AWTTC
Canolfan Therapiwteg a Thocsicoleg Cymru Gyfan
All Wales Therapeutics & Toxicology Centre

Evidence summary report for a limited assessment

Adrenaline (EURneffy®) 2 mg nasal spray, solution in single-dose container

Indication under consideration
The emergency treatment of severe allergic reactions (anaphylaxis) due to insect stings or bites, foods, medicinal products, and other allergens as well as idiopathic or exercise-induced anaphylaxis. Treatment is indicated for adults and children with a body weight ≥ 30 kg.

Company
ALK-Abello Ltd

Background
An allergy is an overreaction of the immune system to a normally harmless substance (allergen) such as pollen, foods, dust mites, animal dander, insect stings and medicines. The immune system misidentifies the allergen as a threat and creates specific antibodies (immunoglobulin E) against it. Upon re-exposure to the allergen, the body releases chemicals such as histamine which causes swelling, inflammation and itching of the surrounding tissues. Allergic reactions can vary in intensity from mild localised skin irritation and sneezing for example, to severe life-threatening whole-body reactions (anaphylaxis) which require immediate medical treatment with adrenaline (Allergy UK).

It is reported that 21 million people in the UK (nearly 30% of the population) have allergies with 5 million experiencing severe enough symptoms to need specialist care and 4.5 million at risk of life-threatening allergic reactions. Numbers are increasing, especially in children, with hospital admissions for anaphylaxis rising significantly over the past decades (Allergy UK).

Intramuscular adrenaline is the first-line treatment for anaphylaxis (RCUK). Adrenaline autoinjectors (AAI) are often prescribed to people at risk of anaphylaxis for early self-administration or injection by a carer or family member in the event of an anaphylactic reaction. These devices inject a measured dose of adrenaline intramuscularly via a spring-loaded needle automatically deployed when the device is pressed against the outer thigh.

EURneffy® is the first intranasal adrenaline treatment for anaphylaxis and positioned as an alternative to AAIs (SmPC).

Guidance and recommendations
Adrenaline is the first-line treatment for anaphylaxis and is recommended in guidelines including those of the Resuscitation Council UK (RCUK) , World Allergy Organization (WAO) and European Academy of Allergy and Clinical Immunology. Anaphylaxis is more easily reversed in early adrenaline administration and delayed administration of adrenaline is a feature in fatal and near-fatal anaphylaxis (BSACI).

The British Society for Allergy and Clinical Immunology (BSACI) recommend an adrenaline autoinjector should be prescribed for those at risk of anaphylaxis, as part of their Allergy Action Plan, and include those:

- who have suffered a severe systemic reaction where the allergen cannot be easily avoided
- who are allergic to high-risk allergens, for example nuts with other risk factors (such as asthma), even if the reaction was relatively mild
- who had a reaction in response to trace amounts of allergen/trigger
- who cannot easily avoid the allergen
- with continuing risk of anaphylaxis (e.g. food dependent exercise-induced)
- with idiopathic anaphylaxis
- with significant co-factors.

The Medicines and Healthcare products Regulatory Agency (MHRA) issued guidance in 2014 (updated in 2021) recommending that people at significant risk of anaphylaxis are prescribed two AAI which should be carried at all times. For children, four should usually be prescribed, two for school and two for home (BSACI).

BSACI issued a position statement welcoming the MHRA approval of EURneffy® for use in the UK in July 2025. This was updated to reflect the publication of data from the USA relating to real world clinical use. After reviewing these data, BASCI state that for most patients at risk of anaphylaxis, EURneffy® can be considered to be a suitable means of giving rescue adrenaline to treat anaphylaxis and recommends shared decision-making when counselling patients on the use of EURneffy® in place of injectable adrenaline. However, BASCI highlight that the current evidence has not yet shown EURneffy® to be as effective as intramuscular adrenaline in treating anaphylaxis for some patient groups, including:

- people who have previously needed more than 1 dose of adrenaline to treat anaphylaxis
- people with a previous severe anaphylaxis with hypotension, something which is more common in those with allergy to insect venom.

