

Changing Perspectives on Pediatric Human Papillomavirus (HPV) Vaccination among Dental Students and Residents Reveals Recent Increase in Vaccine Hesitancy

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BACKGROUND

- There are ever-changing and evolving messages in the media and social media landscape regarding the value and efficacy of pediatric vaccinations.
- An increasing volume of misinformation and disinformation has led to significant increases in vaccine hesitancy and mistrust even among highly educated populations.
- Successful strategies are needed for healthcare providers to directly address this misinformation and the associated parental vaccination hesitancy in order to improve public health and patient outcomes.

STUDY OBJECTIVE

- Although many studies have evaluated the role of specific healthcare providers, such as pediatricians, in addressing vaccine hesitancy, an increasing body of research has demonstrated that dentists and dental providers may also have significant influence on vaccination acceptance and parental perceptions, particularly in the area of human papillomavirus (HPV) vaccination
- Vaccination knowledge, awareness, and acceptance strongly influence provider recommendations, yet relatively few studies have focused on assessing these aspects of dental provider HPV vaccine literacy
- Based upon this information, the primary objective of this study was to provide a more current and up-to-date evaluation of these recent trends among dental students and post-graduate residents to thereby identify any differences that might suggest opportunities for educational interventions or training.

STUDY APPROVAL

- The protocol for this study was reviewed and approved by the University of Nevada, Las Vegas (UNLV) Institutional Review Board (IRB) under protocol number [1762988-2] titled “Retrospective analysis of educational in-class dental student survey” on 8 June 2021. Informed consent for this retrospective study and analysis was waived in accordance with the Basic Health and Human Services (HHS) Policy for the Protection of Human Research Subjects (46.101); Subpart A (b) regarding research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement) in which the subjects cannot be identified directly or through identifiers.

SURVEY

- In brief, enrolled dental students and post-graduate dental residents were asked to complete a voluntary survey, following a scheduled curricular module focusing on vaccination, with a specific focus on human papillomavirus (HPV) vaccination and the relevance to dentistry - based upon a previously validated knowledge, awareness, and clinical practice survey. Participants were asked to voluntarily turn in their survey and supporting evidence with or without demographic information (age, sex, race, or ethnicity only) but with no specific identifying information regarding the respondents (no student identification numbers or other specific identifiers).

RESULTS

Figure 1. Graphic analysis of pro- and anti-vaccine response among DMD students and PG residents. (A) Relative frequency of disagree/neutral responses to **pro-vaccines** questions (Q1 Vaccines necessary; Q3 Vaccines safe; Q6 Vaccines effective) increased over time in both DMD and PGR cohorts. (B) Relative frequency of agree responses to **anti-vaccine** questions (Q2: Too many vaccines; Q4: Vaccines make you sick; also increased over time in both DMD and PGR cohorts, with increases observed among DMD but not PGR cohorts to Q5 (Vaccines dangerous)).

1. Vaccines are necessary to protect public health
2. There are too many required vaccines
3. Vaccines are generally safe
4. Vaccination can make you sick
5. Some vaccines are dangerous
6. Vaccines are generally effective
7. I follow the ACIP vaccine guidelines for myself
8. I adhere to the vaccine guidelines for my family

