



COVID-19 Guidance: Minimising Wastage of Critical Injectable Medicines

Advice to healthcare professionals
preparing doses in clinical areas

This COVID-19 advice has been
produced by the NHS
Pharmaceutical QA Committee

Version 2
1st April 2020

The first stop for professional medicines advice

Document Control

Changes since version 1a

- Addition of Controlled Drugs to the Scope.
- Addition of a decision tree to decide which process is applicable for vial sharing.
- Addition of process flow for multiple doses from one vial
- Separation / formatting of existing process flows
- Clarification that 5 withdrawals are permitted from a vial being used in one preparation exercise but 2 withdrawals if the vial has been stored.

COVID-19 Guidance: Minimising Wastage of Critical Injectable Medicines

Advice to healthcare professionals preparing doses in clinical areas

Introduction

During the emergency period relating to Covid-19, it is essential to minimise wastage of critical medicines. This guidance provides advice to health professionals on how to safely provide a supply of injectable medicines to meet the increased demand whilst minimising wastage.

Scope

- The guidance contained in these documents applies to injectable medicines used in the treatment and supportive care of COVID-19 patients when UK-wide supply of these medicines is severely constrained.
- The guidance applies only to the preparation of intravenous medicines. It does **not** apply to medicines given by epidural or spinal route.
- The principles of preparation outlined in this guidance can be applied to controlled drugs. However local governance policies and procedures relating to the safe & secure handling and storage of stock syringes and part-used vials of controlled drugs apply.
- The guidance is valid only for the duration of the current COVID-19 emergency situation.

General Principles for multiple use of vials and ampoules

Unpreserved injectable medicines are licensed for single use only. This is predominantly due to the risk of microbiological contamination once the container has been breached. The risk of contamination is higher for open ampoules than sealed vials.

During the current emergency period relating to Covid-19, vial and ampoule sharing is permitted in the following circumstances:

- Part-used vials can be stored for up to 12 hours to allow a second dose to be removed, but must then be discarded (see Appendix 1).
- Vials and ampoules can be used to make a small batch (approx. 5) of identical products in one preparation exercise. Step by step instructions for making small batches can be found in Appendix 2 (vials) and Appendix 3 (ampoules)
- Ampoules must not be stored or re-used once opened
- Vials must be pierced using a needle (do not remove the bung)
- Administration should be completed as soon as possible after preparation and always within 24 hours.
- Finished products and any part-used vials must be labelled and stored in the fridge (unless specified not to) while awaiting use.

Additional Good Practice Advice

- Use Aseptic Non Touch Technique (ANTT) at all times
- When making a batch, work on only one product at a time
- Work in an uncluttered area that is as quiet and free from distractions as possible
- Wear a clean non-sterile apron and clean gloves (sterile preferred, if available)
- Clean preparation area with a disinfectant wipe, preferably with sporicidal activity (e.g. containing hydrogen peroxide)
- Label all products once prepared
- Use standardised instructions and labels where available

For further information contact the following Regional QA Specialist Pharmacists:

Mark.jackson@liverpoolft.nhs.uk

Anne.Black7@nhs.net

Linda.hardy5@nhs.net

Storage and Use of Part-Used Vials

1. Storage after use

- Check that there is no leakage or damage to vial. If there is, discard.
- Label the vial with the time and date of opening. Suggested methods are:
 - Attach an adhesive label to the vial, avoiding covering any critical information on the vial label (drug name and strength)
 - Write on the label with indelible marker, avoiding covering any critical information on the vial label
- Place in the fridge

