

Transportation of COVID-19 Vaccines

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Comirnaty (tozinameran) COVID-19 ('Pfizer adult/adolescent') vaccine

Management of onward transport

Management of Comirnaty (tozinameran) COVID-19 vaccine ('Pfizer adult/adolescent vaccine') dilute to use (concentrate) multidose for 12 years of age and over formulation vaccine onward transport beyond the initial point of delivery.

Purpose

This guideline describes the process of transporting Comirnaty (Pfizer) Adult/Adolescent Formulation vaccine from one clinic/facility to another using vehicle on ground, air or water beyond the initial point of delivery.

The document provides a range of options related to the transport and movement of the vaccine. The operational plan should be tailored to local circumstances.

Scope

Onward transport refers to transporting Comirnaty (Pfizer) Adult/Adolescent Formulation vaccine from one clinic/facility to another. Walking the vaccine within a facility or between adjacent buildings on a campus is not considered transport when it is for less than 15 minutes. ²

Responsibility

Staff transporting Comirnaty (Pfizer) Adult/Adolescent Formulation vaccine from one clinic/facility to another must follow this procedure. The vaccine should be transported by staff/couriers who are trained in the transport of vaccine or other products requiring cold chain monitoring. Systems must be in place for tracing and monitoring the vaccine and to ensure the delivery of the vaccines safely without excessive movement or agitation.

Overview and General Precautions

- The vaccine should be handled with care and protected as much as possible from shocks, drops and vibration.
- The transport container should be labelled prominently with "Fragile: Handle with Care, Do Not Drop, Temperature Sensitive" cautionary statements, and "Caution: Heavy" when transporting vaccines in portable refrigerators.
- Use "Do not refreeze" label for the vaccines stored at 2 to 8 °C, and "Keep frozen" label for the vaccines requiring storage at -80°C to -60°C or -25°C to -15°C.
- Vials should be stored in an upright position (i.e., standing up) during transportation.
- The transport containers including portable refrigerators should be secured upright (strapped/braced) in the vehicle when being transported to prevent unnecessary movement and an accident that might occur to injure the driver/passenger(s).
- The vaccine should be protected from being dropped.

- Protect the vaccine vials from light.
- Staff must record transport duration, including details at the individual vial level, on vial/carton labels and onward transport log.
- The temperature should be maintained and recorded for the duration of the transport per temperature range (+2°C to +8°C or -25°C to -15°C), ensuring that the transportation locations, dates and times, including the duration of time in transit are recorded.
 - A data logger, disposable cold chain monitor or minimum-maximum thermometer should be used to monitor temperatures.
 - Download the data logger/record minimum-maximum temperatures as soon as possible to ensure no "unwitnessed" excursions occurred while in transit.
 - Upon receipt, the vaccine should be inspected, inventoried and immediately placed into a vaccine fridge, noting on the storage unit temperature log the date and time of the vaccine delivery.
- Separate carriers should be used when transporting different brands/formulation of COVID-19 vaccine at the same time, where possible.
- Facilities transporting COVID-19 vaccines in ULT or freezer storage units should ensure that annual inspections (including temperature calibration) and regular maintenance is completed by a certified company.
- Infection prevention and control principles must be adhered to for all stages, including handling and storage.
- NSW Health sites should refer to the *COVID-19 Vaccine Redistribution Process – Flow Chart* on the SHEOC SharePoint.

Onward distribution of unopened vials

Onward Distribution of Unopened Vials of the Comirnaty (tozinameran) COVID-19 vaccine ('Pfizer adult/adolescent vaccine') dilute to use (concentrate) multidose for 12 years of age and over formulation vaccine

Packaging vials

Vials must be securely packaged during transport. This includes ensuring that they are in an upright position with packaging that prevents the vials from falling over and from exposure to excessive movement, shaking or agitation. See Appendix A for images of packaging.

