

# **Aldurazyme Home Infusion Guide for Health Care Professionals**

**Version 1.1, Dec 2024**

This guide is not intended to suggest or recommend home infusion therapy for any patient. The decision to provide treatment in the home setting is made by the treating physician, who knows the patient's current clinical status and previous infusion history, in consultation with the patient and/or his/her caregiver. This guide is solely to share information that might be helpful to HCP and their patients/caregivers when treated at home.

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# 1 OBJECTIVES AND GOALS

- The main objective of this Home Infusion guide is to provide information and guidance to HealthCare Professionals (HCPs) for the management of patients receiving Aldurazyme in the home setting and to mitigate the following important risks:
  - Infusion Associated Reactions (IARs) including hypersensitivity and anaphylaxis and
  - Medication errors in home infusion setting.
- Treating physicians may make this material available to other HCPs involved in the management of the disease as required (infusion nurses, pharmacists, non-specialist physicians, allergists, nurses, etc.).
- Aldurazyme infusion therapy is the only available approved Enzyme Replacement Therapy (ERT) for the treatment of the non-neurological manifestations of individuals affected by Mucopolysaccharidosis type I (MPS I) disease and is generally well tolerated. To enhance convenience and improve patient's quality of life, ERT infusions may be transferred to the patient's home if specific requirements can be fulfilled. This increases comfort and flexibility of infusion schedule.
- The decision to transfer Aldurazyme infusion to the patient's home setting is made by the treating physician and should reflect patient and/or caregiver preferences and medical status.
- The home infusion will take place under the responsibility of the treating physician.
- It is the responsibility of the treating physician to ensure safe administration of Aldurazyme, to reduce and mitigate the risks of medication errors in the home and IARs, particularly hypersensitivity reactions.
- It is the responsibility of the treating physician to provide the 'Home infusion guide for patient/caregiver' to the patient/carer if the patient is eligible for home infusion treatment.
- The processes presented in this guide serve as overall guidance but are subject to local medical practice and national rules and regulations.

## 2 INFORMATION FOR HCPS PRESCRIBING ALDURAZYME

### 2.A) GENERAL REQUIREMENTS FOR HOME INFUSION

- Infusion of Aldurazyme at home may be considered for patients who are tolerating their infusions well and have no history of moderate or severe IARs for a few months. The decision to have a patient move to home infusion should be made after evaluation and upon recommendation by the treating physician.
- Home infusion must be administered by a HCP who should be always available during the home infusion and for a specified time after infusion. Home infusion infrastructure, resources and procedures, including training, must be established and available to the HCP. Appropriate information should be given by the treating physician and/or Infusion Nurse to the patient and/or caregiver prior to initiation of home infusion.
- Dose and infusion rate should remain constant while at home and should not be changed without supervision of the treating physician.
- If the patient experiences adverse events during the home infusion, initiate appropriate medical treatment (see section 4). Subsequent infusions may need to occur in a hospital or in an appropriate setting of outpatient care until no such adverse reaction is present, at the discretion of the treating physician or their medical designate.
- Before making any arrangements for providing Aldurazyme infusion at home, the treating physician determines whether the patient meets the eligibility criteria below:
  - *The patient has been tolerating the infusion well in a hospital or outpatient setting and has no history of moderate to severe IARs for a few months.*
  - *After a complete medical assessment, the patients' condition is deemed stable to receive infusions at home.*
  - *The treating physician is responsible for the recommendation to administer Aldurazyme infusions at home.*
  - *A patient's underlying co-morbidities and ability to adhere to the home infusion requirements need to be considered when evaluating the patient for eligibility to receive home infusion.*
  - *The patient must not be affected by an advanced disease state that puts him or her at higher risk of complications that require advanced medical resuscitation measures only available on a hospital setting.*
  - *The patient has reasonably uncomplicated venous access or may have a central venous access device placed that allows adequate infusion.*

- *The patient must be willing and able to comply with home infusion procedures, and the patient's home environment should be suitable for home infusion therapy.*
- *Home infusion infrastructure, resources and procedures, including training, must be established and available to the HCP.*

## **2.B) ORGANISATION OF HOME INFUSION**

- The treating physician is responsible for organisation of the home infusion and needs to recommend the home infusion procedure. The Infusion Nurse will carry out the entire procedure for the infusions at the patient's home.
- Once the patient has been considered eligible for home infusion based on the primary criteria, further requirements must be considered to ensure that Aldurazyme infusions can be safely, efficiently, and reliably delivered at the patient's home.
- In principle, the initial instructions and training of the Infusion Nurse will be provided according to local regulations, by the health institution (hospital) or the correspondent experienced HCP. The level of support required from the Infusion Nurse in the home setting will be discussed and agreed by the treating physician and the patient and/or caregiver(s).