2. Removal from storage for use

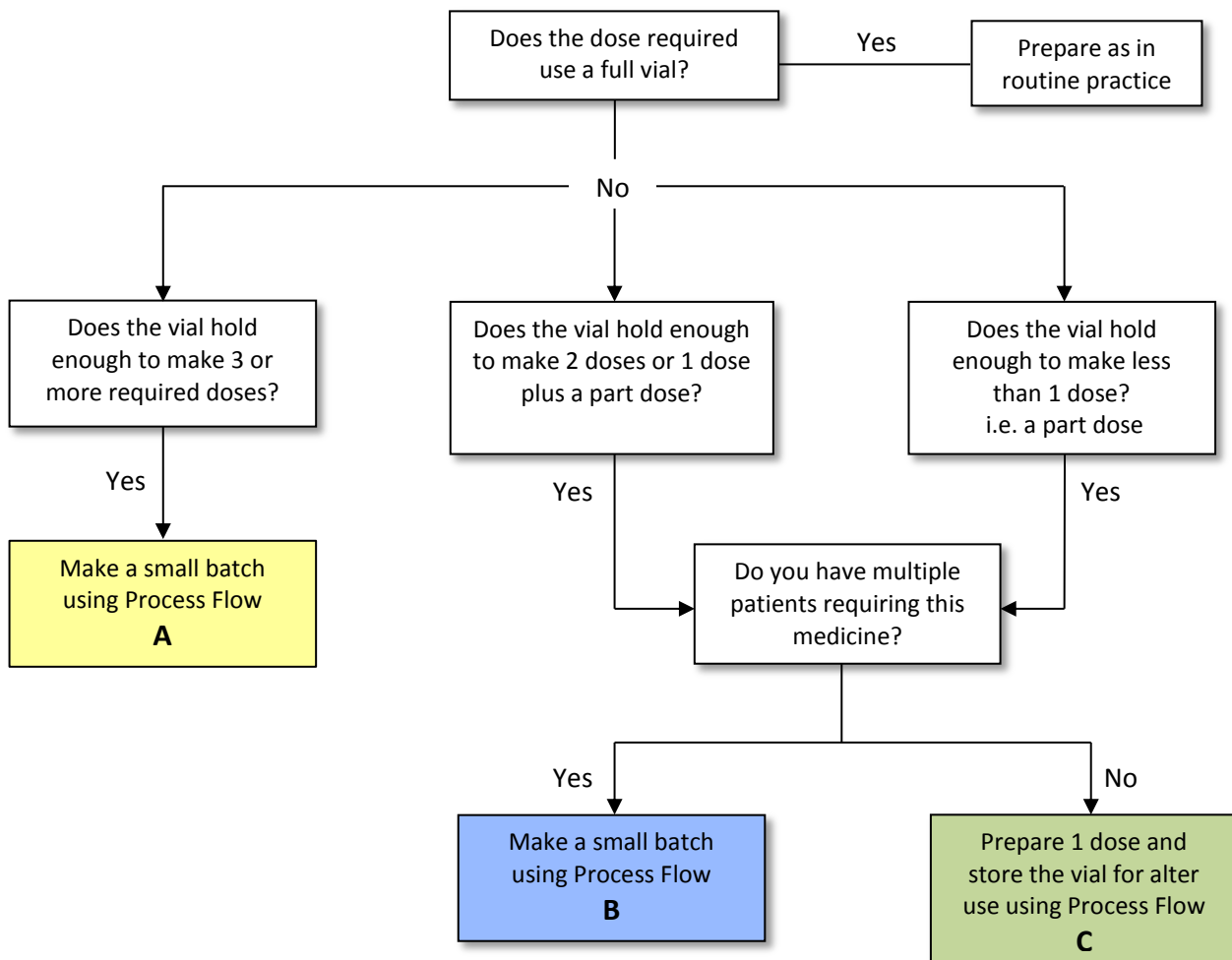
- Check that there is no leakage or damage to vial. If there is, discard.
- Check the time and date on the label
- If no more than 12 hours have passed since opening, the vial may be used
- If more than 12 hours have passed, discard the vial
- After second use, discard immediately

