Weaknesses of treatment guidelines for the management of anaphylaxis and healthcare utilization following an anaphylaxis event

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Aims: Intramuscular epinephrine (adrenaline) is classified as first-line treatment of choice for anaphylaxis in international and national guidelines. Patients at risk are recommended to be prescribed 2 epinephrine auto-injectors (EAs) which they should carry with them at all times. A prospective, web-based survey was conducted to obtain insight into adherence to treatment recommendations according guidelines, and post-anaphylaxis behavior in patients at risk for anaphylaxis and their caregivers.

Methods: 505 patients aged 18-65 years (mean = 30.4; 26.1% male) and 448 caregivers of individuals under aged 18 years (mean = 24.4; 33.3% male) were recruited in the United States between the 15th and 30th of November, 2015. All participants had been prescribed an EAI for self-administration or for administration as a caregiver.

Results: At home, 16.8% of patients and 14.3% of caregivers had no EAI and 61.0% of patients and 58.5% of caregivers indicated 1 EAI was available. At their workplace, 81.8% of patients did not have access to at least 1 EAI and 32.6% of caregivers reported that their child did not have access to at least 1 EAI at school. Only 9.6% of caregivers identified that 2 EAs were available for their children at school. Of those who received emergency care, 4.6% received their first dose of epinephrine in the Emergency Department. 6.0% of patients reported having to call emergency services due to the lack of a secondary EAI with 2.8% being admitted to inpatient care. Following utilization of an EAI, 23.8% of patients and 21.4% of caregivers did not seek follow-up medical attention.

Discussions: Given the lifesaving ability of EAs, the effect of treatment according to guidelines is imperative to successful manage anaphylactic events. The data call into question the efficacy of current educational programs and safety information delivered to patients and caregivers regarding the access to and the use of EAs to treat anaphylaxis.

Conclusions: This survey revealed poor guideline adherence by patients and caregivers: most patients did not carry the guideline recommended number of 2 EAs and did not seek emergency treatment after using an EAI. Reasons for this behavior should be investigated in further studies to improve the utilization of this life saving treatment.