Frozen State at Ultra-Low Temperature (ULT) (-80°C to -60°C) Transport

- Transport of the vaccine for storage at another facility can occur in the frozen state at ULT or at -25°C to -15°C as per recommendations below.
- If placed in an ULT portable unit (-80°C to -60°C) or in a freezer temperature portable unit (-25°C to -15°C), the vaccines can go back into an ULT unit.
- The ULT portable unit that will be storing the vaccines should be stabilised at the recommended temperature range prior to placing the vaccines into the unit.
- Closed-lid vial trays containing 195 vials removed from ULT frozen storage units may be at temperature up to 25°C for up to 5 minutes for transfer between ULT environments.
- Open-lid vial trays, or vial trays containing less than 195 vials removed from ULT frozen storage units may be at temperature up to 25°C for up to 3 minutes to remove vials or for transfer between ULT environments.
- After vial trays are returned to ULT frozen storage following temperature exposure up to 25°C, they must remain in ULT frozen storage for at least 2 hours before they can be removed again.

Frozen State at Freezer Temperature (-25°C to -15°C) Transport

- Air and water transport may occur in a frozen state at -25°C to -15°C.
- Do not transport on dry ice or below -50°C. Use of dry ice may subject vials to temperatures colder than -50°C.

- Any time in transport at this temperature should be counted towards the 2-week total cumulative time a vial can be stored/transported at this temperature range.
- Vials transported/stored at this temperature range may be returned to an ultra-cold storage unit. If a vial(s) begins to thaw or is stored at temperatures above -15°C, they should not be refrozen.
- Transport containers used for -25°C to -15°C temperature range should be packed as per the recommendations/specifications for the container (e.g., credo cubes, stirling coolers).
- Closed-lid vial trays containing 195 vials removed from frozen storage (-25°C to -15°C) may be at temperatures up to 25°C for up to 3 minutes.
- Open-lid vial trays or vial trays containing less than 195 vials removed from frozen storage (-25°C to -15°C) may be at temperatures up to 25°C for up to 1 minute.

Liquid State (+2°C to +8°C) Transport

- Vaccine cold chain management must comply with the National Vaccine Storage Guideline Strive for Five and NSW Health policy directive
- [PD2020_028 Vaccine Storage and Cold Chain Management](#).
- Unopened vaccine vials must not be transported for more than 12 hours of cumulative time.
- It is recommended that the vaccine is only transported at +2°C to +8°C once. Under exceptional circumstances, based on a risk assessment, the vaccine may be transported at +2°C to +8°C more than once. ²
- Do not transport the vaccine at room temperature.
- Do not refreeze the vaccine once defrosted to +2°C to +8°C.
- Do not pack vaccines that are at +2°C and +8°C with frozen vaccine vials.
- Do not allow thawed vaccines to come into contact with any frozen packs added to maintain temperature.
- The time in transit at +2°C to +8°C should be considered part of the 31 days allowed for storage at refrigerated temperatures, even if the vaccine was placed into the cooler frozen.
- Undiluted vaccine vials can be stored at up to 30 °C for 2 hours including thawing time. They must be diluted within 2 hours if they are exposed to room temperature (above 8°C) during transport.
- When the vaccine is placed into the cooler frozen, the time the vaccine vial was removed from frozen storage, and the beyond use date and time should be recorded on the 'Concentrate fridge temperature bag expiry label' – see [Management of COVID-19 Pfizer \(Comirnaty™\) vaccine from refrigerator to administration](#) at the time the vaccine is removed from frozen storage and be a total of no more than 31 days. The label should be placed directly on the vial as well as on the box/carrier transporting the vial.
- The unopened vials should be transported in a container that is labelled with:
 - Facility name and phone number
 - Quantity of vials
 - Colour coding to distinguish between the vaccines. NSW Health documents are coded blue for the Comirnaty (Pfizer) Adult/Adolescent Formulation vaccine, yellow for the Vaxzevria (AstraZeneca), green for the Spikevax (Moderna) and orange for Comirnaty (Pfizer) 5 to <12 Formulation.
- Separate carriers should be used when transporting the vials with different thawed dates and times at the same time, where possible.
- Transport in the largest configuration wherever possible, (e.g., box), avoiding individual vial distribution, while considering the minimum number of doses needed at the onwards location to avoid wastage. ²
- Prevent movement in the cooler by surrounding with dunnage (padding material) inside the container to minimise product movement during transport. At the same time, ensure that padding material allows space for air circulation to prevent temperature from rising.
- If transport is conducted at vial level, the vial should be placed upright in insulation and bubble wrap or similar padding to protect the product (e.g., wrapping the vial in bubble wrap, using a container as required, or using bubble wrap to fill the space of open-lid vial trays).

- The pack should be secured in the vehicle so that it does not move around. As much care as possible should be taken to minimize extra movement in the thawed state. Never place the cooler in the trunk of a vehicle.