3. Housekeeping and stock control

- Check the fridge regularly to remove and discard any expired vials

Process for Sharing **Vials** in Clinical Areas

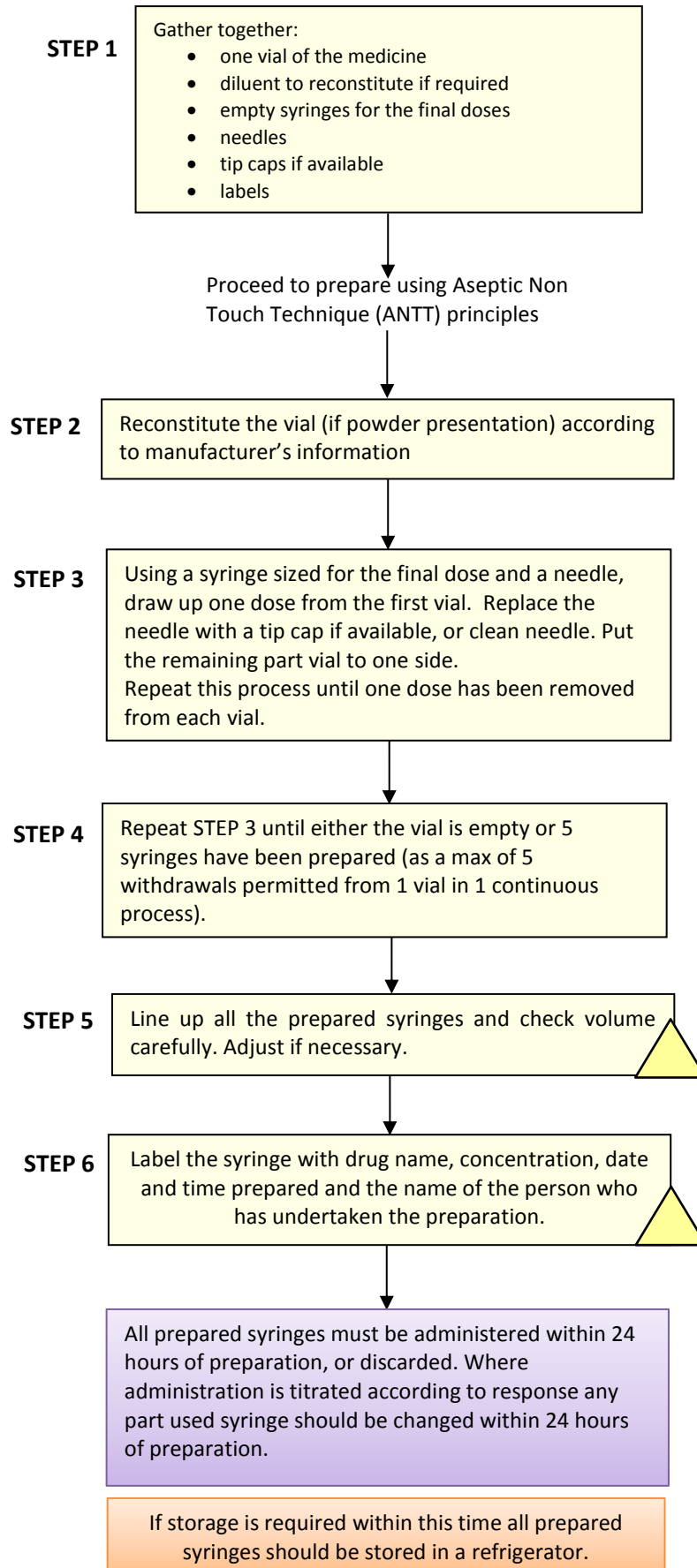
Use the decision tree below to decide which Process Flow to follow A, B or C



Process Flow A for Sharing a VIAL in a Clinical Area

This method should be followed where multiple doses can be obtained from one vial e.g. 500 mg / 10 ml vial where a 100 mg dose is required.