At the present time, BSACI do not recommend EURneffy® as the sole rescue therapy for patients in these two groups and advise that these patients should continue to have ongoing access to adrenaline autoinjectors although they could be prescribed EURneffy® for use in the first instance (BSACI). BSACI has recently published both paediatric and adult Allergy Action Plans for individuals prescribed EURneffy® (BSACI).

The submitting company advises AWTTC that EURneffy® for its licensed indication will be made available in England via local commissioning. The applicant company has stated that they are not planning on making a submission to the Scottish Medicines Consortium for assessment.

Technology

Each single-dose EURneffy® container delivers adrenaline 2 mg in 100 microlitres as a nasal spray. One dose should be administered at the first sign of a severe Type I

allergic reaction. In the absence of clinical improvement after 5 minutes, or if deterioration occurs or symptoms reappear after the initial treatment, a second dose should be administered in the same nostril. A maximum of 4 mg (two doses) may be given unless instructed by a medical professional to give additional doses. It is recommended that patients should always carry two nasal sprays to treat an allergy emergency (SmPC EURneffy).

EURneffy® has a shelf life of 30 months, and can be used after accidental freezing if sufficiently thawed (SmPC EURneffy). The company advise in their submission that it is temperature stable up to 50°C. In comparison, AAIs have a shelf life of 24 months and have an upper temperature limit of 25°C. AAIs should not be refrigerated or frozen as this can compromise the integrity and effectiveness of the device and it is advised that it should be replaced if accidently frozen (Anaphylaxis UK). EURneffy® devices are significantly smaller and lighter than AAIs (SmPC EURneffy and SmPC EpiPen). Used EURneffy® containers may be disposed of in household waste, whereas AAIs should be disposed as 'sharps waste' (most commonly via community pharmacies) and which has a higher carbon footprint. The applicant company highlight that the smaller size and the disposal route of EURneffy® results in it having a lower environmental impact than AAIs.

EURneffy® is not licensed for any other indications.

Marketing authorisation date: 18 July 2025

Criteria for limited assessment

The AWMSG Scrutiny Panel reviewed the company request for the assessment of adrenaline (EURneffy®) and considered that it was suitable for a limited assessment via the Licensed One Wales Medicines Assessment Group (LOWMAG). They cited the following reasons for this decision:

- It is an alternative formulation of a long-established medicine for this indication.
- The anticipated budget impact is expected to be low and the product may be cost saving in comparison to AAIs due to having a potentially longer functional shelf life.

The AWMSG Scrutiny Panel agreed that the clinical equivalence of adrenaline delivered intranasally versus by autoinjector is sufficiently established for the MHRA to license and for the BSACI to consider it a suitable alternative to AAIs for the majority of patients and so does not warrant further review. Therefore, the limited assessment should give an overview of current use, equity of access, patient factors and budget impact only.

Comparator(s) and place in pathway

EURneffy® is an intranasal adrenaline treatment for anaphylaxis and the applicant company position it as an alternative to adrenaline autoinjectors.

The company propose that EURneffy® offers some patient groups advantages over AAIs, a view supported by clinical experts in Wales. These are discussed in the Patient factors section of this report.

Budget impact

The company estimates for the budget impact (BI) are given in Table 1 with the net resource costs of EURneffy® given in Table 2. EURneffy® is costed at the list price of £182.10 for a pack of two devices. The company comparators used are the two AAIs prescribed in Wales for adults and children over 30 kg, EpiPen® with a list price of £121.38 for a pack of two devices and Jext® with a list price of £60.69 per device. Costings per patient are for two prescribed devices as per UK guidance which recommends that patients should carry two adrenaline devices at all times. All prices exclude VAT.

As self-administered adrenaline devices are prescribed in case of emergency, most will not be used before expiry and there is no exact data available on usage. Therefore, for simplification, the company has assumed in their budget impact calculations that no patients have used their devices. The company has based the calculated cost per patient per year for both EURneffy® and AAIs on the average functional shelf life of each at the point of dispensing which is typically shorter than the products whole shelf life and thus reduces the effective usability period for patients. The average functional shelf life used for EURneffy®, and AAIs has been informed by real world evidence collected by the applicant company from 50 community pharmacies in England. The company state that the results of this study give an average functional shelf life of 11 months for AAIs at the point of dispensing (compared to a 24-month whole shelf life) and an average functional shelf life of 22 months for EURneffy® at the point of dispensing (compared to a 30-month whole shelf life).