## **2.C) PATIENT READINESS FOR HOME INFUSION**

- The patient and/or caregiver(s) have been informed by the treating physician about the treatment to be provided at home, the associated risks, and the provision of medical assistance at home, like hypersensitivity reactions and medication errors' and must agree to the treatment at home.
- The patient and/or caregiver(s) understand the illness and can recognise adverse events such as hypersensitivity reactions and medication errors and understand the procedure to be followed should these occur.
- The home environment must be suitable to home infusion therapy, including a clean environment with electricity, water, telephone access, refrigeration, and physical space to support storage of Aldurazyme and other infusion supplies.
- The patient/caregiver must be informed that the infusion should always be administered in the presence of an experienced HCP, i.e., the Infusion Nurse who must be adequately trained on how to act in case of an infusion associated reaction (IAR).
- The patient must be physically and mentally able to undergo the infusions at home.
- The patient has venous access or a central venous access device that allows adequate infusion.

- The patient must adhere to regular disease monitoring as required by the treating physician.
- The patient and/or the caregiver must receive the educational material ‘Home infusion guide for patient/caregiver’ which includes information about the signs and symptoms of IARs and the recommended actions for their management.
- Patients experiencing serious adverse events should contact Triple Zero (000) in the case of an emergency. For all other adverse events, the patient/caregiver should immediately contact the treating physician or his/her medical designate. Events can occur during the infusion or up to several hours after the infusion has ended. Subsequent infusions may need to occur in a hospital or in another appropriate setting of outpatient care until no such adverse reaction is present at the discretion of the prescribing HCP or his/her medical designate.

## **2.D) RESPONSIBILITIES OF THE HCPS PRESCRIBING ALDURAZYME**

- The treating physician is responsible for initiating all the administrative procedures which will allow the other stakeholders (patient and/or caregiver(s), Infusion Nurse, home healthcare provider, pharmacy, etc. to proceed with home infusion and act and discuss with the patient and/or caregiver the level of support to be provided in the home setting.
- The treating physician has informed patient and/or caregiver(s) about the disease, treatment and home infusion procedure as listed in section “2.C) Patient Readiness” and has distributed to the patient/caregiver the educational material ‘Home infusion guide for patient/caregiver. Distribution is only required where the treating physician decides that the patient is eligible for home infusion treatment.
- The treating physician is responsible for selection of the infusion rate and dose. The infusion rate of Aldurazyme that was previously tolerated by the patient in hospital or outpatient setting must not be changed in the home setting, unless necessary due to safety considerations. Any changes to the prescription (dose or infusion rate) must be documented. The prescription must be written in accordance with local regulations.
- The home infusion will take place under the responsibility of the treating physician.
- It is the responsibility of the treating physician to ensure safe administration of therapy to the patient, to reduce and mitigate the risks of medication errors and IARs, in particular hypersensitivity reactions. The Infusion Nurse should immediately inform the treating physician if an IAR or hypersensitivity occurs.
- The treating physician prescribes the medication including all necessary equipment for administration of Aldurazyme at home.

- Pre-infusion treatment, if administered in the hospital or another appropriate setting of outpatient care (e.g., antihistamines, paracetamol, ibuprofen, corticosteroids), must be provided based on the patient-specific prescription. This treatment must not be altered in the home setting, unless medically warranted at the discretion of the treating physician.
- Emergency treatment must be available and provided based on the patient-specific prescription in case of IARs. Instructions (e.g., in a logbook or equivalent) and a documented emergency plan must be given to the Infusion Nurse prior to setting up home infusion.
- The treating physician is strongly encouraged to report any adverse events that occur during treatment with Aldurazyme. To report an adverse event, refer to section 4.C ‘Safety Reporting’.
- The treating physician must ensure that a rapid and reliable line of communication is available between them and the Infusion Nurse, to expedite an emergency response in case immediate medical attention is required.
- Regular disease monitoring of the patient undergoing home infusions is the responsibility of the treating physician.
- Appropriate scheduling and monitoring of the infusions are the responsibility of the treating physician and Infusion Nurse.
- The prescribing HCP must give the patient/caregiver guide to the patient/caregiver.

