A Survey of Allergists, Pediatricians, and Primary Care Physicians About the Utilization of Epinephrine

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INTRODUCTION

Epinephrine auto-injectors (EAIs) are the first-line therapy for out-of-hospital treatment of severe allergic reactions, including anaphylaxis.[1,2,3] Although EAIs have been demonstrated to be both safe and effective, they are considered inconvenient and cumbersome.

The reluctance and hesitation to administer epinephrine with an EAI during a severe allergic reaction is well documented and increases the risk of serious outcomes.[4,5,6]

In contrast to current clinical guidelines and approved FDA labeling (Package Inserts) of epinephrine that instruct to dose immediately after detecting symptoms of an allergic reaction, up to 83% of patients/caregivers fail to administer treatment or delay the use of EAIs even when they know a severe allergic reaction is occurring.[7,8,9]

METHODS

A 30-minute double-blind survey was administered in September 2022 to a total of 315 physicians.

To understand the barriers and unmet needs related to approved EAIs, respondents were asked about their patients'/caregivers' perceptions of treatment options.

NUMBER OF RESPONDENTS BY SPECIALTY

Allergists	Pediatricians	Primary Care
150	90	75

RESULTS

- 66% of physicians agreed that patients/caregivers do not recognize the importance of carrying an EAI as directed.
- 61% of physicians agreed that patients/caregivers avoided an EAI because they were afraid of needles.
- 55% of physicians agreed that patients/caregivers avoided using an EAI because it is painful.
- 87% of physicians agreed that patients would prefer a needle-free means of delivering epinephrine.
- 62% of physicians would prescribe an intranasal epinephrine device for 50% or more of their patients.

DISCUSSION

Across all specialties, almost 90% of physicians felt that patients would appreciate an intranasal epinephrine device.

The benefits of an intranasal option include:

- 79% of physicians believe more patients would be more likely to carry the device (smaller size)
- 90% or physicians felt patients would be more likely to use the device because it doesn't require an injection
- 86% of physicians felt patients would use the device more quickly after the onset of symptoms than an EAI

CONCLUSIONS

Epinephrine auto-injectors that are currently available are not properly used when needed during an allergic reaction. Patients and caregivers fail to carry their EAIs and hesitate to use their devices during an allergy emergency due to needle phobia. This leads to significant delays in needed treatment and more severe patient outcomes. Having a needle-free option may help address many of the barriers patients currently experience with injectable devices.

90% of physicians agreed that patients and caregivers will be more likely to use an intranasal epinephrine device, and 86% agreed that patients will likely use the intranasal epinephrine device faster during a severe allergic reaction.

Needle-free, ease of administration, and a more portable device are key advantages that may enable patients to be better prepared and less hesitant to administer epinephrine when needed.

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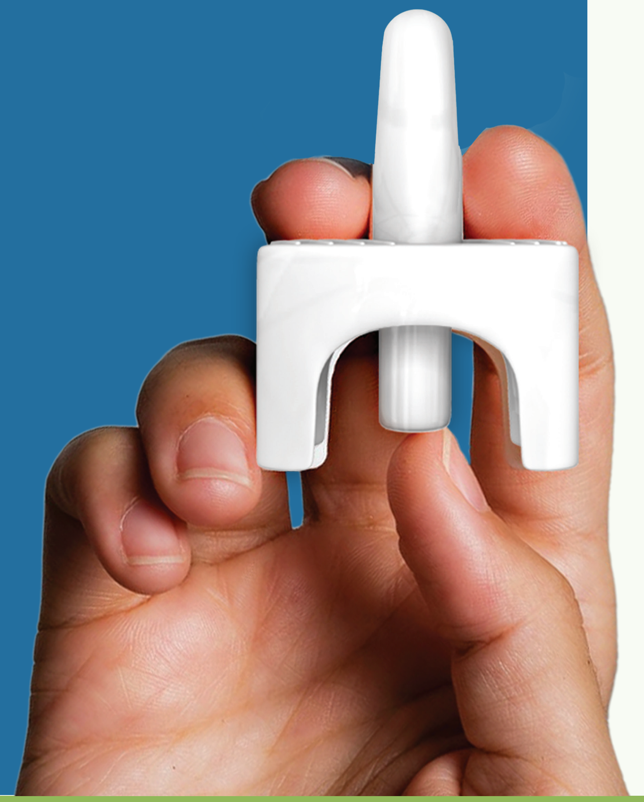
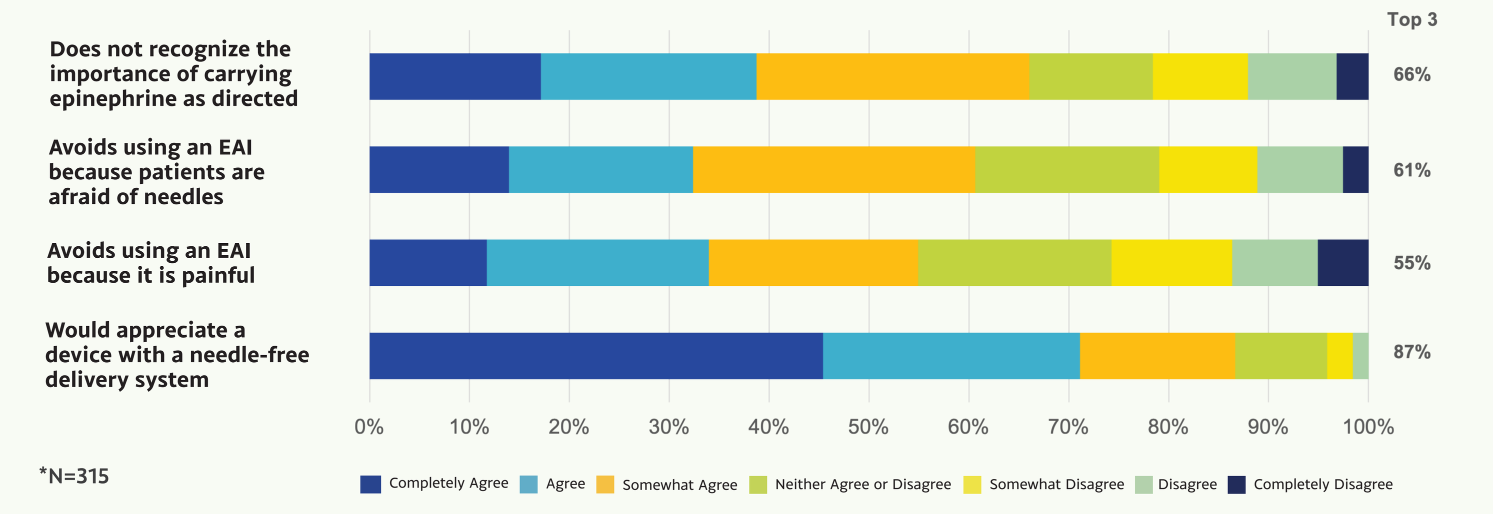


