

Supplemental Online Content

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eMethods

eAppendix. Employee Symptom Survey

This supplemental material has been provided by the authors to give readers additional information about their work.

eMethods

Mass General Brigham (MGB) began employee COVID-19 vaccination on December 16, 2020. Vaccination occurred across 17 vaccine clinics in phases with the earliest vaccinations in employees whose primary location of work included: ambulatory location for COVID-19 evaluation/testing/care, emergency departments, inpatient and observation units, laboratories working with COVID-19, occupational health clinics, patient homes (home health), and urgent care centers. The only allergy-related exclusion criterion for initial vaccination was a history of a severe allergic reaction (e.g., anaphylaxis) to a component of the vaccine (e.g., polyethylene glycol or polysorbate 80). After vaccination in the MGB vaccine clinics, employees were observed for 15 or 30 minutes according to guidelines set by the Centers for Disease Control and Prevention.

For potential allergic reactions, pages to a dedicated MGB allergy/immunology pager, implemented December 17, 2020 to support employee vaccination, were encouraged. MGB allergists maintained a shared pager log and all potentially allergic reactions were specialist-documented in the employee's electronic health record (EHR). Vaccine clinic staff also documented potential reactions associated with vaccination in the employee's EHR. Filing of 1) a Vaccine Adverse Event Reporting System report and 2) a safety report was encouraged for all possible anaphylactic reactions. Each MGB-affiliated hospital sent MGB allergists COVID-19 vaccine-related safety reports biweekly during employee vaccination.

For 3 days after vaccination, employees were contacted regarding post-vaccination symptoms through a multi-pronged approach including e-mail, text message, phone, and employee smartphone application links; symptom checks were completed through a web-based Research Electronic Data Capture (REDCap)¹ survey or telephone. Survey completion was defined as full completion of at least one of the three post-vaccine symptom surveys. Employees who self-reported an allergic reaction more severe than itching and rash alone were referred to MGB allergists for evaluation and dose two guidance.

Investigators screened 546 logged pages, 85 health records of employees self-reporting 2 or more allergic symptoms, 169 MGB safety reports, and 795 MGB allergy referrals as part of prospective anaphylaxis surveillance. A comprehensive EHR review was performed on all possible anaphylaxis cases by a board-certified allergist, and included demographic, allergy history, and reaction detail (timing, symptoms, treatment, measurement of tryptase, and outcome). Potential anaphylaxis cases were scored according to Brighton² and National Institute of Allergy and Infectious Diseases/ Food Allergy and Anaphylaxis Network³ criteria by at least two allergists. Severity was scored using a modified Ring and Messmer⁴ scale.

eAppendix: Employee Symptom Survey—Allergy Question

Version 1. December 17 through December 31 2020

Have you had any of the following allergic symptoms over the past day? (check all that apply)

- Rash or itching (other than at injection site)
- Hives
- Swollen lips, tongue, eyes, or face
- Wheezing, chest tightness or shortness of breath
- None of the above

Version 2. January 1, 2021 through present

Over the past day, have you had any of the following allergic symptoms? (check all that apply)

- Rash or itching (other than where you got your shot)
- Hives (itchy, raised bumps that can look like mosquito bites)
- Swollen lips, tongue, eyes, or face
- Wheezing, chest tightness or shortness of breath that has continued since your shot
- None of the above

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