Onward transport of open (punctured) vials or syringes

Onward transport of Open (Punctured) Vials or Syringes Comirnaty (tozinameran) COVID-19 vaccine ('Pfizer adult/adolescent vaccine') dilute to use (concentrate) multidose for 12 years of age and over formulation vaccine

While not recommended as routine practice, in exceptional circumstances diluted Comirnaty (Pfizer) Adult/Adolescent Formulation vaccine can be transported in a syringe or punctured vial. Once a vial has been punctured, the air pressure in the vial will have been changed and the potential for agitation (physical stress) of the mRNA in the vaccine is more likely.

Exceptional circumstances could include situations in which a few doses are needed to support the immunisation or series completion of small numbers of individuals residing in congregate settings (i.e., one or two residents) and for those who are home bound (e.g., those who may be unable to attend a community-based clinic due to physical limitations). When at all possible, it is recommended that unpunctured vials of vaccine be transported and the entire vial of vaccine administered in one location rather than transporting syringes filled with vaccine.

In exceptional circumstances, when transporting a syringe/punctured vial containing the Comirnaty (Pfizer) Adult/Adolescent Formulation vaccine, the following parameters should be considered and adhered to:

- The vaccine does not contain a preservative, therefore special attention should be paid to handling and packaging of the syringe/punctured vial to prevent contamination.
- The syringe/punctured vial should be protected from light.
- There should be a tamper evident seal on the pre-drawn syringe or container during transport between locations.
- The pre-drawn syringes/punctured vial should be labelled – see [Management of COVID-19 Pfizer \(Comirnaty™\) vaccine from refrigerator to administration](#).
- The syringes/ punctured vial should be transported in a container that is labelled with:
 - Originating facility name and phone number
 - Quantity of syringes/punctured vials
 - Colour coding to distinguish between the vaccines. NSW Health documents are coded blue for the Comirnaty (Pfizer) Adult/Adolescent Formulation vaccine, yellow for the Vaxzevria (AstraZeneca), green for the Spikevax (Moderna) and orange for the Comirnaty (Pfizer) 5 to <12 years of age formulation vaccine.
- The syringe/punctured vial should be packed appropriately in a conditioned cooler (transport container) at +2°C to +8°C and the temperature monitored during transport.
 - Note: The vaccine in the syringe/punctured vial can be at ambient temperature, maximum of +25°C. The vaccine should not be at a temperature below +2°C.
 - The pre-drawn syringes should be packed in the equipment that limits agitation of the vaccine, protects the syringe plunger from being depressed. See Appendix A for images of packaging.
- A barrier of bubble wrap or corrugated cardboard (at least 1 inch) may be utilised as a barrier between ice packs and the container with pre-drawn syringes/punctured vial. This is to prevent direct contact between pre-drawn syringes/punctured vial and the cooling agent that may cause the vaccine to freeze or deviate from appropriate cold chain.
- The syringe/punctured vial should be packed to cushion it and to protect from agitation.
- If the punctured vial or syringe being transported is from a vial that was previously transported at fridge temperature, the total transportation time includes the time it was previously transported and the time the vial was transported at +2°C to +8°C and must not exceed 12 hours.
- The pre-drawn up doses must be administered within 6 hours if at 2-8°C or within 1 hour if at room temperature from the time the dose was first drawn. The transport time at 2-8 °C is a maximum of 6 hours for the drawn-up dose in the syringe.
- It is preferable to administer the vaccine dose immediately after dilution.

- An appropriate chain of custody should be in place for the punctured vial/syringe during all phases of transport.
- If the information regarding the beyond use date and total transport time, or the tamper evidence seal, or ability to track the syringe in any way is in questions, the vaccine should not be administered. Quarantine the vaccine and contact SHEOC for further advice.
- Upon receipt of the syringe, it should be visually inspected to confirm that
 - The full dose in the syringe remains;
 - The quantity of doses is correct;
 - The syringe has not reached the expiry date/time (the total maximum storage period of 6 hours at 2-8°C;
 - There is no damage, no significant bubbles, no particulates, and no discoloration.
- If the syringe(s) will not be administered by staff from the originating site, the originating site should confirm with the receiving site all details of the transport, as per above.
- The receiving site should ensure the person receiving the vaccine:
 - Is trained in standard procedures related to vaccine storage and handling and in routine and emergency policies and procedures related to vaccine storage and handling;
 - Has knowledge of the requirement for vaccine storage and handling, product sensitivities, storage equipment, temperature monitoring devices and inventory management procedures;
 - Is available to receive and store vaccines when they are expected to arrive;
 - Understands that:
 - vaccine deliveries require immediate attention;
 - never leaves vaccines in a transport container, unpacked or unattended; and
 - never exposes vaccines to light on a table once they have reached their delivery destination.