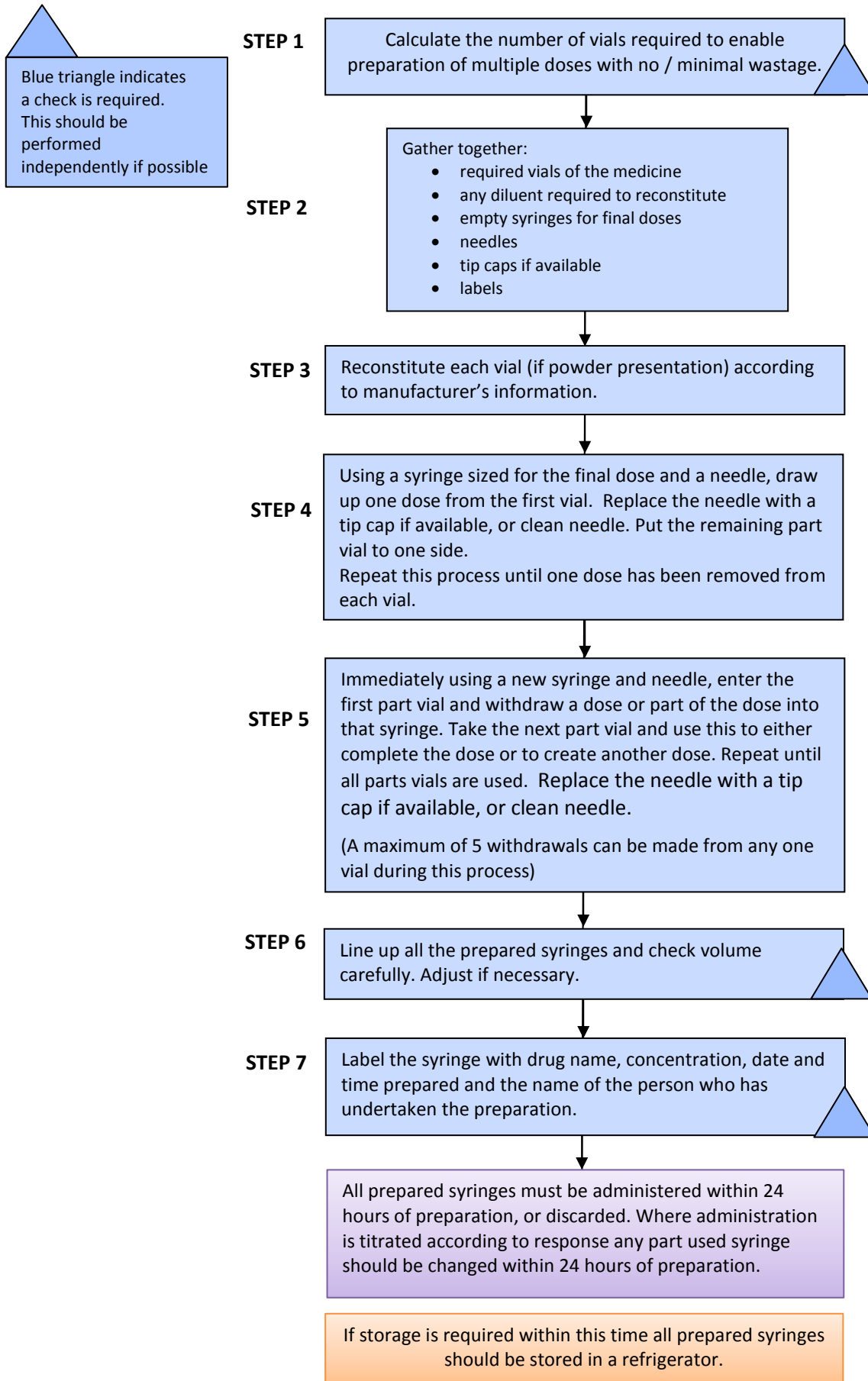
Yellow triangle indicates a check is required
This should be performed independently if possible



If the final prepared syringe requires further dilution e.g. needs to be added to any infusion bag, this should occur prior to administration.

Process Flow B for Sharing a VIAL in a Clinical Area

Preparation of Small Batch (to make proximately 5 products)

