

Managing Exacerbations of Heart Failure

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Red Flags

- Ongoing chest pain
- Acute pulmonary oedema
- Oxygen saturation < 94% (in the absence of any other reasons)
- Haemodynamic instability
- Syncope or pre-syncope
- Recent myocardial infarction (within 2 weeks)
- Pregnant or post-partum woman.

Background – About Managing Exacerbations of Heart Failure

Exacerbations of heart failure are characterised by fluid overload, an event that can result in hospitalisation. Appropriate and rapid management can preclude further deterioration. Models of care that optimise medication titration (e.g., nurse-led titration) decrease hospital admission and improve survival.

Assessment

1. Assess the patient's **fluid and cardiovascular status:**

Weight, including any recent change

- *Respiratory rate*
- *Blood pressure*
- *Heart rate and rhythm (regular or irregular)*
- *Walking distance, including any recent change*
- *Fluid status:*
 - *Chest auscultation*
 - *Dyspnoea*
 - *Orthopnoea or pillows required to sleep*
 - *JVP*
 - *Ascites*
 - *Ankle oedema*
 - *Appetite*
 - *Bloating*
 - *Fatigue*
 - *Urine output*

2. Check adherence to medication, diet, salt intake and fluid restrictions.

3. Look for **exacerbating factors:**

- *Infection*
- *Thyroid dysfunction – hyperthyroidism, hypothyroidism*
- *Anaemia*
- *Iron deficiency (without anaemia) – consider if ferritin < 100 or transferrin saturation < 30% and ferritin < 250*
- *Arrhythmias e.g., atrial fibrillation (AF) or heart block*
- *Alcohol*
- *Medications:*
 - *Non-steroidal anti-inflammatory drugs (NSAIDs)*

- *Prednisolone (long-term)*
 - *Cyclosporine*
 - *Clozapine*
 - *Thiazolidinediones (TZDs or glitazones for type 2 diabetes)*
4. Review previous biochemistry and diuretic responses. Consider whether **repeat investigations** are needed as per the [Heart Failure \(Cardiac Failure\)](#) pathway.

Repeat investigations

- *ECG*
- *Chest X-ray*
- *Echocardiogram*
- *FBE*
- *U and E*
- *LFT*
- *TFT*
- *Iron studies*
- *Pacemaker/ICD check – if the patient has one.*

Management

1. Refer for an [immediate cardiology assessment](#) if a patient with heart failure presents with an exacerbation with any **red flags**.

Red flags

- *Ongoing chest pain*
 - *Acute pulmonary oedema*
 - *Oxygen saturation < 94% (in the absence of any other reasons)*
 - *Haemodynamic instability*
 - *Syncope or pre-syncope*
 - *Recent myocardial infarction (within 2 weeks)*
 - *Pregnant or post-partum woman*
2. If fluid overloaded, increase dose of diuretic by 50% to 100% from usual dose with the aim of reducing weight by 0.5 to 1 kg per day. This can be managed by the general practitioner, or a diuretic titration management plan can be arranged via [Complex Care Program](#) (previously HARP). Consider use of [heart failure diary](#) to monitor and self-manage medications.
 3. Check the patient's renal function within 3 days of changes to diuretic dosages.
 4. When weight has returned to pre-exacerbation weight, attempt to reduce diuretic dose back to minimal dose required to achieve baseline weight.
 5. Some deteriorations in heart failure patients may be due to acute dehydration, not fluid overload. If dehydrated, decrease dose of diuretic back to minimal dose required to achieve baseline weight until response achieved.
 6. Review the patient no later than 48 hours after first presentation.
 7. If changes in the diuretic dose do not stabilise the patient's symptoms and weight within 2 days:

- seek advice from a cardiologist by telephone, or
- arrange an [immediate cardiology assessment](#) by telephone, or
- if neither of the above options is possible, send patient to emergency department for an [immediate cardiology assessment](#).

For more information on managing fluid overload, over-diuresis, and dehydration, see Heart Foundation – [Fluid Management Algorithm in Heart Failure](#).

8. For patients whose performance status is poor or deteriorating, or who have multiple co-morbidities, consider a [palliative or end-stage heart failure approach](#), even if the exacerbation has responded to treatment. If end-stage heart failure, consider referral to [palliative services](#).

Referral

- Refer for an [immediate cardiology assessment](#) if a patient with heart failure presents with an exacerbation with any **red flags**.
- If changes in the diuretic dose do not stabilise the patient's symptoms and weight within 2 days:
 - seek advice from a cardiologist by telephone, or
 - arrange an [immediate cardiology assessment](#) by telephone, or
 - if neither of the above options is possible, send patient to emergency department for an [immediate cardiology assessment](#).
- If a community diuretic plan for diuretic titration is required, contact [Complex Care Program \(previously HARP\)](#).
- If end-stage heart failure, consider referral to [palliative services](#).

References

1. NHFA CSANZ Heart Failure Guidelines Working Group. [National Heart Foundation of Australia and Cardiac Society of Australia and New Zealand: Guidelines for the Prevention, Detection, and Management of Heart Failure in Australia 2018](#). Heart Lung and Circulation. 2018 Oct [cited 2018 Oct 31];27(10):1123-1208.

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