Spikevax (elasomeran) COVID-19 (Moderna) vaccine

Management of onward transport

Management of Spikevax (elasomeran) COVID-19 (Moderna) vaccine onward transport beyond the initial point of delivery.

Purpose

This guideline describes the process of transporting Spikevax (Moderna) COVID-19 vaccine from one clinic/facility to another using vehicle on ground, air or water beyond the initial point of delivery.

The document provides a range of options related to the transport and movement of the vaccine. The operational plan should be tailored to local circumstances.

Scope

Onward transport refers to transporting Spikevax (Moderna) COVID-19 vaccine from one clinic/facility to another. Walking the vaccine within a facility or between adjacent buildings on a campus is not considered transport when it is for less than 15 minutes.

Responsibility

Staff transporting Spikevax (Moderna) COVID-19 vaccine from one clinic/facility to another must follow this procedure. The vaccine should be transported by staff who are trained in the transport of vaccine or other products requiring cold chain monitoring. Systems must be in place for tracing and monitoring the vaccine to ensure delivery of the vaccines safely without excessive movement or agitation.

Overview and General Precautions

- The vaccine should be handled with care and protected as much as possible from shocks, drops and vibration.

- The transport container should be labelled prominently with "Fragile: Handle with Care, Do Not Drop, Temperature Sensitive" cautionary statements, and "Caution: Heavy" when transporting vaccines in portable refrigerators.
- Use "Do not refreeze" label for the vaccines stored at 2 to 8 °C, and "Keep frozen" label for the vaccines requiring storage at -80°C to -60°C or -25°C to -15°C.
- Vials should be stored in an upright position (i.e., standing up) during transportation.
- The transport containers including portable refrigerators should be secured upright (strapped/braced) in the vehicle when being transported to prevent unnecessary movement and an accident might occur to injure to the driver/passenger(s).
- The vaccine should be protected from being dropped.
- Protect the vaccine vials from light.
- Staff must record transport duration, including details at the individual vial level, on vial/carton labels and onward transport log.
- The temperature should be maintained and recorded for the duration of the transport per temperature range (+2°C to +8°C or -25°C to -15°C), ensuring that the transportation locations, dates and times, including the duration of time in transit are recorded.
 - A data logger, disposable cold chain monitor or minimum-maximum thermometer should be used to monitor temperatures.
 - Download the data logger/record minimum-maximum temperatures as soon as possible to ensure no "unwitnessed" excursions occurred while in transit.
 - Upon receipt, the vaccine should be inspected, inventoried and immediately placed into vaccine fridge, noting on the storage unit temperature log the date and time of the vaccine delivery.
- Separate carriers should be used when transporting different brands/formulation of COVID-19 vaccine at the same time, where possible.
- Facilities transporting COVID-19 vaccines in ULT or freezer storage units should ensure that annual inspections (including temperature calibration) and regular maintenance is completed by a certified company.
- Infection prevention and control principles must be adhered to for all stages, including handling and storage.
- NSW Health sites should refer to the *COVID-19 Vaccine Redistribution Process – Flow Chart* on the SHEOC SharePoint.

Onward distribution of unopened vials

Onward Distribution of Unopened Vials of the Spikevax (elasomeran) COVID-19 (Moderna) vaccine.

Packaging vials

Vials must be securely packaged during transport. This includes ensuring that they are in an upright position with packaging that prevents the vials from falling over and from exposure to excessive movement, shaking or agitation. See Appendix A for images of packaging.

Frozen State (-25°C to -15°C) Transport

- Do not transport on dry ice or below -50°C. Use of dry ice may subject vials to temperatures colder than -50°C.
- Transport containers used for -25°C to -15°C temperature range should be packed as per the recommendations/specifications for the container (e.g., credo cubes, stirring coolers).