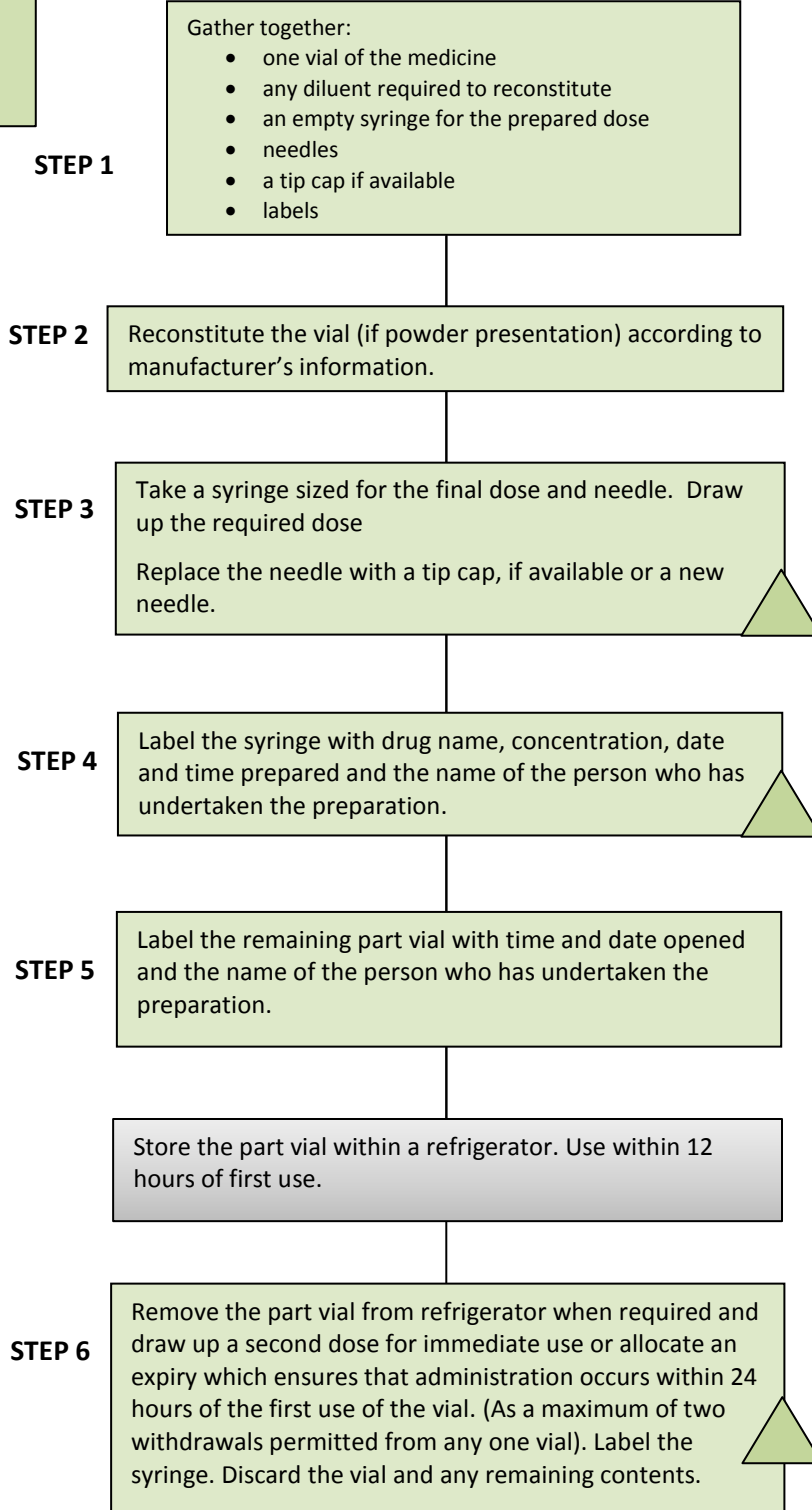


If the final prepared syringe requires further dilution e.g. needs to be added to any infusion bag, this should occur prior to administration.

Process Flow C for Sharing a VIAL in a Clinical Area

Preparation of One Dose and Storage of Part Vial

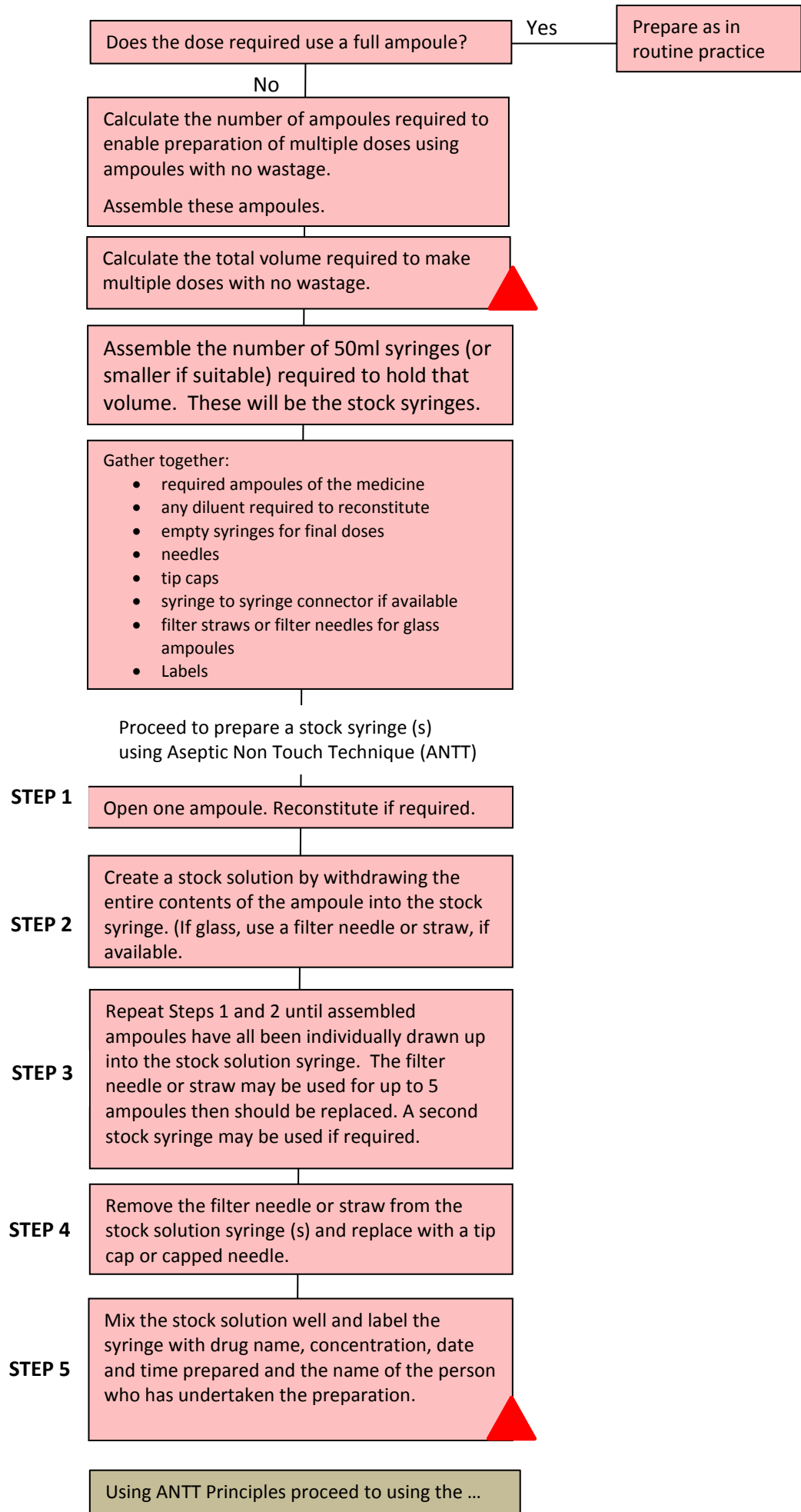
Green triangle indicates a check is required. This should be performed independently if possible