### **3 INFORMATION REGARDING THE ADMINISTRATION OF ALDURAZYME**

Instructions for use relating to the dose and method of administration for Aldurazyme are extensively detailed in the Aldurazyme PI, available at [sanofi \(medsinfo.com.au\)](http://sanofi.medsinfo.com.au) or the Pack Insert in the Aldurazyme vial box. Further important information to be read in combination with the Aldurazyme PI/pack insert is detailed in the sections below.

#### **3.A) RESPONSIBILITIES OF INFUSION NURSE**

- The Infusion Nurse will have a coordinating role alongside the treating physician and the patient and/or caregiver(s) in organising the treatment at home and will establish with the treating physician, patient and/or caregiver(s) the level of support necessary in the home.
- The Infusion Nurse is qualified to give IV infusions, has been appropriately trained on MPS I and the administration of Aldurazyme. In addition, he/she is trained in recognising adverse events (including serious adverse events such as anaphylactic reactions) and in the actions to take should they occur.
- Before the infusion, the Infusion Nurse will evaluate the patient to check the general condition of the patient to detect any condition that could interfere with the infusion. Any abnormalities should be recorded. If the patient has any acute illnesses the treating physician should be consulted before proceeding with the infusion.
- The Infusion Nurse will strictly follow the prescribed method of preparation and administration of Aldurazyme as stated in the Aldurazyme PI and this Guide.
- The Infusion Nurse will strictly follow the prescribed dose and infusion rate as stated by the prescribing physician.
- The Infusion Nurse will document each Aldurazyme infusion in a logbook or equivalent and shares reports with the treating physician on regular agreed basis.
- Appropriate scheduling and monitoring of the infusions are the responsibility of the treating physician and Infusion Nurse, in agreement with the patient or patient's caregiver.
- If an adverse event occurs (such as hypersensitivity reactions, medication errors or IARs, during or after the infusion), the Infusion Nurse must follow the patient-specific emergency measures provided by the treating physician in an emergency plan. Depending on severity, this may include immediately contacting Triple Zero (000) and the treating physician and/or his/her medical designate.



- The Infusion Nurse will document any adverse event in a logbook or equivalent. Reporting of adverse events helps ensure the ongoing safety of Aldurazyme. To report an adverse event, refer to section 4.C ‘Safety Reporting’.
- It is recommended that the treating physician documents any adverse event/s that may occur during the infusion, including recording treatment/s implemented to resolve the event/s in the patient’s medical chart to ensure adequate decision making for continuity of the home treatment.

### **3.B) REQUIRED SUPPLIES**

Supplies are generally provided by the hospital/pharmacy to the patient or to a third party with the appropriate prescription:

- Vials of Aldurazyme must be stored in a clean refrigerator at a temperature of between 2°C and 8°C.
- Saline Solution 0.9% for IV administration. Use 100 mL bag for patients weighing 20 kg or less and 250 mL bag for patient’s weighing more than 20 kg
- Saline Solution to flush infusion line post-infusion.
- Chlorhexidine 0.5% in alcohol 70% (antiseptic solution).
- Appropriate number of 10 mL, 20 mL and 50 mL syringes depending on dose of Aldurazyme.
- Sterile hypodermic needles (calibre Gauge 20G or 21G). Plan 2 needles per 4 vials.
- In-line low protein-binding 0.2µm filter.
- Supply for the installation of a peripheral venous path or management of central venous path according to local guidelines.
- Supplies needed for IV infusion according to local guidelines and material required to comply with hygienic and aseptic conditions as well as waste disposal rules according to local guidelines.
- Pretreatment medication (if applicable)
- Emergency medication/equipment according to local Standard of care

### **3.C) PREPARATION**

Before starting the preparation of Aldurazyme, the Infusion Nurse must evaluate the patients’ medical status including vital signs, and sign of fever or infection. Patients with an acute underlying illness, including a respiratory infection that may prompt respiratory distress, at the time of Aldurazyme infusion appear to be at greater risk for IARs. In such cases, the infusion must not be performed, and treatment should be resumed when the patient has fully recovered, at the discretion of the treating physician.