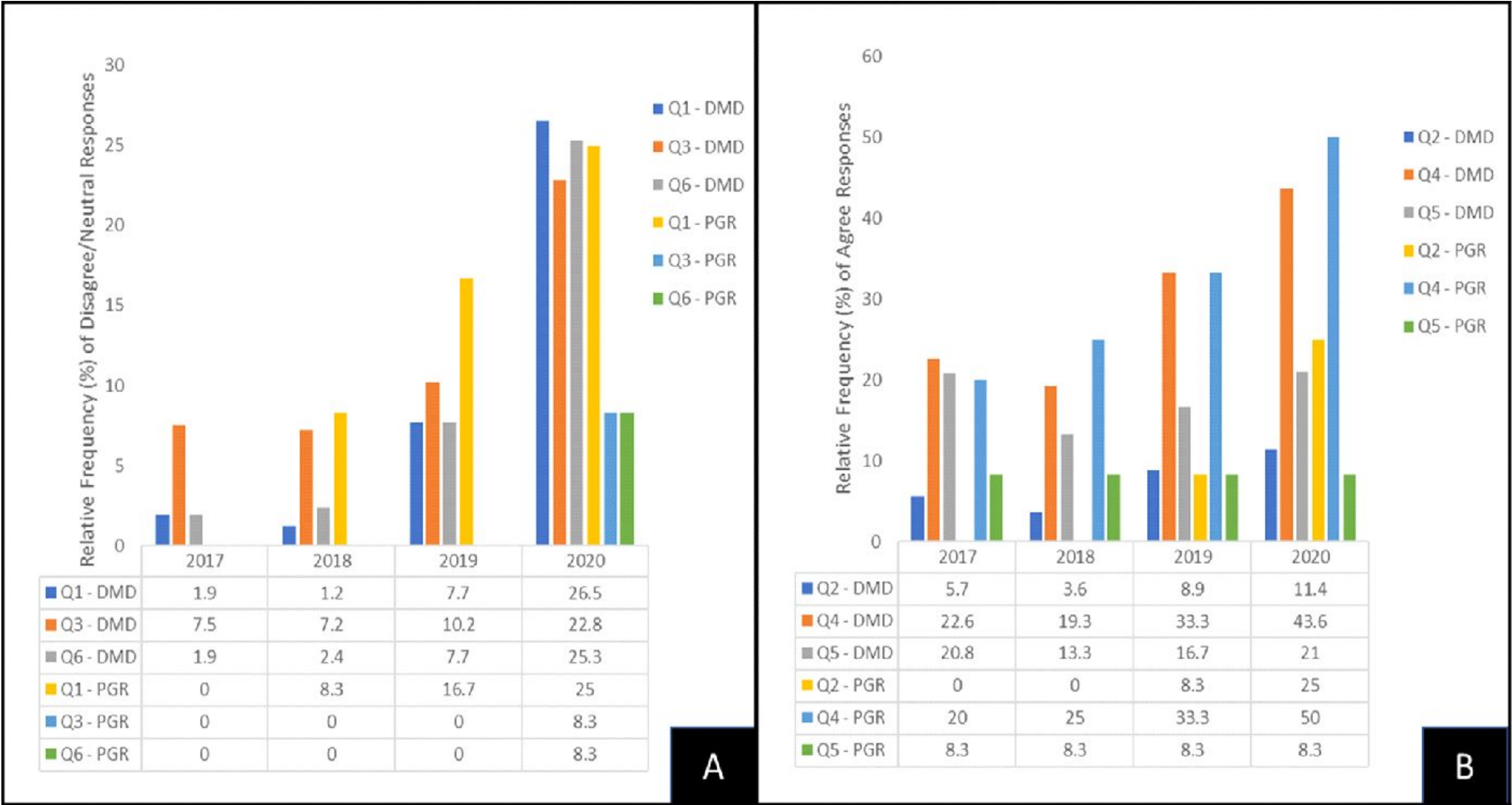
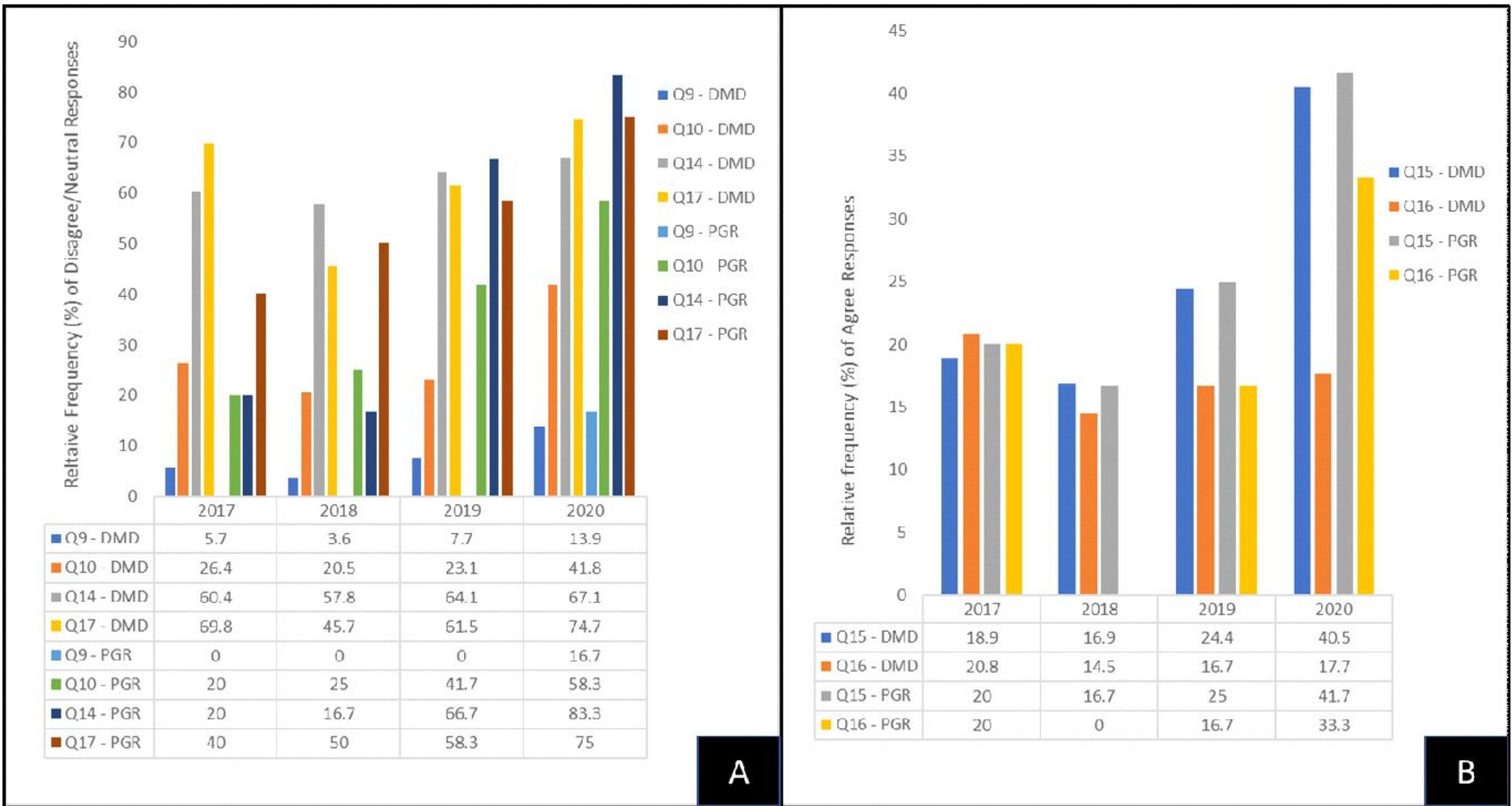


