

Examining Parent, Child, and Provider Experiences with Early Childhood Immunization for an HPV Vaccine Trial Among Four to Eight-Year-Olds: A Mixed Methods Study

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EXCEPTIONAL CARE. WITHOUT EXCEPTION.

Background

Since the introduction of the first vaccine against human papillomavirus (HPV) in 2006, there has been a significant drop in HPV infection and HPV-related cancers in the United States. Despite exemplary efficacy and safety data, less than 50% of US adolescents complete the HPV vaccine series by the recommended age of 13.

Purpose

This study aims to deepen understanding of parent, patient, and provider experiences as part of an early childhood HPV vaccine trial, to ultimately encourage participation in the trial and subsequent uptake post-recommendation.

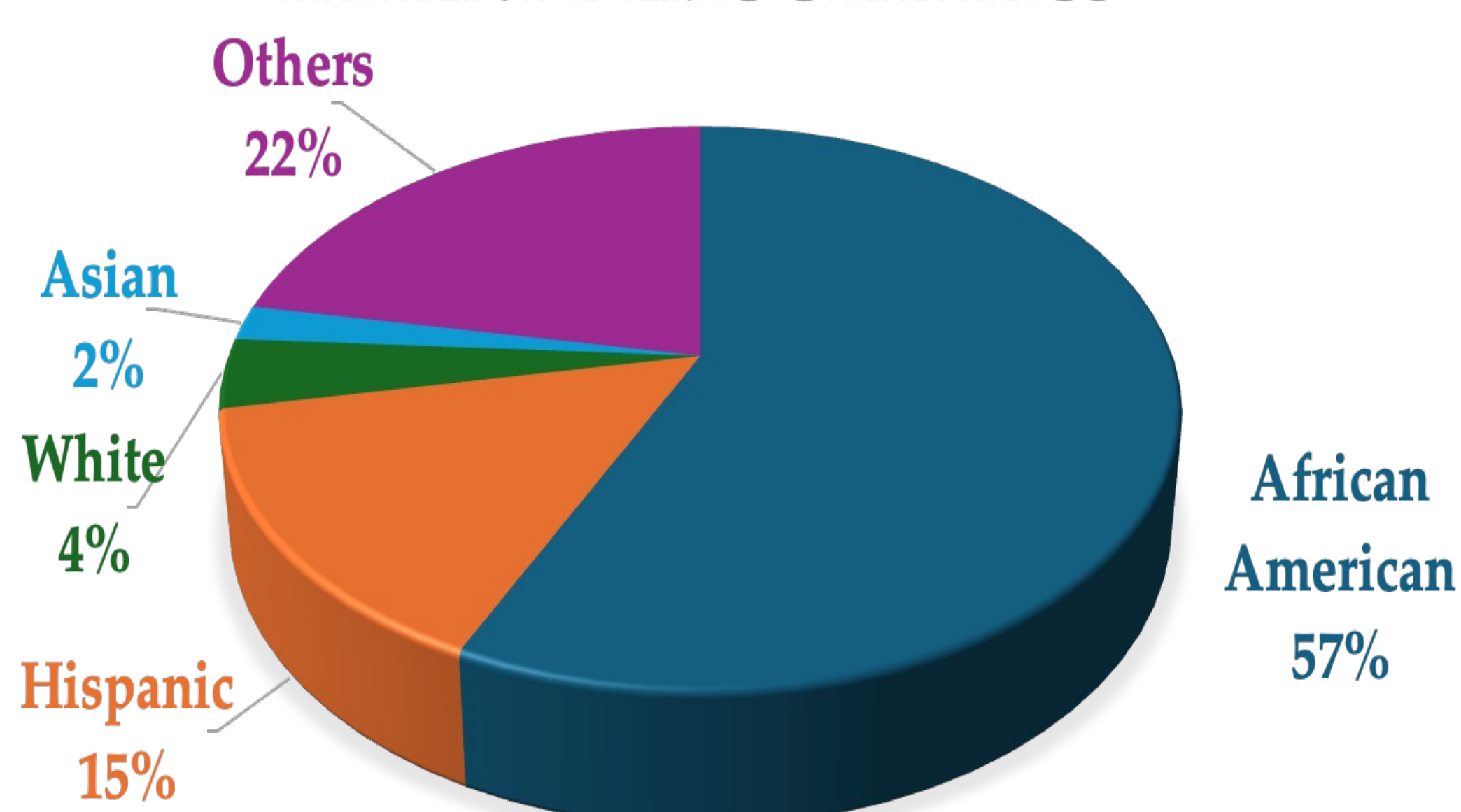
Methods

A longitudinal exploratory mixed methods study involving semi-structured interviews of a subset of subjects currently participating in an investigational new drug trial at Boston Medical Center. Audio transcripts were analyzed to identify emerging codes and themes. Weekly team meetings resolved any discrepancies. Themes underwent refinement until a master codebook was finalized. Interviews were complemented by cross-sectional survey data comprising 100 children and their respective parents. A quality improvement initiative followed, employing the Plan-Do-Study-Act (PDSA) cycle, a systematic method for iterative improvement.