Before preparation of the infusion, it is also recommended to install the venous pathway (peripheral venous catheter), or to connect the patient's central venous pathway, according to local protocols, to ensure Aldurazyme infusion can be administered immediately after its preparation.

- Check the number of vials is appropriate for the patient's weight and dose prescribed.
- Remove the vials from the refrigerator and set aside for approximately 30 minutes to allow them to reach room temperature.
- Check the expiry date printed on the bottom of the vial pack (do not use Aldurazyme after the labelled expiry date).
- Due to the frequent weight variation in this patient population, it is highly recommended to have an updated weight measurement within the past 6 months, and within the past 3 months in children younger than 6 years old.
- Check that the solution contained in the vials is clear to slightly opalescent and without any residue. Solution should be colourless to pale yellow. A few translucent particles may be present. Do not use if the solution is discoloured.
- Vials should not be shaken.

### **3.D) DOSE AND METHOD OF ADMINISTRATION**

Information on dose and method of administration for Aldurazyme are extensively detailed in the Aldurazyme PI, available at [sanofi \(medsinfo.com.au\)](http://sanofi.medsinfo.com.au) or the Pack Insert in the Aldurazyme vial box. Further important information to be read in combination with the Aldurazyme PI/pack insert is detailed below.

- Calculate the volume of Aldurazyme to be diluted based on the individual patient's weight and the recommended dose of 100 U/kg (1mL=100U):

Examples: Patient Weight	14 kg	35 kg
Volume of Aldurazyme required	14 mL	35 mL
Saline Solution 0.9% Infusion Bag size	100 mL	250 mL
Volume of Saline Solution 0.9% to be removed from the infusion bag (prior to adding Aldurazyme)	14 mL	35 mL

- Prepare the infusion bag following the instructions in the Aldurazyme PI.

- From a microbiological perspective, the infusion should be used immediately after dilution. If not used immediately, in-use storage times and conditions are the responsibility of the user and would normally not be longer than 24 hours at 2-8°C.

### 3.E) INSTRUCTIONS FOR USE

Instructions for use are extensively detailed in the Aldurazyme PI, available at [sanofi \(medsinfo.com.au\)](http://sanofi.medsinfo.com.au) or the Pack Insert in the Aldurazyme vial box. Further important information to be read in combination with the Aldurazyme PI/pack insert is detailed below.

#### Administration:

- Once Aldurazyme has been diluted, attach the tubing to the infusion bag.
- Connect a low protein binding, 0.2 µm in line filter to the infusion bag
  - *This step avoids administration of inadvertently introduced particles during dose IV preparation.*
- Prime the infusion line with the diluted Aldurazyme via gravity and connect the infusion line to the patient vein path.
- Before starting the infusion, check the patient's pulse, blood pressure, respiratory rate and temperature.
- Administer the Aldurazyme infusion incrementally following the Infusion rate schedule in Table 1. Vital signs should be obtained at each step, if stable then increase the rate.
- After the infusion is complete, the intravenous line should be flushed with sodium chloride 0.9% in water at the same rate and the needle removed.
- Aldurazyme should not be infused in the same intravenous line with other medicinal products.

The Aldurazyme dose, infusion rate, as well as any changes, will be determined by the treating physician. The treatment must not be altered in the home setting, unless medically warranted at the discretion of the treating physician.

**Table 1. Infusion rate schedule for ALDURAZYME Infusion**

<b>100 mL ALDURAZYME Infusion</b> <b>(For Patients weighing 20 kg or Less)</b>	<b>250 mL ALDURAZYME Infusion</b> <b>(For Patients weighing greater than 20 kg)</b>
2mL/h for 15 min	5mL/hr for 15 min
4mL/h for 15 min	10mL/hr for 15 min
8mL/h for 15 min	20mL/hr for 15 min
16mL/h for 15 min	40mL/hr for 15 min

32mL/h for the remainder of the  
infusion(approximately 3 hr)

80mL/h for the remainder of the infusion  
(approximately 3 hr)

## 4 ALDURAZYME SAFETY PROFILE

Identified risks of treatment with Aldurazyme include:

- Infusion-associated reactions including hypersensitivity and anaphylaxis.
- Medication errors in home infusion setting.

