INTRANASAL ADRENALINE (EPINEPHRINE): HEALTHCARE PROFESSIONAL PERCEPTIONS AND PATIENT USABILITY

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BACKGROUND

Despite availability of adrenaline autoinjectors (AAIs) for anaphylaxis, underutilisation remains a significant concern.[1–4]

Severe allergic reactions primarily occur outside of a hospital setting and adrenaline is typically administered by patients or caregivers.

LESS THAN 50% **OF PATIENTS RECEIVED ADRENALINE PRE-HOSPITAL IN AN AUSTRALIAN AUDIT OF EMERGENCY DEPARTMENT PRESENTATIONS FOR ANAPHYLAXIS.[5]**

Common challenges to timely adrenaline administration include needle phobia and patients not carrying their AAI.[6–9]

An intranasal adrenaline device (*neffy*) designed to overcome these challenges has recently become available in the United States (US) and Europe. *neffy* delivers a single dose of adrenaline using an established device used in other emergency settings (e.g. opioid overdose) and represents an alternative to AAIs.[10]

METHODS

Prior to the availability of *neffy*, two studies were conducted to evaluate the potential of *neffy* as an alternative to AAIs through healthcare professional (HCP) perceptions and usability in simulated scenarios.

HCP survey: A web-based survey was conducted with 202 US HCPs to understand their perceptions of *neffy*.

Human factors (HF) study : A separate study of untrained, Type 1 allergy participants was conducted to evaluate the usability of *neffy* during a simulated allergy emergency. Eight adult patients/caregivers and eight paediatric participants (aged 10–17 years) were required to load a two-dose carry case, open the case, remove the nasal sprays and administer the product once and twice by following written instructions only.

RESULTS FROM A HEALTHCARE PROFESSIONAL SURVEY (US)

74% INDICATED A HIGH LIKELIHOOD OF **PRESCRIBING *NEFFY*** AFTER BEING PRESENTED WITH IT

90% CITED **'EASE OF PATIENT ADMINISTRATION'** AS THE MAIN REASON (FIG 1)

HCPs said they were strongly likely to prescribe *neffy* for (Fig 2):

1. **Needle-phobic** patients **(94%)**
2. Patients **at risk of not taking treatment (78%)**
3. Patients **at risk of delaying administration (71%)**

Figure 1: Main reasons given for prescribing *neffy*

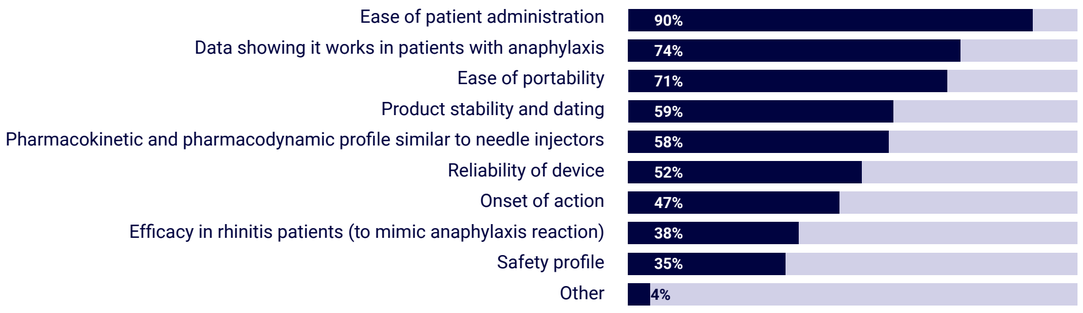
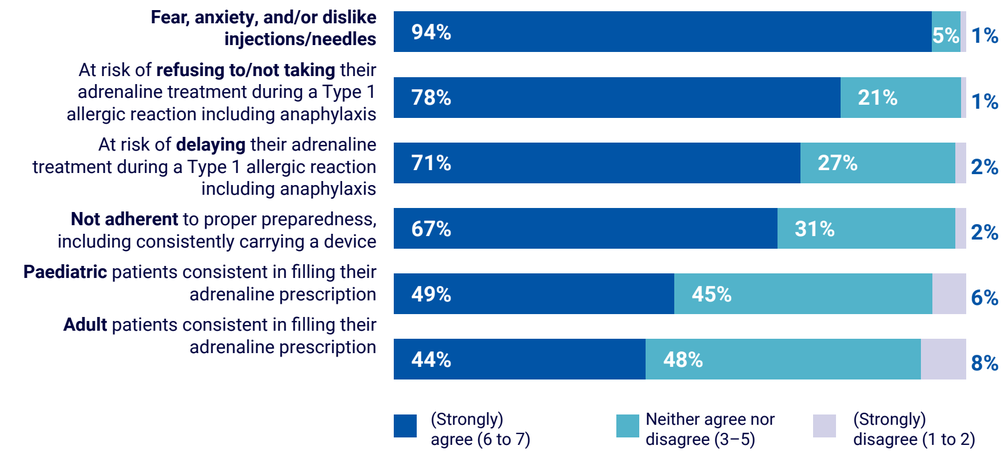


Figure 2: Likelihood of prescribing *neffy* for anaphylaxis in the following Type 1 allergy patients



RESULTS FROM A HUMAN FACTORS STUDY

100% OF PARTICIPANTS WERE ABLE TO SUCCESSFULLY **LOAD THE CARRYING CASE** WITH TWO *NEFFY* NASAL SPRAYS

100% OF PARTICIPANTS WERE ABLE TO SUCCESSFULLY **OPEN THE CARRYING CASE** DURING A SIMULATED ALLERGY EMERGENCY

100% OF PARTICIPANTS WERE ABLE TO SUCCESSFULLY **REMOVE THE NASAL SPRAYS AND ADMINISTER THE PRODUCT** BOTH ONCE AND TWICE (10 MINS APART) IN THE SAME NOSTRIL

These results are consistent with four previous HF studies (n=188) which demonstrated that patients, caregivers, passers-by, and children can administer *neffy* during a simulated allergy emergency without prior training.[11]

CONCLUSIONS

Favorable HCP perceptions and ease of administration with *neffy* demonstrate its potential to address current challenges in underutilisation and delayed administration of AAIs, which may improve patient outcomes and anaphylaxis management.

Disclaimer: *neffy* is not currently approved by the Therapeutic Goods Administration. Studies were funded by ARS Pharmaceuticals.

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