Figure 1: Perception of Caregivers & Allergy Patients at Risk of Anaphylaxis According to Respondents

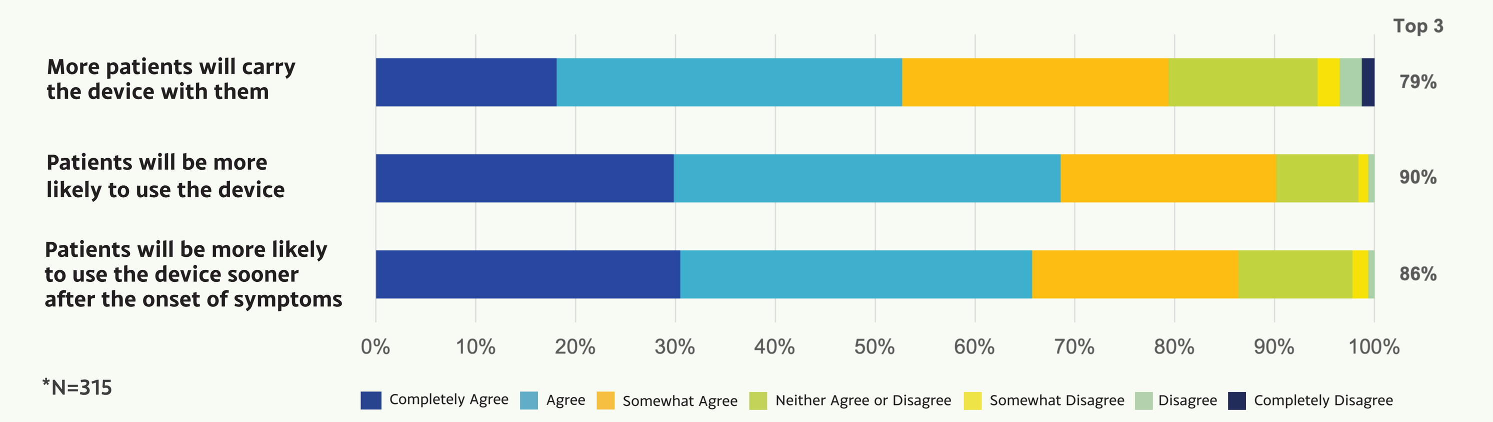


Top 3
Does not recognize the importance of carrying epinephrine as directed
66%
Avoids using an EAI because patients are afraid of needles
61%
Avoids using an EAI because it is painful
55%
Would appreciate a device with a needle-free delivery system
87%
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
*N=315
Completely Agree
Agree
Somewhat Agree
Neither Agree or Disagree
Somewhat Disagree
Disagree
Completely Disagree

Table 1: Perception of Caregivers & Allergy Patients at Risk of Anaphylaxis According to Respondents by Specialty

Top Reasons	Allergist N=150	Pediatrician N=90	Primary Care N=75
Does not recognize the importance of carrying epinephrine as directed	69%	67%	59%
Avoids using a needle injector because patients are afraid of needles	67%	61%	48%
Avoids using a needle injector because it is painful	62%	57%	39%
Would appreciate a device with a needle-free delivery system (e.g., intranasal)	85%	91%	84%

Figure 2: Caregivers' & Allergy Patients' Perception of Intranasal Device vs EAIs According to Respondents



Top 3
More patients will carry the device with them
79%
Patients will be more likely to use the device
90%
Patients will be more likely to use the device sooner after the onset of symptoms
86%
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
*N=315
Completely Agree
Agree
Somewhat Agree
Neither Agree or Disagree
Somewhat Disagree
Disagree
Completely Disagree

Table 2: Caregivers' & Allergy Patients' Perception of Intranasal Device vs EAIs According to Respondents by Specialty

Top Reasons	Allergist N=150	Pediatrician N=90	Primary Care N=75
More patients will carry the device with them	84%	74%	78%
Patients will be more likely to use the device	90%	90%	91%
Patients will be more likely to use the device sooner after the onset of symptoms	91%	78%	87%

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