Liquid State (+2°C to +8°C) Transport

- Vaccine cold chain management must comply with the National Vaccine Storage Guideline Strive for Five and NSW Health policy directive
- [PD2020_028 Vaccine Storage and Cold Chain Management](#).
- Thawed, unopened vaccine vials must not be transported for more than 12 hours of cumulative time.

- It is recommended that the vaccine is only transported at +2°C to +8°C once. Under exceptional circumstances, based on a risk assessment, the vaccine may be transported at +2°C to +8°C more than once. ²
- Do not transport the vaccine at room temperature.
- Do not refreeze the vaccine.
- Do not pack vaccines that are at +2°C and +8°C with frozen vaccine vials.
- Do not allow thawed vaccines to come into contact with any frozen packs added to maintain temperature.
- The time in transit at +2°C to +8°C should be considered part of the 30 days allowed for storage at refrigerated temperatures, even if the vaccine was placed into the cooler frozen.
- When the vaccine is placed into the cooler frozen, the time the vaccine vial was removed from frozen storage, and the beyond use date and time should be recorded on the 'Fridge temperature bag expiry label' - see [Management of Moderna elasmomern COVID-19 \(SPIKEVAX\) vaccine – from a standard temperature \(-20°C\) freezers to refrigerator](#) at the time the vaccine is removed from frozen storage and be a total of no more than 30 days. The label should be placed directly on the vial as well as on the box/carrier transporting the vial.
- The unopened vials should be transported in a container that is labelled with:
 - Facility name and phone number
 - Quantity of vials
 - Colour coding to distinguish between the vaccines. NSW Health documents are coded blue for the Comirnaty (Pfizer) Adult/Adolescents formulation vaccine, yellow for the Vaxzevria (AstraZeneca), green for the Spikevax (Moderna) vaccine and orange for the Comirnaty (Pfizer) 5 to <12 years of age formulation vaccine.
 - Separate carriers should be used when transporting the vials with different thawed dates and times at the same time, where possible.
- Transport in the largest configuration wherever possible, (e.g., box), avoiding individual vial distribution, while considering the minimum number of doses needed at the onwards location to avoid wastage.
- Prevent movement in the cooler by surrounding with dunnage (padding material) inside the container to minimise product movement during transport.
- If transport is conducted at vial level, the vial should be placed in insulation and bubble wrap or similar padding to protect the product (e.g., wrapping the vial in bubble wrap, using a container as required, or using bubble wrap to fill the space of open-lid vial trays). At the same time, ensure that padding material allows space for air circulation to prevent temperature from rising.
- The pack should be secured in the vehicle so that it does not move around. As much care as possible should be taken to minimize extra movement in the thawed state. Never place the cooler in the trunk of a vehicle.
- Thawed vials can be handled in room lighting conditions.

Onward transport of opened vials

Onward transport of Opened Vials of the Spikevax (elasmomern) COVID-19 (Moderna) vaccine

While not recommended as routine practice, in exceptional circumstances Spikevax (Moderna) vaccine can be transported in a syringe or punctured vial whilst careful attention is taken. Once a vial has been punctured the air pressure in the vial will have been changed and the potential for agitation (physical stress) of the mRNA in the vaccine is more likely.

Exceptional circumstances could include situations in which a few doses are needed to support the immunisation and series completion of small numbers of individuals residing in congregate settings (i.e., one or two residents) and for those who are home bound (e.g., those who may be unable to attend a community-based clinic due to physical limitations). When at all possible, it is recommended that unpunctured vials of vaccine be transported and the entire vial of vaccine administered in one location rather than transporting syringes filled with vaccine.

In exceptional circumstances, when transporting a syringe containing the Moderna COVID-19 vaccine, the following parameters should be considered and adhered to:

