# Mismatched expectations most common reason for patients not completing HPV vaccine series

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Conflicting expectations between parents and medical providers about who is responsible for scheduling follow-up appointments is resulting in a failure of young girls completing the Human Papilloma Virus (HPV) vaccination series, according to a new study led by Boston Medical Center researchers. The study, which is published online ahead of print in the journal *Human Vaccines and Immunotherapeutics*, involved interviews with both parents and providers in order to determine why, despite the known benefits of the vaccine, patients are not receiving all three doses.

HPV, the most common sexually transmitted infection, is diagnosed in approximately 14 million people each year in the United States and can lead to various cancers including cervical, mouth and throat cancer. The HPV vaccine is administered in a three-part series over six months and is currently recommended for boys and girls ages 11 and 12 and up to age 26. Recently, the Centers for Disease Control and Prevention (CDC) encouraged expanding the vaccine's availability to 9- and 10-year-olds if they have a history of sexual abuse and officially endorsed using the HPV-9 vaccine, which protects against nine strains of the virus.

"There has been a heightened awareness within the medical community in recent years about the need to address HPV and get more children vaccinated in order to prevent long-term health issues," said Rebecca Perkins, MD, MSc, an obstetrician at BMC and lead author of the study.

"Yet, we're finding that many pre-teens aren't getting all three doses, which is imperative to preventing HPV."

Over a one-year period, researchers interviewed 65 parents whose daughters received at least one dose of the HPV vaccine and divided them into groups whose daughters had completed the series (28) and those who had not (37). Of the group whose daughters did not finish the series, 65 percent said they expected the clinic to contact them regarding scheduling additional doses. Twenty-four percent cited inconvenience, such as long commutes to the clinic, for failing to complete the series, only 4 parents made a conscious decision to halt the series.

Next, 27 providers were interviewed about their specific plans to ensure patients completed the series. Fifty-two percent said they informed parents about when the next doses were due, but relied on the parents to schedule the follow-up visits. Forty-one percent planned on scheduling the second dose when the first dose was given and 7 percent hoped to immunize patients when they returned for a different appointment. Providers stated that most failures to complete the series were due to a lack of reminder systems.

Interestingly, no provider identified the need for three doses as a barrier to completion, and more than two-thirds of the parents in both groups stated that they felt that the benefits of HPV vaccination outweighed the risks.

"What we've learned is that there is a great opportunity to close the non-completion gap by improving education and dialogue between providers and parents about scheduling future visits to finish the three-dose vaccination series," Perkins said.

Researchers had several suggestions for increasing vaccination completion rates, including scheduling follow-up appointments as the

child receives the first dose; implementing reminder and recall systems in clinics, such as phone calls, educational brochures, and text messages; having patients receive reminders directly from state immunization registries, which are independent from individual medical practices; and offering vaccines at alternative sites that are more convenient for parents such as schools and pharmacies.

"By implementing a reminder system, we hope that more children will complete the vaccination series, which can help improve the overall health of our next generation," Perkins said.

Provided by Boston University Medical Center