



COVID-19 Vaccines and Low Dead Volume (LDV) Syringes

PROTECTING AND EMPOWERING CANADIANS
TO IMPROVE THEIR HEALTH



Change in doses per vial of Pfizer-BioNTech vaccine

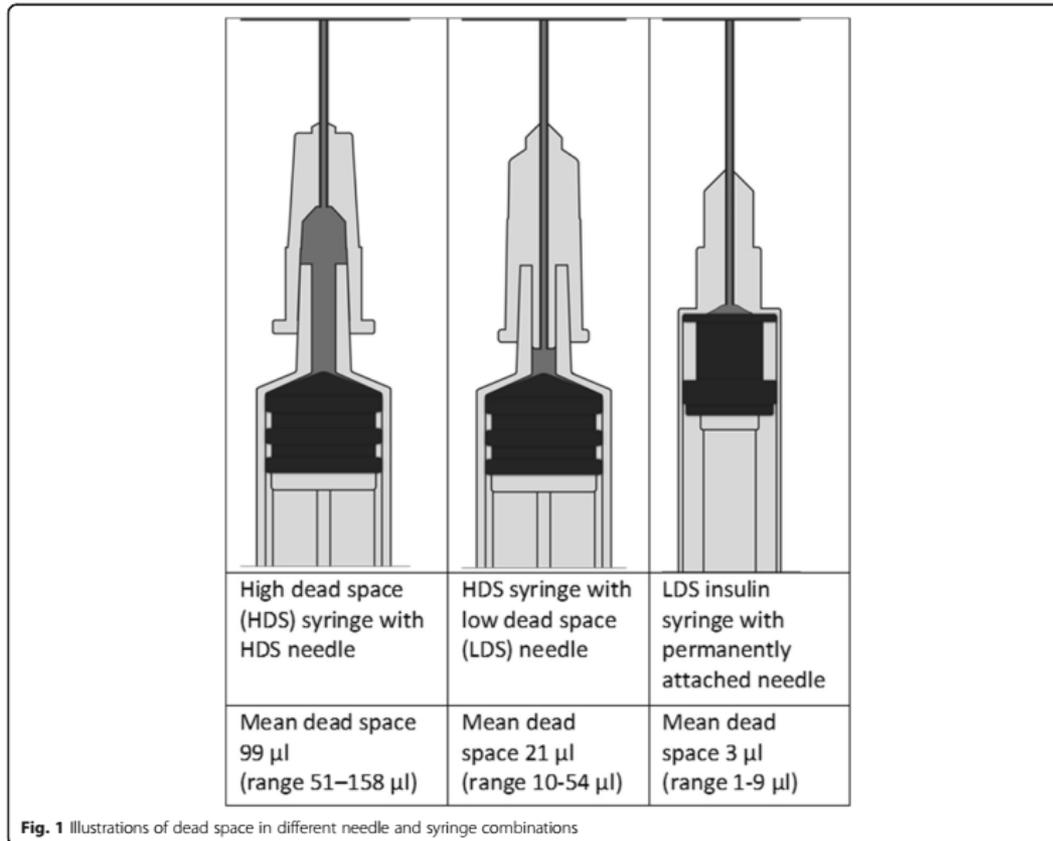
- Health Canada has authorized a change in the number of doses per vial in the Pfizer-BioNTech product **from 5 to 6**
- The volume of vaccine in the vial is **0.45 mL** to which **1.8 mL** of normal saline diluent is added for a total of **2.25 mL**
- Each dose of Pfizer-BioNTech vaccine is 0.3 mL so should be able to obtain 6 doses as long as:
 - Diluent is added at 1.8 mL and each dose is 0.3 mL
 - Little vaccine is left in the injection equipment
 - Little wastage in drawing up