A description of IARs including hypersensitivity and anaphylaxis, and their clinical management, is provided in the section below. Information relating to the full safety profile of Aldurazyme can be found in the Product Information (PI), available at [sanofi \(medsinfo.com.au\)](https://www.sanofi.com.au/medsinfo)

### 4.A) INFUSION ASSOCIATED REACTIONS (IARS) INCLUDING HYPERSENSITIVITY AND ANAPHYLAXIS

An IAR is defined as any adverse event occurring during the infusion or during the hours following the infusion and assessed as potentially causally related to the administration of Aldurazyme.

IARs may occur at any time during and/or within a few hours after the infusion and are more likely with higher infusion rates. Related events occurring after the post-infusion period may be considered IARs at the discretion of the reporter.

Hypersensitivity reactions, including anaphylaxis, have also been reported in patients treated with Aldurazyme.

The most common IARs in a clinical trial included flushing, fever, headache and rash. Flushing occurred in 5 patients (23%) receiving Aldurazyme; other reactions were less frequent. There was one case of anaphylaxis during the open-label extension setting and one additional case received for a patient treated in the post-marketing setting. Less common IARs include cough, bronchospasm, dyspnoea, urticaria, angioedema and pruritus. All reactions were mild to moderate in severity. The frequency of IARs decreased with continued use during the open-label extension use.

In addition to the infusion reactions reported in clinical trials, the following infusion reactions have been reported in patients during post-marketing use of Aldurazyme: cough, dyspnoea, oxygen saturation decreased/hypoxia, tachypnoea, cyanosis, respiratory failure, drug specific antibody, neutralising antibodies, hypersensitivity, bradycardia and manifestations of angioedema such as facial oedema and laryngeal oedema.

Additional significant adverse drug reactions have included serious reports of infusion-associated bronchospasm that required treatment with adrenaline, corticosteroids and/or oxygen therapy. Some patients were successfully re-challenged. Other infusion reactions reported patients during post marketing experience include: pallor, fatigue, erythema, oedema peripheral, paresthesia, feeling hot, and feeling cold.

In the Phase 3 clinical studies with Aldurazyme, most IARs were successfully treated by slowing the rate of infusion and by administering antihistamines and antipyretics, thus enabling the continuation of treatment.

#### **4.B) CLINICAL MANAGEMENT OF IARS**

The majority of IARs and hypersensitivity reactions were mild or moderate and were managed with standard clinical practices.

Appropriate measures for emergency support and monitoring should be in place according to the patient's individual emergency plan, as determined by the treating physician.

