An e-mail based vaccine curriculum for pediatric residents improves self-reported knowledge

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BACKGROUND

Objectives

Among pediatric residents in a large pediatric training program:

1. To evaluate voluntary participation in an e-mail-based vaccine curriculum.
2. To assess perceived change in a) vaccine knowledge, b) self-efficacy in vaccine conversations with vaccine-hesitant parents.
3. To assess perspectives on the format and effectiveness of an e-mail-based curriculum.

Methods

This was an evaluation of a resident-led e-mail-based vaccine curriculum, with e-mails sent weekly to all pediatric residents from 2017 to the present. E-mails contained vaccine-related content such as vaccine schedules, side effects, and common parental concerns. The content was updated yearly.

E-mail opening rates were monitored to assess the usage of the curriculum.

Study Population: All-level pediatric residents who completed surveys before and after the educational program during each academic year through 2022; residents that voluntarily participated in a group interview.

Survey Design and Administration: Pre- and post-surveys sent via e-mail, 2 total surveys per year. Residents were asked to use a 1-5 Likert scale (1=strongly disagree, 5=strongly agree) to rate knowledge and comfort surrounding pediatric vaccine education pre- and post-e-mail curriculum. Qualitative data were obtained during a focus group among 8 residents in 2018.

Analysis: ANOVA was used to compare mean opening rates and t-Tests to compare resident knowledge and comfort before and after the vaccine curriculum was completed.

Results

Residents in the focus group either read some or all the e-mails and felt that it was an overall effective educational modality.

E-mail topics were said to help improve communication with families by providing credible facts to build upon for parental education and reinforcing previously learned information.

Residents felt that an e-mail curriculum was a reliable option for vaccine education; however, residents noted that many individuals did not open their e-mails consistently.

Conclusions

There was a high resident participation rate in this e-mail-based curriculum, particularly after the onset of the COVID-19 pandemic, suggesting a potential increase in interest surrounding vaccines as a result of the pandemic.

The implementation of our vaccine e-mail curriculum is associated with increased resident-reported vaccine knowledge but not with increased reported self-efficacy in addressing vaccine-hesitant families.

It may not be possible to capture everyone with one modality; however, e-mailing is a simple, scalable, inexpensive option that can adjunct educational modalities already in place.

Further evaluation of e-mail-based vaccine curricula is necessary to improve resident comfort with addressing parental vaccine hesitancy. Integration of an e-mail-based curriculum may improve resident education across multiple topics and serves as a flexible tool to address changing issues.

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