**Data from a retrospective study of completion of the 3-shot anti-HPV vaccine, Gardasil**

The data were gathered from written and electronic records at four clinics of Johns Hopkins Medical Institutions (JHMI) that was offering the Gardasil vaccine in 2006-2008. Young female patients who came to start the HPV series were identified. Two of the clinics (Odenton, White Marsh) are located in suburban Baltimore, while the other two (Bayview and Johns Hopkins Hospital Outpatient Center) are located in Baltimore City.

* Age = the patient's age in years
* Race = the patient's race (0 = white, 1 = black, 2 = Hispanic, 3 = other/unknown)
* Shots = the number of shots that the patients completed during a period of 12 months from the time of the first shot
* Completed = did the patient complete the three-shot regimen within the recommended period of 12 months (0 = no, 1 = yes)
* InsuranceType = the type of insurance that the patient had (0 = medical assistance, 1 = private payer [Blue Cross Blue Shield, Aetna, Cigna, United, Commercial, CareFirst], 2 = hospital based [EHF], 3 = military [USFHP, Tricare, MA])
* MedAssist = did the patient have some type of medical assistance (0 = no, 1 = yes)
* Location = the clinic that the patient attended (1 = Odenton, 2 = White Marsh, 3 = Johns Hopkins Outpatient Center, 4 = Bayview)
* PracticeType = the type of practice that the patient visited (0 = pediatric, 1 = family practice, 2 = OB-GYN)

To get some pilot data for a project about vaccination rates, the PI would like us to review published data from a prior study of at John's Hopkins related to adoption of the Gardasil vaccine. The data set and a description file are in One Drive.

* Is there a difference in odds of completion for white vs black women?
* Is there a difference in odds of completion for urban vs suburban clinics?
* Does odds of completion change with age? (do we want to look at continuous or maybe the difference between minors and adults?)
* Is the odds of completion associated with the type of insurance?
* Follow-up question: The modern Gardasil is now only 2 doses. Hypothetically, if these women only needed 2 shots would the relationship with completion change?