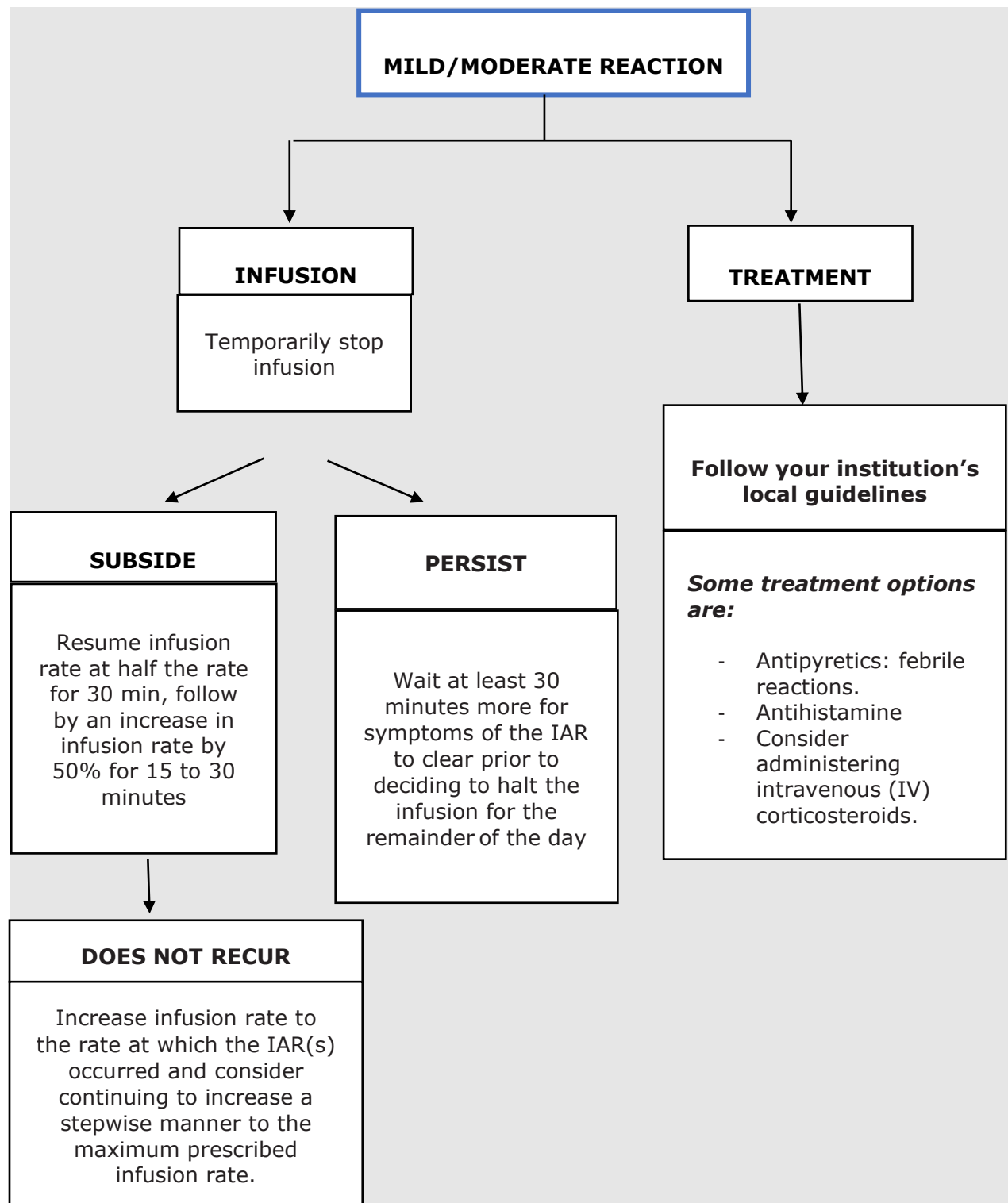
If the patient experiences an IAR including hypersensitivity and anaphylactic reactions during the home infusion, the infusion process should be stopped immediately but the venous access should not be removed.

The measures indicated in the individual emergency plan should be followed based on the severity of the IAR, i.e., stopping temporarily or completely, and initiating appropriate medical treatment if needed. Please see Figure 1 and Figure 2 for clinical management in case of mild/moderate or severe adverse events.