If the final prepared syringe requires further dilution e.g. needs to be added to any infusion bag, this should occur prior to administration.

Process for Sharing AMPOULES in Clinical Areas

Red triangle indicates a check is required. This should be performed independently if possible



... stock syringe to create individual doses

If you **are using** a syringe to syringe connector (preferred)

- STEP 1 Attach the connector to stock syringe
- STEP 2 Attach an empty syringe suitable for the final volume to the other end of the connector
- STEP 3 Push the required volume of solution from the stock syringes into the final syringe
- STEP 4 Check the volume carefully adjusting via the syringe to syringe connector as required
- STEP 5 Remove the final syringe from the connector and add a tip cap (or clean needle if no tip cap available)
- STEP 6 Repeat with final dose syringes until the stock syringes (s) is / are empty
- STEP 7 Line up prepared finished syringes and check volume. Adjust if necessary
- STEP 8 Label the syringe with drug name, concentration, date and time prepared and the name of the person who has undertaken the preparation.

All prepared syringes must be administered within 24 hours of preparation, or discarded. Where administration is titrated according to response any part used syringe should be changed within 24 hours of preparation.

If storage is required within this time all prepared syringes should be stored in a refrigerator.

If the final prepared syringe requires further dilution e.g. needs to be added to any infusion bag, this should occur prior to administration.

If you are **not** using a syringe to syringe connector

- STEP 1 Calculate the number of syringes with the required dose which can be filled from the stock syringe
- STEP 2 Assemble the empty syringes by peeling back the wrapper for ease of access but retain each syringe in its wrapper
- STEP 3 Attach a needle to the stock syringe
- STEP 4 Take one of the final syringes and draw back the plunger to just past the volume to be added. Carefully insert the needle from the stock syringe via the tip into the barrel of the final syringe.
- STEP 5 Push the required volume from the stock syringe into the final syringe
- STEP 6 Check the volume carefully and adjust via the needle as required
- STEP 7 Carefully remove the final syringe from the stock solution and needle. Add a tip cap to the final syringe (or new needle if not available)
- STEP 8 Repeat steps 3 – 7 until the stock syringe is empty. If there is a second stock syringe repeat steps 1 - 7
- STEP 9 Line up prepared finished syringes and check volume. Adjust if necessary.
- STEP 10 Label the syringe with drug name, concentration, date and time prepared and the name of the person who has undertaken the preparation.

All prepared syringes must be administered within 24 hours of preparation, or discarded. Where administration is titrated according to response any part used syringe should be changed within 24 hours of preparation.

If storage is required within this time all prepared syringes should be stored in a refrigerator.



Specialist
Pharmacy
Service

