

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

Background: The World Health Organization recently listed vaccine hesitancy as one of the top 10 threats to global health. A pediatrician's recommendation is a strong predictor of whether a parent decides to vaccinate, yet pediatric residents are rarely adequately trained to educate families on information regarding vaccines. This highlights the need for improved evidence-based education to empower resident-led vaccine advocacy when approaching vaccine-hesitant families.

Objectives: To evaluate the voluntary participation of residents in an e-mail-based vaccine curriculum and assess perceived change in competency in providing vaccine education by residents.

Methods: An e-mail-based vaccine curriculum was implemented starting in 2016 at Children's Hospital Colorado. Surveys were distributed to all-level pediatric residents before and after the educational program completion during each academic year through 2022. Residents were asked on a 1-5 Likert scale (1=strongly disagree, 5=strongly agree) on knowledge and comfort surrounding pediatric vaccine education pre- and post-email curriculum. Email opening rates were monitored to assess the usage of the curriculum.

Results: Opening rates of emails varied by academic year ranging from ~40-60% and have increased in the last 3 years. Resident reported comfort with vaccine knowledge increased by 20% after the curriculum ($p < 0.05$). There was no change in reported self-efficacy to address vaccine hesitancy.

Conclusion: There is a high resident participation rate in this e-mail-based curriculum, particularly after the onset of COVID-19, suggesting a potential increase in interest surrounding vaccines as a result of the pandemic. The implementation of our vaccine email curriculum is associated with increased resident-reported vaccine knowledge but not with increased reported self-efficacy in addressing vaccine-hesitant families. Further evaluation of email-based vaccine curricula is necessary to improve resident comfort with addressing patient vaccine hesitancy. Integration of an email-based curriculum may improve resident education across multiple topics and serves as a flexible tool to address changing issues.