

## Vaccine Cold Chain Management

### Introduction

Vaccines are biological substances that may lose their effectiveness quickly or become potentially dangerous if they become too hot or too cold at any time, especially during transport and storage.

The 'cold chain' is a term used to describe the cold temperature conditions in which certain products need to be kept during storage and distribution. Maintaining the cold chain ensures that vaccines are transported and stored according to the manufacturer's recommended temperature range of +2°C to +8°C until the point of administration. All vaccines must be refrigerated and protected from light. They must not be frozen. The efficacy of vaccines depends on their temperature being kept within the range 2-8 °C from manufacturer to patient.

If storage recommendations are not followed, manufacturers will disclaim responsibility for any subsequent failure of the product.

Each site where vaccines are stored must have a trained and designated person responsible for receipt and safe storage of vaccines. There should also be an identified deputy who is trained person to deputise in times of absence. Public Health England provides a protocol that covers the minimum standards expected of professionals responsible for vaccination.

### Key considerations

- Review and update your vaccine cold chain policy
- Temperatures in the vaccine fridge are to be monitored and recorded at least once each working day and documented as maximum reading, minimum reading and actual reading. The maximum and minimum functions must be reset after each temperature reading.
- Specialised refrigerators for the storage of pharmaceutical products, must be used for vaccines and diluents. Ordinary domestic refrigerators must not be used.
- Validated vaccine porters (with maximum-minimum thermometers) should be used at all times to reduce damage to vaccines during transit and maintain temperature. Domestic cool bags should not be used to store, distribute or transport vaccines.

### 1. How can I access advice on vaccine cold chain management?

Please see the following chapter of the green book:

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/223753/Green\\_Book\\_Chapter\\_3\\_v3\\_0W.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/223753/Green_Book_Chapter_3_v3_0W.pdf)

Contact [england.gmsit@nhs.net](mailto:england.gmsit@nhs.net) for any queries, advice or guidance

**2. How can I move vaccines between practices or sites? If we want to do a vaccination clinic outside of our practice, how should we store the vaccines?**

Vaccines should be moved or stored in a validated cool box. Domestic cool boxes should not be used. Please see Chapter 3, page 32 of the Green book (linked above) for detailed advice on cool boxes.

**3. What should I do if there is a cold chain incident, for example a fridge failure, or vaccines left out of the fridge?**

If you identify a cold chain incident, please follow the steps below to help mitigate the loss of vaccines:

- ✓ Ensure the vaccines are isolated in a working fridge. If there are no working fridges within the practice, try contacting local pharmacies or practices, and transport the vaccines in a validated cool box.
- ✓ Ensure the vaccines are labeled “do not use” – ensure all staff are aware not to administer these vaccines to any patients until further advice has been sought
- ✓ Contact the GM screening and immunisation team for advice [england.gmsit@nhs.net](mailto:england.gmsit@nhs.net) – **Please ensure you put “urgent” in the subject**
- ✓ Please provide full contact details and a direct phone number where possible

Please see PHE vaccine incident guidance for detailed information on responding to cold chain and other vaccine incidents - <https://www.gov.uk/government/publications/vaccine-incident-guidance-responding-to-vaccine-errors>

**4. A GP wants a stock of flu vaccine in their room for opportunistic vaccinations, however there is no fridge. How long can we leave them out of the fridge?**

Generally, vaccines should not be taken outside of the cold chain until they are due to be administered. You may wish to use a validated cool box for this purpose.

Please refer to the SPC of each vaccine for further information.