Patient number estimates provided by the applicant company are based on UK prevalence data for allergy and company data on file from 2024 of the proportion of those provided with an AAI, which has been extrapolated for Wales using published population data. Uptake of EURneffy® for the first year is based on data from other markets with subsequent yearly uptake expected to be gradual with patients mainly switching on expiry of their current devices.

Table 1. Company model: budget impact estimate for EURneffy® in NHS Wales

	Year 1	Year 2	Year 3	Year 4	Year 5
Number of eligible patients	20,320	20,450	20,580	20,710	20,840
Uptake of new medicine (%)	5%	10%	15%	20%	25%
Number of patients receiving new medicine allowing for discontinuations	1,016	2,045	3,087	4,142	5,210
Medicine acquisition costs in a market without new medicine	£2,690,571	£2,707,785	£2,724,998	£2,742,211	£2,759,424
Medicines acquisition costs in a market with new medicine	£2,656,962	£2,640,136	£2,622,880	£2,605,194	£2,587,078
Net medicine acquisition costs	-£33,609	-£67,649	-£102,118	-£137,017	-£172,347

Table 2: Company model: net resource costs of EURneffy® versus AAIs

	Year 1	Year 2	Year 3	Year 4	Year 5
Net administration costs	-£874	-£1,759	-£2,655	-£3,562	-£4,481
Net diagnostic and monitoring costs	£0	£0	£0	£0	£0
Net adverse events costs	£0	£0	£0	£0	£0
Net primary care costs	£0	£0	£0	£0	£0
Net secondary or tertiary costs	£0	£0	£0	£0	£0
Net Personal Social Services costs	£0	£0	£0	£0	£0
Net resource implications	-£874	-£1,759	-£2,655	-£3,562	-£4,481

Critique of company BI model

- AWTTC broadly agree with the predicted number of patients who will be given EURneffy® for this indication although some clinical experts in Wales estimate that up to 7,500 patients may switch to EURneffy®. However, all clinical experts agree that patient numbers are difficult to estimate but expect that a considerable proportion of patients (especially paediatric patients) would prefer an intranasal adrenaline option over an injectable device.
- The company base case is calculated using functional shelf life derived from unpublished market research results. Using this measure results in EURneffy® being cost saving in comparison to AAIs. If calculations are based on the

whole shelf life of each product, the cost per patient per year for two EURneffy® devices is £72.84 compared to £60.69 for two AAIs; a cost increase of £12.15 per patient. This would result in a net increase in medicine acquisition spend for this patient population of £12,344 in Year 1 rising to £63,302 in Year 5. AWTTC sought views from Community Pharmacy Wales on the expiry date of AAIs dispensed in community pharmacies. They advise that feedback from colleagues working in community pharmacy is that the expiry date of AAIs dispensed to patients is sometimes 12 months or less. There is no published evidence on the functional shelf life of EURneffy® at the point of dispensing. Therefore, it is not possible to state with any certainty that EURneffy® will be cost saving in comparison to AAIs over the 5-year timeframe, but there is some, albeit limited evidence, indicating that patients will need replacement AAIs much more frequently than would be expected when considering their 24-month whole shelf life.

- Due to the fact that the majority of dispensing for both EURneffy® and AAIs is by community pharmacy, the company has included a net administration cost to account for the cost reimbursement paid to community pharmacy for each item dispensed in accordance with the 25/26 Community Pharmacy Contractual Framework (CPCF). Due to the longer functional shelf life of EURneffy® in comparison to AAIs, the administration cost of EURneffy® per year is predicted to be less due to the lower yearly refill rate, thus resulting in a net administration cost saving. AWTTC considers this reasonable as EURneffy® has a 6-month longer whole shelf life irrespective of real world functional shelf life data. Other resource use (e.g. monitoring costs and costs associated with adverse events) is assigned a net zero cost. AWTTC considers this assumption to be reasonable as EURneffy® and AAIs are considered to be therapeutically equivalent and all people experiencing anaphylaxis, irrespective of whether emergency adrenaline has been self-administered and by which type of device, are advised to immediately seek urgent medical attention and will be taken to hospital for monitoring and further treatment if necessary.
- Company budget impact calculations assume that all patients fill their prescriptions on device expiry. Additionally, it is also assumed that the usage of EURneffy® will be the same as usage of AAIs when the BSACI and clinical opinion indicates that patients may be more likely to use a nasal device over an injectable, therefore the number of EURneffy® devices required may be greater for some patients than the number of AAIs typically required over a similar time period.
- Evidence provided by the company indicates that it is reasonable to anticipate EURneffy® being cost saving when compared to AAIs due to its longer average functional shelf life at the point of dispensing although the magnitude of such savings is uncertain as estimates are based on several assumptions.