Quantitative Results

The age range of the children (n=100) spanned from 4 to 8 years, with a mean age of 6.01 years (SD = 1.49). Parents fell within the range of 30 to 42 years of age with a mean age of 36 years (SD=8.27). 83% of parents who completed the questionnaire were female. Most parents relied solely on healthcare providers for health information (50%), with a combination of healthcare providers and Internet/Google searches being secondary sources (13%).

PATIENT DEMOGRAPHICS



Limitations

The current results and analysis is based on a small sample, with limited participants.

Qualitative Results

Parent Themes

- #### Motivating Factors to Vaccinate
- Attainment of Long-Term Protection
 - Perceived Susceptibility
 - Means of HPV Transmission
 - Knowing Someone Affected by Cancer
 - History of HPV Vaccination
 - Taking Preventative Action for Child
 - Securing Peace of Mind
 - Trust in Provider

Preferred Source for Vaccine Information

- Provider
- Internet/Social Media
- School

Recommendations to Improve Vaccine Uptake and Parent Knowledge

- Uninterrupted Vaccine-Specific Information Sessions
- Preferred Communication Method
- Empowering Parents to Seek Information
- Share Social Responsibility to Protect One's Community

Vaccine Decision Making Process

- Weighing Risks to Benefits
- Desire to Make an Informed Choice
- Seeking out Further Information

Representative Quotes

"Children are like human germs. Everything. It's like everything gets to them. ... They're touching this. They're touching that. You gotta constantly wash their hands sometimes, you can't get to them fast enough before they put it in the mouth. ... They're in contact with so many different things. ... I thought that the HPV vaccine at 4, 5 years old was amazing."

"It's just easier to [vaccinate] when they're young. You get it out the way compared to when they're older."

"Well, the person who first brought it to me was, Dr. Joseph. She was the one that reached out to me and told me about it. It was very self-explanatory how she explained it to me. She just really opened my eyes to certain things. So, it was more like something I would do for my own children if I have a chance to."

"Growing up we had sex ed, so they taught us all these things. They don't give sex education now in schools."

"I think maybe more visual, like a video maybe, to like educate parents who don't have all the children like myself. Speak on everything about it, the foundation, and when, where it's at now, I think that will help with again to make people familiar and comfortable with the vaccine."

"I was a mom at 14, and there's a lot of things that I didn't know. But throughout the years I learned a lot of things, and that's why I know something like this is great for our children. And not just African American children, all children, because it's everywhere. It's in every race, it's in every neighborhood. It's not, you know, it's not singling out one neighborhood or one race. It's spreading, like if you, if you pay attention. And if you read about this, you'll see. It's a lot of young people, lot of older people, and at times cancerous."

"I can only try to better her and I try to not hurt her. That was my main aspect of the whole thing. Like it wasn't something to hurt her, it was something to better her later down the line, or like help her prevent certain things."

Provider Themes

Addressing the HPV Vaccine

- Cancer Prevention
- Risk to Benefit
- Time-Limitations
- Counseling from Outside Sources

Recommendations For Recruitment and Improving Acceptance

- Addressing Social Determinants of Health
- Understanding Differences in Patient Populations
- Developing Trust
- Parent Autonomy

Provider Impression on Children's Autonomy

- Parent Focus vs. Child Focus
- Impact of Fear of Needles/ Shots

Feasibility for Providers to Offer HPV Vaccine During Early Childhood

- Potential Initial Difficulty But Worthwhile
- Experience With Updated Recommendation
- Grouping Vaccinations is a Positive

"I just sort of talk about it in general as a way of cancer prevention. It's a common cause of cancer, in young people. And this is way to prevent it. And it's, you know, low stakes and low risk and low harm."

"I said it would be good to have it because it can prevent cancer and when you say that they're very open about it."

"My initial thought was its early in my community. I see mostly Haitian patients, and I was saying doing this study in this group of Haitian they will be quite reluctant to participate. But I'm very excited about it to start at an early young age, I'm very happy about it but for my community it would be very hard to convince them to take the vaccine at this age. They will say why, she's only 4, why does she need it now?"

"Conversations mostly these days are about Covid more than any other vaccine and, and I sometimes mentioned that I feel really safe about it for myself and my own kids that we were, you know, we were all fortunate to get all the doses of the Covid vaccine and that I feel really good about the state of the evidence, and kind of empathize with them feeling anxious and how hard it is to weed through bad information online. And then I'm ready and willing to talk through all of their concerns, if they have any specific ones."

"I mean, you know, no kid wants a vaccine. And sort of frustrates me when parents like kind of defer, like with the Covid, when they're like, I don't know 10-year-old do you want it? Like of course they don't want it. I tend to focus most of my counseling on the parents, and I let them do most of the talking to the kids."

"Yeah, I mean, it's just another vaccine. Year 4 is a big year for vaccines. ... vaccine recommendations change all the time, and we incorporate them and stay up with it. This is, sort of the way things work, so I don't have any particular concerns."

"I think yes, it could be hard at the beginning but in the long term yeah maybe in the future it would be easier."

Conclusion

Routine HPV vaccination of children aged 4 to 8 is enthusiastically accepted by parents and feasible for providers. By adapting future recruitment conversations towards diverse patient populations, investigators may be able to increase HPV vaccination uptake. In doing so, researchers will help to diminish provider-identified barriers to vaccination and facilitate protection from HPV-associated cancers.

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