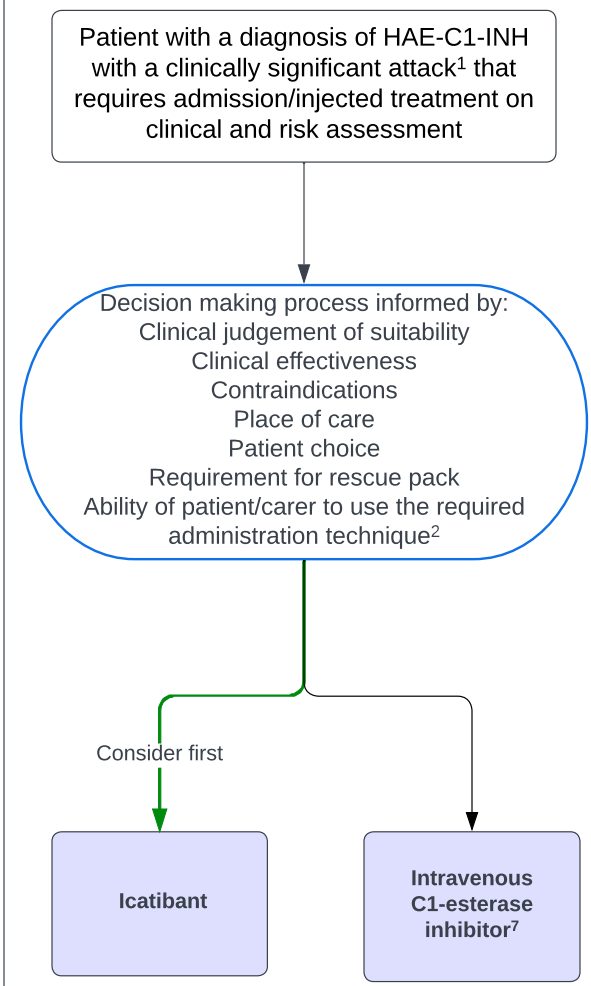
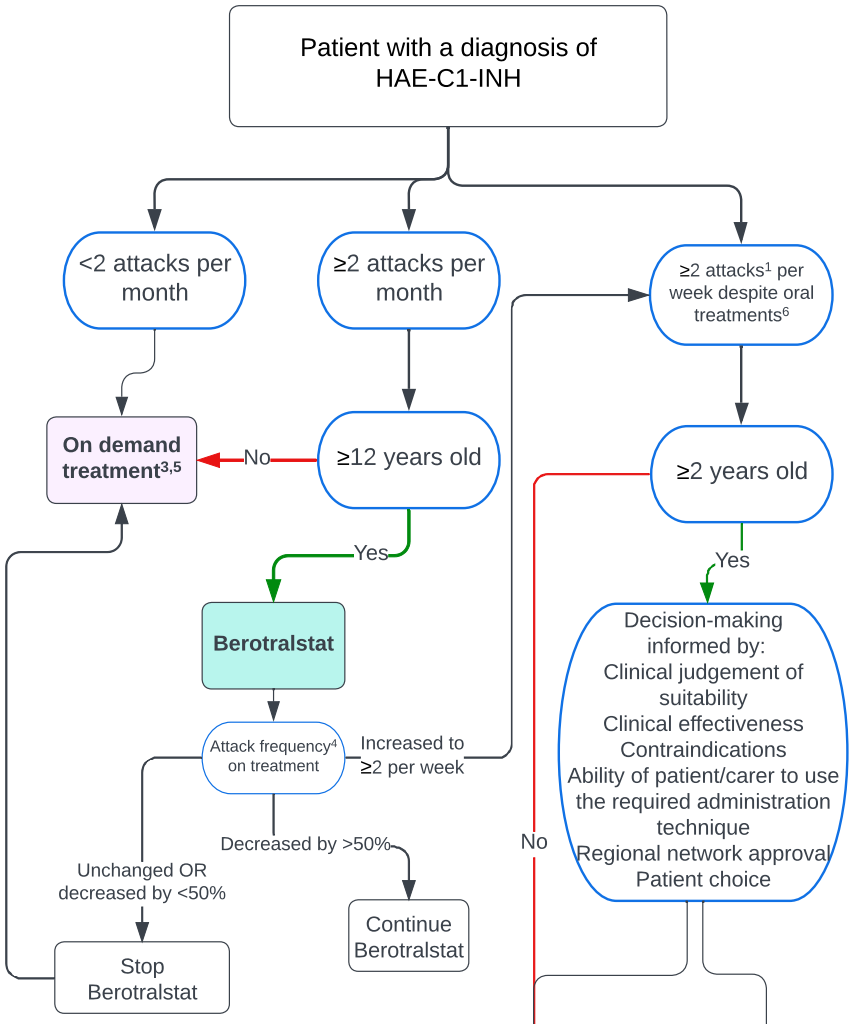
Commissioned treatment options for patients with Hereditary Angioedema secondary to C1 esterase inhibitor deficiency (HAE-C1-INH)

- This algorithm provides a framework to aid decision-making for angioedema specialists and patients
- The algorithm is informed by the regulatory status, NICE technology appraisal (TA) guidance and NHS England (NHSE) clinical commissioning policies. Relevant clinical commissioning policies/TAs should be consulted for further details
- All patients with a diagnosis of HAE-C1-INH should be under the care of specialised immunology centres as outlined in the service specification. HAE-C1-INH is classified as per the IUIS Phenotypical Classification
- For special circumstances including pregnancy and lactation, please refer to individual product Summary of Product Characteristics
- Where plasma products are used, patients need to be consented to potential risks associated with these products
- This algorithm is not intended to guide management during critical events including airway threatening or life threatening emergencies