Methods to support withdrawing 6 doses per vial

- Diluent is added at 1.8 mL and each dose is 0.3 mL
 - Use of a 1.0 mL syringe will help with drawing up 0.3 mL dose
- Little vaccine is left in the injection equipment
 - Use of low dead-volume syringes or needles will limit the volume of vaccine left in the syringe or needle
 - A sufficient supply of low dead space syringes has been secured
- Little wastage in drawing up
 - Keep needle in vial when adjusting dose or expelling air bubbles
 - Consistent health care provider dedicated to drawing up vaccine, if possible

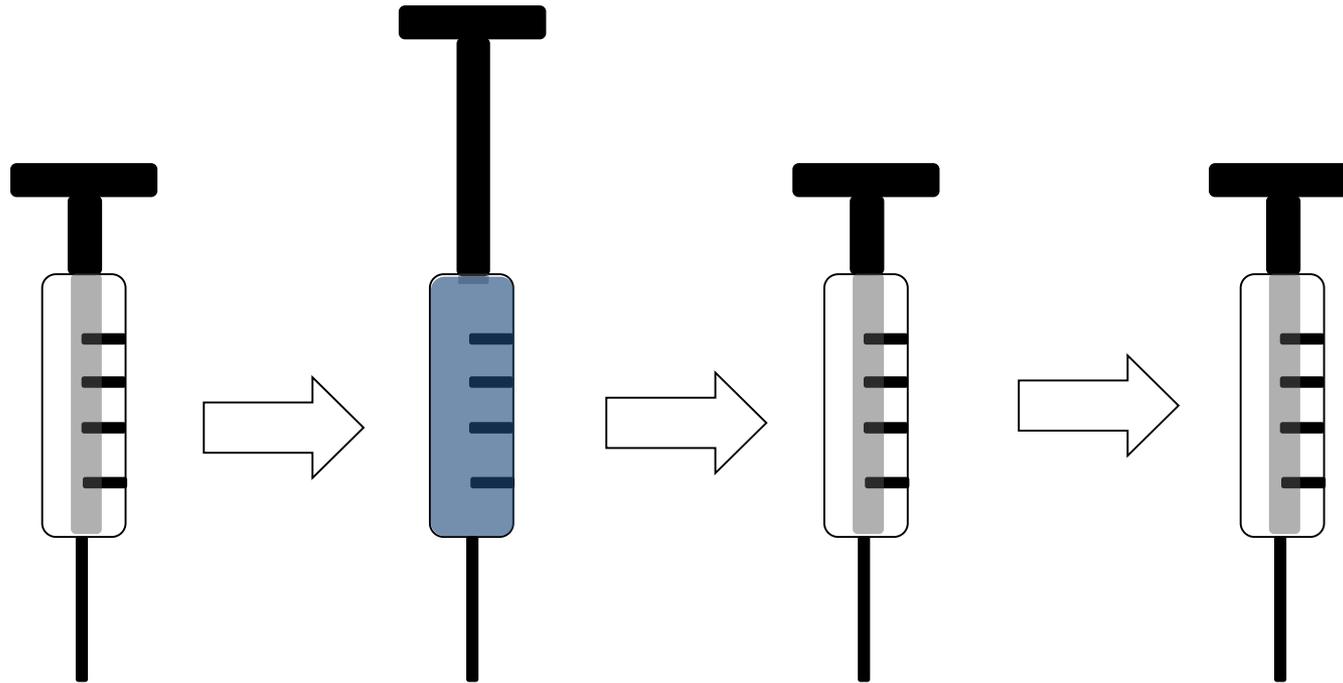
Low Dead Volume Syringes

Low Dead Volume (also called low dead-space) is the amount of fluid remaining within the syringe and needle after injection is completed



In the absence of the LDV syringes a regular 1ml syringe or a 3 ml syringe is still usable. Vaccine should not be withheld in the absence of the LDV syringes

Process to Assess the Dead Volume of a Syringe:



Weigh Empty
Syringe
(A)

Fill up whole
volume with
water

Empty water

Reweigh
syringe
(B)

$$\text{Dead Volume} = \text{Reweighed Syringe (B)} - \text{Empty Syringe (A)}$$