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Najat Ziyadi*, Department of Mathematics, Morgan State University, 1700 East Cold Spring Lane, Baltimore, MD 21251. *A mathematical model of human papillomavirus (HPV) in African American Men and Women populations.*

In this talk, we introduce two-sex mathematical HPV epidemic models (with and without vaccination) with “fitted” logistic demographic equation to study HPV in African American men and women. We compute the basic reproduction number and use it to show that $R_0 < 1$ in the African American population. We use sensitivity analysis to illustrate the impact of each model parameter on R_0 . In addition, we obtain that adopting a HPV vaccination policy lowers the number of HPV infections in the African American population. (Received September 20, 2015)