.
- If you get to the end of the vial and it’s still within the time that it can be used, and there is a full extra dose left in the vial, you can use that dose on another patient
- If there’s a little bit of vaccine remaining in the vial, but not enough for a full dose, throw the vial away.
 - ▶ Never mix, or “pool” or “marry,” vaccine from different vials to put together a vaccine dose for a patient
 - Pooling increases the risk of contamination
- Follow the vaccine maker’s instructions for how to store vaccine.



**PROJECT
FIRSTLINE**

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

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