- Opened or punctured vials of Moderna should not be transported. A single dose of Moderna vaccine should only be transported when in a syringe. ²
- The vaccine does not contain a preservative, therefore special attention should be paid to handling and packaging of the syringe/punctured vial to prevent contamination.
- The syringe/punctured vial should be protected from light.
- There should be a tamper evident seal on the pre-drawn syringe or container during transport between locations.
- The pre-drawn syringes/punctured vial should be labelled – see [Management of Moderna elasomeran \(SPIKEVAX\) COVID-19 vaccine from refrigerator to administration](#). The syringes/punctured vial should be transported in a container that is labelled with:
 - Facility name and phone number
 - Quantity of syringes
 - Color coding to distinguish between the vaccines. NSW Health documents are coded blue for the Comirnaty (Pfizer) Adult/Adolescents formulation vaccine, yellow for the Vaxzevria (AstraZeneca) vaccine, green for the Spikevax (Moderna) vaccine and orange for the Comirnaty (Pfizer) COVID-19 5 to <12 years of age formulation vaccine.
- The syringe/punctured vial should be packed appropriately in a conditioned cooler (transport container) at +2°C to +8°C and the temperature monitored during transport.
 - Note: The vaccine in the syringe/punctured vial can be at ambient temperature, maximum of +25°C for up to 6 hours. The vaccine should not be at a temperature below +2°C.
 - The pre-drawn syringes should be packed in the equipment that limits agitation of the vaccine, protects the syringe plunger from being depressed. See Appendix A for images of packaging.
- A barrier of bubble wrap or corrugated cardboard (at least 1 inch) may be utilised as a barrier between ice packs and the container with pre-drawn syringes/punctured vials. This is to prevent direct contact between pre-drawn syringes/punctured vials and the cooling agent that may cause the vaccine to freeze or deviate from appropriate cold chain.
- The syringe/punctured vial should be packed to cushion it and to protect it from agitation.
- If the punctured vial or syringe being transported is from a vial that was previously transported at fridge temperature, then the total transportation time includes the time it was previously transported +2°C to +8°C and must not exceed 12 hours.
- Opened vials should preferably be stored at 2°C to 8°C, and the cumulative storage time of opened vials at +2°C to +25°C should not exceed 6 hours.
- Pre-drawn doses kept at room temperature should be used within an hour to minimise any remote potential risk of infection.
- Draw up vaccine must be administered within 6 hours from the time the vial was first punctured.
- An appropriate chain of custody should be in place for the syringe during all phases of transport.
- If the information regarding the beyond use date and total transport time, or the tamper evidence seal, or ability to track the syringe in any way is in question, the vaccine should be quarantined and advice sought from SHEOC.
- Upon receipt of the syringe/punctured vial, it should be visually inspected to confirm that
 - The full dose in the syringe remains;
 - The quantity of doses is correct;
 - The syringe has not reached the expiry date/time (the total maximum storage period of 6 hours at 2-8°C;
 - There is no damage, no significant bubbles, no particulates, and no discoloration.
- If the syringe(s)/punctured vial will not be administered by staff from the originating site, the originating site should confirm with the receiving site all details of the transport, as per above.
- The receiving site should ensure the person receiving the vaccine:
 - is trained in standard procedures related to vaccine storage and handling and in routine and emergency policies and procedures related to vaccine storage and handling;

- has knowledge of the requirement for vaccine storage and handling, product sensitivities, storage equipment, temperature monitoring devices and inventory management procedures;
- is available to receive and store vaccines when they are expected to arrive;
- understands that:
 - vaccine deliveries require immediate attention;
 - never leaves vaccines in a transport container, unpacked or unattended; and
 - never exposes vaccines to light on a table once they have reached their delivery destination.

Vaxzevria (ChAdOx1-S) COVID-19 (AstraZeneca) vaccine

Management of onward transport

Management of Vaxzevria (ChAdOx1-S) COVID-19 (AstraZeneca) vaccine onward transport beyond the initial point of delivery.

Purpose

This guideline describes the process of transporting Vaxzevria (AstraZeneca) COVID-19 vaccine from one clinic/facility to another using vehicle on ground, air or water beyond the initial point of delivery.

The document provides a range of options related to the transport and movement of the vaccine. The operational plan should be tailored to local circumstances.

Scope

Onward transport refers to transporting Vaxzevria (AstraZeneca) COVID-19 vaccine from one clinic/facility to another. Walking the vaccine within the facility or between adjacent building on a campus is not considered transport when it is for less than 15 minutes.²

Responsibility

Staff transporting Vaxzevria (AstraZeneca) COVID-19 vaccine from one clinic/facility to another must follow this procedure. The vaccine should be transported by staff who are trained in the transport of vaccine or other products requiring cold chain monitoring. The systems must be in place for tracing and monitoring vaccines and the ability to deliver the vaccines to prevent excessive movement or agitation.

Onward transport of vials or syringes

Onward transport of vials or syringes containing Vaxzevria (ChAdOx1-S) COVID-19 (AstraZeneca) vaccine.

