

Pfizer COVID-19 vaccine: dilution of multidose vials and preparation of 0.3mL dose syringes

1 March 2021

OFFICIAL

Important Information

- Use a new, sterile 23G or 25G 25mm length needle (or 23G/25G 38mm needle for people who are obese) and 1 mL tuberculin syringe (preferably Luer lock if available) to draw up each new 0.3 mL dose by re-puncturing the bung.
- Ensure each re-puncture occurs at a different site on the bung.
- Recap the clean needle using either a single-handed technique, forceps, or a suitable protective guard designed for re-sheathing. The needle must be properly recapped, and the sheath must not be held in the fingers.
- NB: In the event of a needle stick injury during recapping, the needle and syringe must be discarded and incident recorded.

Consumables required for each Pfizer multi dose vial prepared:

- 1x sodium chloride 0.9% 10mL ampoule
- 1x 3mL (Luer lock) syringe 3mL
- 7x single use 70% alcohol swabs
- 6x 1mL tuberculin (Luer lock) syringe 1mL
- 1x Red Combi-stopper
- 1x injection tray
- 7x 23G or 25G 25mm length needle (or 23G/25G 38mm needle for people who are obese)

Throughout the procedure, continue to perform a visual check of the solution and check for contamination. Quarantine the vial and dose syringes if particulates or discolouration are present.

Please see recommended step by step process below

1		<p>Initial set up for aseptic prep space. Required consumables and vial with 'use by' marked</p> <ul style="list-style-type: none"> • Performed hand hygiene and don appropriate PPE. • Prepare aseptic workspace and assemble required consumables. • Mark dilution / use by date and time – this is to be done prior to the vial being handed to the technician for preparation Suggestion to add small vial label with “Dilutant added Date___ Time____. Discard 6hrs after dilution 6-30°C”
2		<p>Concentrated vial being inverted</p> <ul style="list-style-type: none"> • Slowly invert the vial 10 times to thoroughly mix the concentrate suspension, DO NOT SHAKE.
3		<p>Vial bung being wiped</p> <ul style="list-style-type: none"> • Wipe the vial stopper with a single use 70% alcohol swab and allow to dry.
4		<p>3mL syringe attached to sodium chloride polyamp</p> <ul style="list-style-type: none"> • Draw up 1.8 mL of sodium chloride 0.9% into a 3mL syringe by attaching syringe directly to polyamp. Attach and prime a needle.
5		<p>3mL syringe puncturing vial</p> <ul style="list-style-type: none"> • Slowly add the 1.8mL of sodium chloride 0.9% down the side of the vial ensuring entire contents transferred. • Equalise the vial pressure by withdrawing 1.8 mL of air into the empty diluent syringe before removing the needle from the vial. • Place diluent ampoule and 3mL syringe in the injection tray for checking.

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**Diluted vial being inverted**

- Slowly invert the vial 10 times to mix contents thoroughly, **DO NOT SHAKE.**

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**Vial bung being wiped**

- Wipe the diluted vial stopper with a single use 70% alcohol swab and allow to dry.

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**1mL syringe with needle attached**

- Firmly attach a needle to a 1mL syringe, draw up 0.3mL of air.

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**1mL syringe/ needle puncturing vial**

- Puncture the bung of the diluted vial, equalising pressure by injecting the air into the vial.

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**Inverted vial + 1mL syringe / needle withdrawing dose**

- Draw up 0.3 mL of the diluted vaccine into the 1mL syringe
- Adjust to remove air bubbles.
- Check volume withdrawn is 0.3mL.

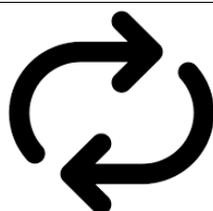
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Safely recapping a 1mL syringe / needle

- Withdraw the needle from the vial and carefully recap the clean needle using either a single-handed technique, forceps, or a suitable protective guard designed for re-sheathing. The needle must be recapped, and the sheath must not be held in the fingers.
- Label syringe to include the following:
 - Date and Time of preparation
 - Name of preparer
 - Name and amount/volume of vaccine
 - Diluent
 - Batch number
 - Date and Time that diluent was added
- Place dose in injection tray
- NB: In the event of a needle stick injury during recapping, the needle and syringe must be discarded and incident recorded.

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Repeat Steps 7 to 11

- Steps 7 to 11 may be repeated up to a further five times to produce a total of six syringes from each diluted vial.
- Each time the vial bung is punctured it must be in a different location to previous points of puncture on the bung.
- Each syringe must be labelled

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Applying a red cap to an under filled 1mL syringe

- If the amount of vaccine remaining in the vial for preparation of the sixth syringe cannot provide a full dose of 0.3 mL it is not to be used.
- Remove needle from 6th syringe and replace with red combi-stopper.

(NB: some services will discard the 6th syringe at this point.)

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Syringe tray with 5 doses, plus partial 6th (red cap) plus vial plus dilutant /3mL syringe

- Label all syringes
- Place all prepared syringes and empty vaccine vial in injection tray for checking before releasing for administration.
- Discard the 6th syringe prior to sending for administration.

To receive this document in another format, phone 1300 651 160, using the National Relay Service 13 36 77 if required, or email COVIDvaccination@dhhs.vic.gov.au

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