Figure 2. Graphic analysis of pro- and anti-HPV vaccine response among DMD students and PG residents. (A) Relative frequency of disagree/neutral responses to **pro-HPV vaccines questions** (Q9—HPV vaccine awareness; Q10—HPV vaccine important for me; Q14—Discussed HPV vaccines with doctor; Q17—Received HPV vaccine) increased over time in both DMD and PGR cohorts. (B) Relative frequency of agree responses to anti-HPV vaccine questions (Q15—Not enough information about HPV vaccine; Q16—Concerned about HPV vaccine side effects) also increased over time in both DMD and PGR cohorts.

9. I am aware of a vaccine for human papillomavirus (HPV)
10. HPV vaccination is important for me
11. HPV vaccination is important for (my) spouse/partner
12. HPV vaccination is important for (my) daughter(s)
13. HPV vaccination is important for (my) son(s)
14. I have discussed HPV vaccination with a doctor
15. I do not have enough information about the HPV vaccine
16. I am concerned about possible HPV vaccine side effects
17. I have already received the HPV vaccine



CONCLUSIONS

Although most respondents agreed that vaccines were necessary, safe, and effective, over the past 4 years (2017–2020) a growing percentage of respondents disagreed. In addition, although most respondents disagreed that there are too many required vaccines, vaccines can make you sick, or are dangerous,a growing percentage of respondents now agreed with these statements. Finally, although most respondents were aware of the HPV vaccine, recently a growing percentage of both students and residents reported they had insufficient information about this vaccine. These results provide novel insights into recent changes in attitudes and beliefs regarding vaccination among this population. Moreover, analysis of these shifts in attitudes and knowledge about HPV vaccination suggests that curricular integration of vaccine research and hesitancy may be needed to answer these questions in a supportive learning environment that fosters critical thinking and evidence-based practice and decision making.

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CITATION

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