Packaging vials

Vials must be securely packaged during transport. This includes ensuring that they are in an upright position with packaging that prevents the vials from falling over and from exposure to light and excessive movement, shaking or agitation. See Appendix A for images of packaging.

The vaccine should be transported prior to puncture. But in the event that transport of a punctured vial or pre-drawn syringe is required to provide access to vaccination or prevent wastage the following should be followed:

- The use by date/time of the product following first puncture of a vial is:
 - The cumulative storage time of 6 hours post first puncture at room temperature up to +30°C;
 - The total cumulative storage time of 48 hours post first puncture in a refrigerator at +2°C to +8°C.
- The vaccine does not contain a preservative, therefore special attention should be paid to handling and packaging to prevent contamination.
- The vial or syringe should be protected from light.

- Infection prevention and control principles must be adhered to for all stages, including handling and storage.
- The number of times a punctured vial or pre-drawn syringe is transported should be minimised to prevent risk of product microbial contamination and adherence to the use by date/time.
- Do not pack with unpunctured vials.
- There should be a tamper evidence seal on the container or on the pre-drawn syringe during transport between locations.
- The pre-drawn syringes/punctured vial should be labelled – see
- [Management of COVID-19 Vaccine AstraZeneca \(ChAdOx1-S\) from refrigerator to administration.](#)
- The syringes/punctured vial should be transported in a container that is labelled with:
 - Facility name and phone number
 - Quantity of vials or syringes
 - Colour coding to distinguish between the vaccines. NSW Health documents are coded blue for the Comirnaty (Pfizer) Adult/Adolescents formulation vaccine, yellow for the Vaxzevria (AstraZeneca) vaccine, green for the Spikevax (Moderna) vaccine and orange for the Comirnaty (Pfizer) 5 to <12 years of age formulation vaccine.
- The vial or syringes should be packed appropriately in a conditioned cooler (transport container) at +2°C to 8°C and the temperature monitored during transport.
 - The vaccine in the vial or syringe can be at ambient temperature to a maximum of +30°C for 6 hours post first puncture.
 - The vaccine should not be frozen or at a temperature below +2°C.
- The pre-drawn up vaccine doses must be administered within 6 hours if at 2-8°C or within 1 hour if at room temperature from the time the dose was first drawn. The transport time at 2-8 °C is a maximum of 6 hours for the drawn-up dose in the syringe.
- A barrier of bubble wrap or corrugated cardboard (at least 1 inch) may be utilised as a barrier between ice packs and the container with the vial or pre-drawn syringes. This is to prevent direct contact with the cooling agent that may cause the vaccine to freeze or deviate from appropriate cold chain.
- The vial or syringe/s should be packed to cushion it and to protect it from agitation.
- The transport containers including portable refrigerators should be secured upright (strapped/braced) in the vehicle when being transported to prevent unnecessary movement and an accident that might occur to injure the driver/passenger(s).
- The vaccine should be handled with care and protected as much as possible from shocks, drops, and vibration.
- The transport container should be labelled prominently with "Fragile: Handle with Care, Do Not Drop, Temperature Sensitive" cautionary statements.
- Vials should be stored in an upright position (i.e., standing up) during transportation.
- If transport is conducted at vial level, the vial should be placed in insulation and bubble wrap or similar padding to protect the product (e.g., wrapping the vial in bubble wrap, using a container as required, or using bubble wrap to fill the space of open-lid vial trays). At the same time, ensure that padding material allows space for air circulation to prevent temperature from rising.
- An appropriate chain of custody should be in place for the vial or syringes during all phases of transport.
- Staff must record transport duration capturing the details at the individual vial level on labels on vials/cartons and onward transport log.
- The temperature should be maintained and recorded for the duration of the transport per temperature range (+2°C to +8°C), ensuring that the transportation locations, dates and times are recorded.
 - A data logger, disposable cold chain monitor or minimum-maximum thermometer should be used to monitor temperatures.
 - Download the data logger/record minimum-maximum temperatures as soon as possible to ensure no "unwitnessed" excursions occurred while in transit.

