Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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RESEARCH ABSTRACTS

Adverse Drug Reactions, Insect Reactions, Anaphylaxis

P001

A NEWLY DEVELOPED WEB BASED ANAPHYLAXIS CURRICULUM IMPROVES THE EFFECTIVENESS OF UNASSIGNED EPINEPHRINE ADMINISTRATORS

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Introduction: Anaphylaxis is a severe, life-threatening allergic reaction. Children can suffer from anaphylactic reactions at school. In 2014, Pennsylvania Legislature passed Act 195, which allows individuals to administer unassigned epinephrine in an emergency. This allows school staff to serve as unassigned epinephrine administrators (UEA's) during anaphylactic reactions. We developed an online training program which aims to help Pennsylvania school staff identify at risk children, manage, and treat anaphylaxis. This study measured the effectiveness of our online curriculum.
Methods: A newly developed web-based curriculum was distributed to UEA's within various Pennsylvania schools. An anonymous pre/post online survey (20-item survey) was administered to participants (UEA's) (n = 170).
Results: UEA's were identified as teachers (57%), administrators (15%), nurses (2%), and "other staff" (26%). Epinephrine was administered by "other staff" most frequently (55%) followed by teachers (30%) and school nurses (15%). Prior to the integration of our standardized online curriculum training, 24% of UEA's were aware of the general signs/symptoms of anaphylaxis. 28% knew the first line treatment for anaphylaxis, and only 17% had correctly identified the 4 essential steps of epinephrine administration. Following the implementation of our online curriculum, follow up surveys revealed significant improvement in anaphylaxis assessment scores. 88% of UEA's were aware of signs/symptoms of anaphylaxis, 92% cited epinephrine as first-line therapy for anaphylaxis, and 79% had correctly identified the 4 essential steps of treatment compared with 12% before the training course.
Conclusion: Provision of online training for school staff increases availability and effectiveness of UEA's.

P002

TOLERABILITY OF GRADED CORONAVIRUS DISEASE 2019 MRNA VACCINE DOSING

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Introduction: The rapid development of novel coronavirus disease 2019 (COVID-19) mRNA vaccines and their widespread use has raised concerns that they may cause allergic reactions at rates greater than conventional vaccines. Vaccine administration strategies in cases of prior COVID-19 vaccine reaction or patient hesitancy include full dose administration with close observation and graded dosing protocols.
Methods: Retrospective chart review of patients who were referred to an allergy clinic for observed COVID-19 vaccine administration with emphasis on demographic characteristics, atopic co-morbidities, prior vaccine reactions, and outcome of challenge.
Results: Data were available for 83 patients comprising 102 total COVID-19 vaccine challenges. All (n=102) challenges were successful; 21 experienced symptoms and 81 did not. The most reported symptoms were pruritus (n=5), headache (n=5), and chest tightness (n=3). No patient experienced vital sign changes during the protocol and there were no cases of anaphylaxis. The most common dosing protocols were either one-step (n=38) or two-step (n=36). The most common reasons for undergoing challenge were previous COVID-19 vaccine reaction (n=55) and concern for multiple drug allergies (n=21).
Conclusion: This review demonstrates that COVID-19 vaccine graded dosing protocols were highly tolerated and successful regardless of prior COVID-19 vaccine reactions or drug allergies. The presence of symptoms during the challenge did not preclude successful outcome, and no patients experienced anaphylaxis. Given the ongoing nature of the COVID-19 pandemic, it is important to recognize that graded challenge or full dose administration with observation may provide a safe means for patients who are hesitant to pursue COVID-19 vaccination.

P003

REAL-WORLD TREATMENT BURDEN ASSOCIATED WITH PARENTERAL ON-DEMAND THERAPIES FOR HEREDITARY ANGIOEDEMA

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Introduction: The objective of the current study is to describe treatment burden associated with FDA-approved on-demand therapies for hereditary angioedema (HAE) attacks using the real-world frequency of administration site reactions reported in the FDA's Adverse Event Reporting System (FAERS).
Method: : We searched FAERS data from 10/01/2009 to 3/31/2021 for human C1-inhibitor (H-C1-INH), ecallantide, icatibant, and recombinant C1-inhibitor (R-C1-INH). The number of administration site adverse drug reactions (ADRs), where the drug was listed as "primary suspect" were recorded for each drug. ADR preferred terms were then grouped into an ADR domain based on semantic and/or clinical similarity. This process resulted in 15 overarching ADR domains. For each ADR domain, the number of reports for each drug were calculated per year from the time of their approval through March 2021. Descriptive results are presented.
Results: The most frequently reported ADR domains included injection site pain, erythema, swelling as well as access site complications or malfunctions. Icatibant had the highest rate of ADRs