On demand treatments



Long-term prophylactic treatments



Pre-procedure prophylaxis:
Patients with HAE-C1-INH are eligible for prophylaxis with C1-esterase inhibitor before undergoing dental, medical, obstetric or surgical procedures

Key

NHSE policy	NICE TA	In tariff/ NHSE policy

[1] The lanadelumab TA refers to clinically significant attacks as defined by i) potentially life threatening because it affects the head or neck or ii) causes pain or disability such that the patient cannot continue their normal activities. Frequency should be calculated over a period of at least 56 days.
[2] This includes securing venous access for C1-esterase inhibitors, and ability to reconstitute doses from multiple vials.
[3] Some adult patients are treated with androgens as oral prophylactic treatment. However, evidence is limited and accessing treatment is difficult so this is not recommended as first line for patients newly starting on prophylaxis. Where existing patients are established on androgen therapy, this may continue if considered clinically appropriate; if established patients do cease treatment with androgen therapy then review the need for any prophylaxis. An individualised assessment to withdrawal of androgens and commencing new prophylaxis should be taken. If a historical attack frequency is documented, it can be used as the basis for selecting other prophylaxis treatment options.
[4] Berotralstat should be stopped if, after 3 months of treatment, attack frequency has not reduced by at least 50% compared to baseline.
[5] Some patients, including children under 12, are treated with tranexamic acid however evidence is limited.
[6] Patients who are unable to tolerate oral medications are also eligible for lanadelumab/intravenous C1-esterase inhibitor.
[7] In appropriate cases and where available, licensed recombinant products should be considered in preference to plasma-derived products in the treatment of acute attacks.

Commissioned treatment options for patients with Acquired Angioedema secondary to C1 esterase inhibitor deficiency (AAE-C1-INH)

- This algorithm provides a framework to aid decision-making for angioedema specialists and patients
- The algorithm is informed by the regulatory status, NICE technology appraisal (TA) guidance and NHS England (NHSE) clinical commissioning policies. Relevant clinical commissioning policies/TAs should be consulted for further details
- All patients with a diagnosis of AAE-C1-INH should be under the care of specialised immunology centres as outlined in the service specification, alongside relevant specialist team involved in management of underlying condition. AAE-C1-INH is classified as per the IUIS Phenotypical Classification
- For special circumstances including pregnancy and lactation, please refer to individual product Summary of Product Characteristics
- Where plasma products are used, patients need to be consented to potential risks associated with these products
- This algorithm is not intended to guide management during critical events including airway threatening or life threatening emergencies

On demand treatments

Patient with a diagnosis of AAE-C1-INH with a clinically significant attack[1] that requires admission/injected treatment on clinical and risk assessment

Decision making process informed by:
Clinical judgement of suitability
Clinical effectiveness
Contraindications
Place of care
Patient choice
Requirement for rescue pack
Ability of patient/carer to use the required administration technique[2]

Consider first

- **Icatibant**
- **Intravenous C1 -esterase inhibitor[4]**

Long-term prophylactic treatments

Patient with a diagnosis of AAE-C1-INH

MDT and relevant specialist input to diagnose and treat the underlying cause of AAE. If additional treatment required:

- <2 attacks per week → **Tranexamic acid[3]**
- ≥2 attacks per week → **Intravenous C1 -esterase inhibitor**

Pre-procedure prophylaxis:
Patients with AAE-C1-INH are eligible for prophylaxis with C1-esterase inhibitor before undergoing dental, medical, obstetric or surgical procedures

Key

- NHSE policy
- In tariff

[1] A clinically significant attacks as defined by i) potentially life threatening because it affects the head or neck or ii) causes pain or disability such that the patient cannot continue their normal activities. Frequency should be calculated over a period of at least 56 days.
[2] This includes securing venous access for C1-esterase inhibitors, and ability to reconstitute doses from multiple vials.
[3] Some adult patients are treated with androgens as oral prophylactic treatment. However, evidence is limited and accessing treatment is difficult so this is not recommended as first line for patients newly starting on prophylaxis. Where existing patients are established on androgen therapy, this may continue if considered clinically appropriate; if established patients do cease treatment with androgen therapy then review the need for any prophylaxis. An individualised assessment to withdrawal of androgens and commencing new prophylaxis should be taken. If a historical attack frequency is documented, it can be used as the basis for selecting other prophylaxis treatment options.
[4] In appropriate cases and where available, licensed recombinant products should be considered in preference to plasma-derived products in the treatment of acute attacks.

Current Commissioning Position at Time of Publication

The algorithm describes the key criteria for accessing commissioned treatments.

Two of the commissioned treatments are via NICE TAs:

- Berotralstat for preventing recurrent attacks of hereditary angioedema (Technology appraisal guidance [TA738])(2021) https://www.nice.org.uk/guidance/ta738
- Lanadelumab for preventing recurrent attacks of hereditary angioedema (Technology appraisal guidance [TA606])(2019) https://www.nice.org.uk/guidance/ta606

NHS England has also published two clinical commissioning policies:

- Clinical Commissioning Policy: Treatment of Acute Attacks in Hereditary Angiodema (Adult)(April 2013) https://www.england.nhs.uk/commissioning/wp-content/uploads/sites/12/2013/09/b09-p-b.pdf
- Clinical Commissioning Policy: Plasma-derived C1-esterase inhibitor for prophylactic treatment of hereditary angioedema (HAE) types I and II (2016) https://www.england.nhs.uk/commissioning/wp-content/uploads/sites/12/2013/05/16045_FINAL.pdf