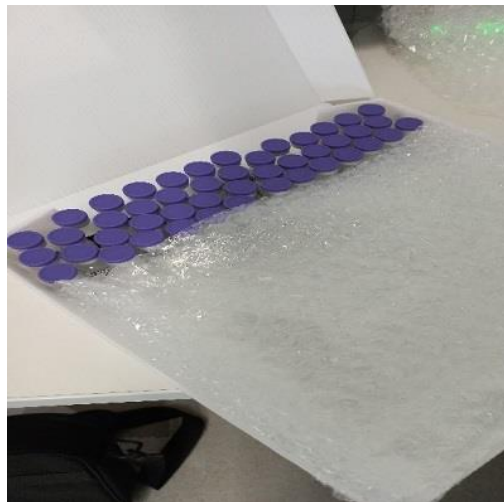
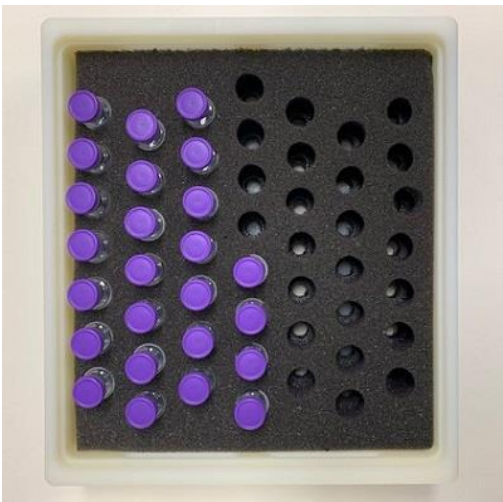
- Upon receipt, the vaccine should be inspected, inventoried and immediately placed into vaccine fridge, noting on the storage unit temperature log the date and time of the vaccine delivery.
- If the information regarding the beyond use date, or the tamper evidence seal, or ability to track the vial or syringes in any way is in question, the vaccine should be quarantined and SHEOC contacted for advice.
- Upon receipt of the vial or syringes, it should be visually inspected to confirm that:
 - The full dose in the syringe remains;
 - The quantity of doses is correct;
 - The syringe has not reached the expiry date/time (the total maximum storage period of 6 hours at 2-8°C;
 - There is no damage, no significant bubbles, no particulates, and no discoloration.
- If the vaccine in the vial or syringes will not be administered by staff from the originating site, the originating site should confirm with the receiving site all details of the transport, as per above.
- The receiving site should ensure the person receiving the vaccine:
 - Is trained in standard procedures related to vaccine storage and handling and in routine and emergency policies and procedures related to vaccine storage and handling;
 - Has knowledge of the requirement for vaccine storage and handling, product sensitivities, storage equipment, temperature monitoring devices and inventory management procedures;
 - Is available to receive and store vaccines when they are expected to arrive;
 - Understands that:
 - vaccine deliveries require immediate attention;
 - never leaves vaccines in a transport container, unpacked or unattended; and
 - never exposes vaccines to light on a table once they have reached their delivery destination.
- NSW Health sites should refer to the *COVID-19 Vaccine Redistribution Process – Flow Chart* on the SHEOC SharePoint.

Appendix A: Images of packaging

Incorrect



Correct



References

1. Australian Technical Advisory Group on Immunisation (ATAGI). Clinical guidance on use of COVID-19 vaccine in Australia in 2021. Canberra: Australian Government Department of Health, 2021 https://www.health.gov.au/sites/default/files/documents/2021/10/covid-19-vaccination-atagi-clinical-guidance-on-covid-19-vaccine-in-australia-in-2021_0.pdf
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3. The Australian Government Department of Health (2019). National Vaccine Storage Guideline Strive for 5 (3rd edition). Available from: <https://www.health.gov.au/resources/publications/national-vaccine-storage-guidelines-strive-for-5>
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6. Therapeutic Goods Administration (TGA). Australian Product Information – Comirnaty (BNT162B2 [mRNA] COVID-19 Vaccine, Canberra: Australian Government Department of Health, 2021 <https://www.ebs.tga.gov.au/ebs/picmi/picmirepository.nsf/pdf?OpenAgent&id=CP-2021-PI-01092-1&d=202104291016933&d=20211111172310101>
7. Therapeutic Goods Administration (TGA). Australian Product Information – SPIKEVAX (ELASOMERAN) COVID-19 Vaccine, Canberra: Australian Government Department of Health, 2021 <https://www.ebs.tga.gov.au/ebs/picmi/picmirepository.nsf/pdf?OpenAgent&id=CP-2021-PI-01968-1&d=20210825172310101>