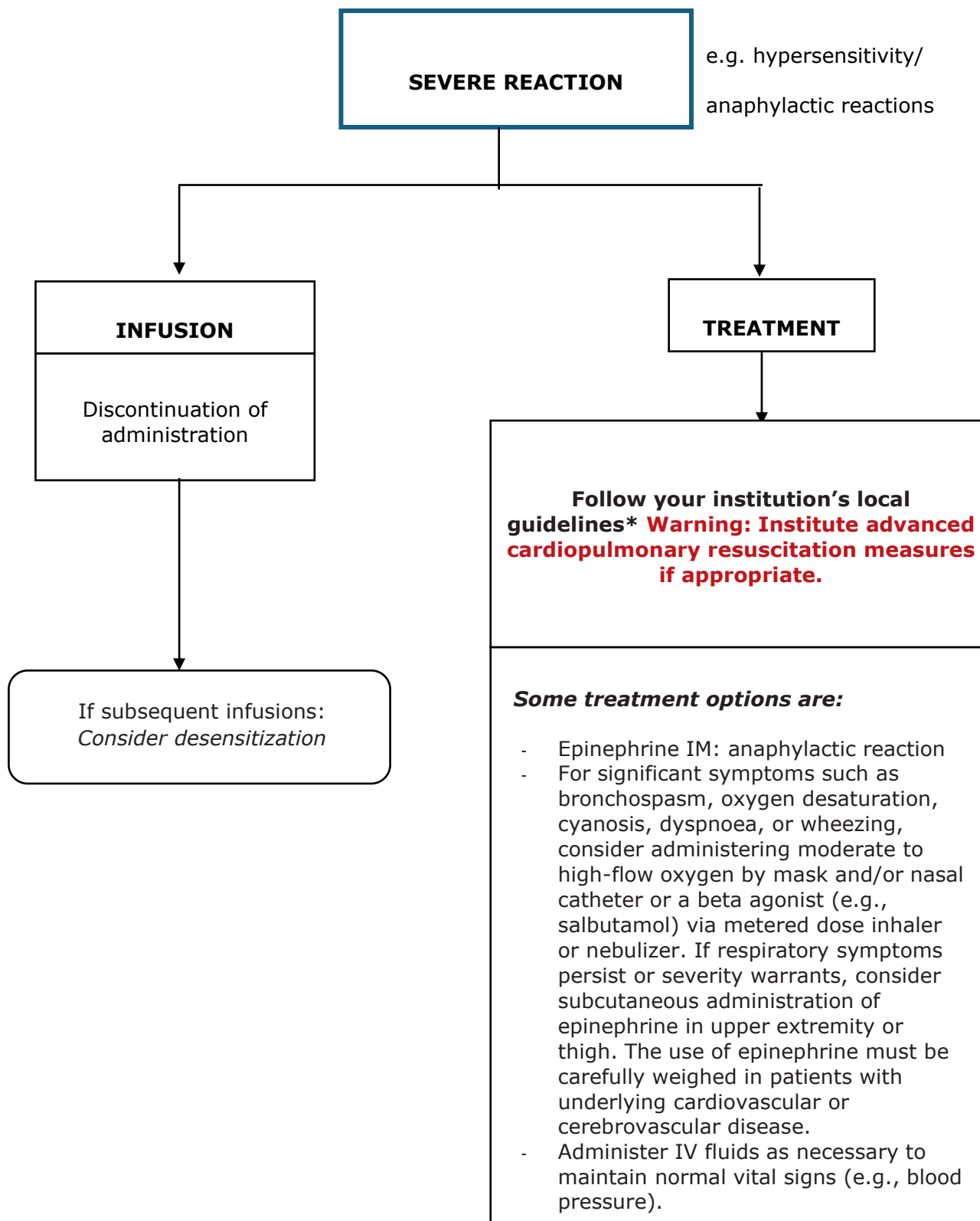
Subsequent infusions may need to occur in a hospital or in an appropriate setting of outpatient care until no such adverse reaction occurs and the treating physician determines that it is acceptable to return to home infusion.

Dose and infusion rate must not be changed for subsequent infusions without consulting the treating physician.

**Figure 1: Clinical management of mild to moderate reactions.**



**Figure 2: Clinical management of severe reactions.**



*\*Contraindications should always be weighed against the benefit or need to use epinephrine as a life-saving measure in case of life-threatening anaphylactic reactions.*



#### **4.C) SAFETY REPORTING**

To report adverse event(s) and/or pregnancy occurring in association with the use of Aldurazyme:

**Please contact Sanofi Medical Information\*:**

Phone: 1800 818 806 (Australia)

Fax: 1800 053 105 (Australia)

E-mail: MedInfo.Australia@sanofi.com

\*or refer to the Patient Support Program specific Pharmacovigilance reporting requirements for PSP nurses.

Alternately, you may report adverse events and/or pregnancy directly to the Therapeutic Goods Administration (TGA)

**TGA (Australia)**

Phone: 1800 044 114

Fax: +61 2 6232 8392

E-mail: adr.reports@tga.gov.au

Online reporting at: <https://aems.tga.gov.au>

#### **4.D) ADDITIONAL INFORMATION**

Please refer to the Aldurazyme PI available at [sanofi \(medsinfo.com.au\)](https://sanofi.medsinfo.com.au) for complete indication statements and further information about the approved use of Aldurazyme.