Impact on health and social care services

No additional burden on health or social care services is expected. EURneffy® may reduce patient barriers (as described in the following section) in accessing timely adrenaline treatment and thus help prevent life-threatening complications requiring an additional stay in hospital and treatment and so may be resource saving.

Patient factors

The submission from Anaphylaxis UK highlights the impact severe allergies has on the daily lives of people with them and how constantly trying to avoid their triggers can lead to persistent anxiety, fear of accidental exposure, social restrictions and reduced independence. They highlight the importance of people at risk of anaphylaxis knowing exactly how and when to use prescribed adrenaline. Although Anaphylaxis UK consider that a positive of AAIs is that people are familiar with them and know how to use them, they consider that the downsides include their bulky size which can prevent people from carrying them at all times and their short expiry dates. In addition, they suggest that a needle-free alternative would be welcomed by some people, particularly by young people and teenagers. The smaller size of EURneffy® will make it easier for some to keep their emergency adrenaline with them at all times as recommended. Clinicians in Wales also agree with this viewpoint, stating in particular that EURneffy® would offer an alternative option for teenagers who refuse to carry needles.

The applicant company highlight that despite the availability of AAIs, real-world data consistently show that these devices are often not used when needed. This underuse arises from a complex interplay of behavioural, psychological, and practical barriers—including user hesitation, unfilled prescriptions, device complexity, needle-related safety concerns, inadequate training, and limitations in portability and temperature stability. A study from the USA showed that even when prescribed and reimbursed, AAIs are frequently not carried or are inaccessible during emergencies, placing patients at significant risk (Warren et al, 2017). The applicant company provided evidence from a systematic review which found that only 37% of patients and 32% of parents/caregivers demonstrated correct AAI administration technique; after specific training, this rose to 77% of patients and 79% parents/caregivers (Turki et al, 2017). In comparison, human factor testing studies in the USA found that 98% of people who had no specific training on using EURneffy® correctly administered it (Hernandz-Trujillo et al, 2024), rising to 100% after training (Lowenthal et al, 2022). The BSACI concur that the availability of a needle-free device which is easier to administer than AAIs is likely to reduce the barriers for carrying and/or using emergency adrenaline in specific patient groups, resulting in more timely treatment of reactions and decreasing the risk of severe outcomes.

Both BSACI and some clinicians in Wales highlight that the easier administration of EURneffy® may offer some people with clinical indications such as needle phobia, neurodivergence or additional learning needs, advantages over AAIs. The applicant company also propose that EURneffy® will provide benefit for patients where communication barriers may be present such as non-native Welsh/English speakers or those with hearing impairments, as training in correct device usage is more straight forward than for AAIs, resulting in reduced rates of erroneous administration. Additionally, the simpler administration may reduce user hesitancy from third parties, such as parents, caregivers and school staff, who may need to administer emergency adrenaline to people under their care.

Equality impact assessment

AWTTC have completed an Equality and Health Impact Assessment in parallel with each development stage of the project. This follows the five ways of working for

public bodies, and work to achieving the wellbeing goals, outlined in the Well-Being of Future Generations (Wales) Act 2015.

It is likely that intranasal adrenaline (EURneffy®) will have a potential positive impact on some groups of people within the protected characteristics of the Equality Act 2010 and on the environment.

This report should be cited as: All Wales Therapeutics and Toxicology Centre. Evidence summary report for a limited assessment. Adrenaline (EURneffy®) nasal spray. Reference number: 6284. June 2026.