

**Project Title:** An Examination Of Multilevel Factors Influencing U.S. Vietnamese Parents' HPV Vaccine Uptake For Their Adolescent Children

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## **Narrative Section**

- (1) We confirm that the tangible output and project goals have been completed. Specifically, the AACE READS Grant supported the completion of a mixed-method study exploring practice-, provider-, and patient-level factors influencing U.S. Vietnamese parents' HPV vaccine decision-making for their adolescent children.
- (2) The project followed an explanatory sequential mixed-methods design and consisted of two phases. In the first phase, we quantitatively examined practice-, provider-, and patient-level factors influencing U.S. Vietnamese parents' HPV vaccine uptake for their adolescents. A national, cross-sectional, online survey was conducted among 408 U.S. Vietnamese parents with children aged 9 to 18. In the second phase, we qualitatively explored why and how factors identified in the first phase shaped U.S. Vietnamese parents' HPV vaccine decision-making and assessed practice-, provider-, and patient-level strategies to promote adolescent HPV vaccine uptake. Phone-based semi-structured interviews were conducted among 32 survey respondents purposively recruited to represent subgroups by HPV vaccine status and sex of child. We were able to meet all of the project goal or objective as set forth in the proposal.
- (3) In our grant application, we proposed to recruit 410 U.S. Vietnamese parents with adolescent children for the first phase and 32 parents for the second phase. We were able to recruit 408 parents for the first phase (99.5% of the proposed sample) and 32 parents for the second phase (100% of the proposed sample). Additionally, we have completed all proposed data analyses activities according to the metrics set forth in the proposal.
- (4) Summary of lessons learned from the project:

Our quantitative data indicated that only 41% of U.S. Vietnamese parents had initiated and 23% had completed the vaccine series for their child. Further, only 46% received provider recommendation for HPV vaccine. Vaccine initiation was associated with receiving provider recommendation for vaccination (either low- or high-quality), while willingness to initiate the vaccine was associated with receiving a high-quality recommendation (which occurred among 32% of participants). In addition, both vaccine initiation and willingness to initiate the vaccine was negatively associated with parental perception that their child was too young for an STI-preventing vaccine.

Our qualitative data indicated that, at the practice level, there were mixed perspectives of U.S. Vietnamese regarding the utility of clinic-based materials about the HPV vaccine, a desire for high-quality translations of materials, and challenges in appointment scheduling. At the provider level, provider recommendation, along with trust in such recommendation, emerged as key facilitators of vaccine uptake. At the same time, several parents received either no

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recommendation or a low-quality recommendation. Diverging patterns of vaccine acceptance followed recommendation receipt and not all parents got their adolescents vaccinated immediately in the same visit. At the patient level, we documented low knowledge of the vaccine, particularly regarding recommended ages, number of doses, and eligibility for males to get the vaccine. Other patient-level barriers included a lack of healthcare utilization, perceived child's sexual inactivity, and safety concerns. All Vietnamese parents with unvaccinated children were open to future vaccinations. Key reasons underlying vaccine acceptance were trust in the protective value of the vaccine, personal experience with HPV, and school requirements.

Besides these key findings, we also reflected on several lessons learned through the process of conducting the research project. We encountered potentially fraudulent responses (e.g., from online "bots" who completed the survey for the incentives) and had to set up filters and methods to detect them in order to ensure high-quality data. We also found snowball sampling to be a very successful recruitment method among the population of U.S. Vietnamese parents. Moreover, we found that including information about the PI (e.g., being a bilingual U.S. Vietnamese person with a long history of doing research on Vietnamese health) and motivation for doing the research was an useful way of generating trust among research participants and encouraging them to participate in the study.

- (5) Two oral presentations based on data from the study has been accepted at the 2021 International Cancer Education Conference. We plan to leverage data from this study and submit a NCI K application to design a mHealth intervention for HPV vaccine acceptance and uptake among U.S. Vietnamese parents for their adolescent children in 2022.