Preparing the AstraZeneca COVID-19 Vaccine

About the vaccine
- AstraZeneca COVID-19 Vaccine (ChAdOx1-S) solution for injection is available in two presentations:
  - 8 doses of 0.5mL in a 4mL multi-dose vial (imported)
  - 10 doses of 0.5mL in a 5mL multi-dose vial (some imported and all locally made)
- Each vial contains at least the number of doses stated, and it is normal for liquid to remain in the vial after withdrawing the final dose.
- The AstraZeneca COVID-19 vaccine does not require reconstitution or dilution.
- The liquid which appears as clear to slightly opaque and colourless to slightly brown. There are no visible particles within the multi-dose vial (MDV).
- Do not shake. Protect from light.

Storage and cold chain
Unopened
- The MDVs should be stored in their original outer packaging (carton) to protect them from light.
- The vaccine can be stored in cold chain conditions of +2°C to +8°C for a maximum of 6 months as per the expiry date printed on the vial. Do not freeze the vaccine.

Once opened, the MDV can be used until one of the following has been reached:
- 6 hours at room temperature up to 30°C
- 48 hours in the refrigerator (+2°C to +8°C)
- The vial can be re-refrigerated, but after first opening the cumulative storage time at room temperature must not exceed 6 hours, and the total cumulative storage time must not exceed 48 hours. After this time, the vial must be discarded.

Preparing the vaccine
Each dose should be used as soon as practical for each recipient. There are two options for vaccine preparation for pharmacies:

Single dose preparation
If doses will not be administered one after another then each dose should be withdrawn and then administered to a recipient before another dose is withdrawn from the vial for the next recipient later when required. This method is preferred when there is a single pharmacist preparing and administering the vaccine, or where doses are administered infrequently.

Multiple dose preparation
Where vaccine doses will be administered immediately one after another, such as during a vaccination clinic, it is possible to withdraw multiple doses consecutively from one vial in the preparation area. This method may be adopted where one pharmacist is dedicated to administering the vaccine, while another staff member prepares the vaccines.

Each filled syringe must be stored with a capped administration needle and appropriately labelled as well as stored at the appropriate temperature and protected from the light. Pre-drawn doses in syringes should be used within:
- One hour if kept at room temperature
- Six hours at 2°C to 8°C
These storage recommendations are to minimise the risk of infection.
| Step 1 | Perform hand hygiene.  
NOTE: Gloves are not recommended for most vaccination preparation and administration and are not required for the COVID-19 vaccine unless the person administering the vaccine is likely to come into contact with potentially infectious body fluids or has open lesions on their hands. |
|---|---|
| Step 2 | Clean and disinfect the preparation area and procedure dish if being used.  
Disinfectant wipes should be discarded in a clinical waste bin. |
| Step 3 | Remove the required vaccine vial (only one at a time) and check the temperature while doing so from the cold chain storage system used.  
Do not shake the vaccine.  
Perform a visual check of the solution in the vial and check for contamination. It should be:  
- Colourless to slightly brown  
- Clear to slightly opaque, and  
- Free of any particles.  
Check the expiry date of the vial and if applicable, the date and time that the vial was opened. DO NOT use if the time is beyond the maximum time indicated on the product information.  
If you are opening the vial for this first time, record the date and time on the vial, before opening it. |
| Step 4 | Perform hand hygiene. |
| Step 5 | Remove vial cap and wipe bung with a single-use 70% alcohol swab.  
|        | Allow a full 30 seconds to dry.  
|        | Discard swab into yellow waste bin. |

| Step 6 | Using aseptic technique, firmly attach a sterile needle to a sterile syringe.  
|        | Syringe: 
|        | A 2mL or 3mL syringe is recommended.  
|        | Needle:  
|        | • If preparing multiple doses at once, a drawing up needle should be used (19G or 21G)  
|        | • It may be acceptable to use the same needle to draw up and administer the vaccine (as seen in image). However there is a potential for a greater frequency of injection site reactions using this technique. |

<p>| Step 7 | Using aseptic technique, draw up 0.5mL of air into the empty syringe. |</p>
<table>
<thead>
<tr>
<th>Step 8</th>
<th>Puncture the bung of the vial, equalising pressure by injecting the air into the vial. When entering the vial multiple times, ensure that each re-puncture occurs at a different site on the bung.</th>
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<tbody>
<tr>
<td>Step 9</td>
<td>Invert vial and draw up 0.5 mL of the vaccine into the syringe. Any air bubbles should be removed prior to removing the needle from vial to avoid losing any vaccine dose. Check volume withdrawn is exactly 0.5mL.</td>
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<tr>
<td>Step 10</td>
<td>If preparing multiple doses for immediate administration, detach the syringe from the needle at this point, leaving the drawing up needle in the vial until all doses are extracted. Attach a new sterile syringe to the drawing up needle to withdraw each of the doses. If the amount of vaccine able to be drawn into the final syringe cannot provide a full dose of 0.5 mL, it is not to be used. It should be discarded in the clinical waste bin. Do NOT pool doses from multiple vials. If returning the vial to the cold chain storage, remove the needle. The vial can be re-refrigerated, but after first opening the cumulative storage time at room temperature must not exceed 6 hours, and the total cumulative storage time must not exceed 48 hours. After this time, the vial must be discarded.</td>
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### Step 11

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<tr>
<th>Single dose preparation</th>
<th>Multiple dose preparation for immediate administration</th>
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| Attach a new sterile injection needle (23G or 25G). Place a single immunisation ready for administration into a procedure dish or tray. Administer the dose as soon as possible after drawing up. | If multiple doses are being made up at once for immediate administration during an immunisation session, a clean and opaque container should be used and protected from the light and labelled clearly with:  
- The date and time doses were drawn.  
- The name of the person who prepared the doses  
- Vaccine name  
- Vial batch number  
- Expiry time of drawn doses  

Each prepared syringe within the container must also be appropriately labelled. Place the injection tray and its contents in a black bag to protect from light. Prepared vaccines must be used within:  
- One hour at room temperature  
- Six hours at 2°C to 8°C |

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