

**TITLE:** A Clinical Workflow Study to Improve Implementation of a Health Information Technology System

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**RESEARCH PROJECT DESCRIPTION:**

**Background:** Health information technology (HIT) interventions can improve health outcomes, but integration into clinical workflow is essential. We have an existing HIT system that increases human papillomavirus (HPV) vaccine series initiation (receipt of the first of three doses) by 300% among girls and boys. Yet, clinic staff rarely offered the HIT system to eligible adolescents; only 8% of adolescents with visits at UF clinics used the HIT system in a pilot study. If HPV vaccination is maximized an average of 26,900 cancer cases could be prevented each year in the United States.

**Hypothesis:** Consistent with Diffusion of Innovation Theory and evidence, tailoring the HIT system to each clinic's workflow will increase use of the HIT system by providers and clinic staff.

**Methods:** We will study workflow by direct observation at each intervention clinic to identify the best timing and clinic personnel to facilitate administration of the HIT system. We will observe 11-12 year-old visits during 2 days at each intervention clinic with a standard data collection form. To evaluate the data, we will produce workflow flowcharts with time estimates. To confirm the workflow models, we will conduct semi-structured interviews with a provider and a clinic staff member.

**Role of medical student:** A medical student will be responsible for studying workflow at three clinics from the University of Florida Clinical and Translational Research Institute led OneFlorida Cancer Control Network, which is a partnership of 22 hospitals, 416 clinic settings and 3,250 physician providers located in all of Florida's 67 counties and encompassing 39% of Florida's patient population. Duties will involve creating electronic data collection forms, direct observation of adolescent clinic workflow using standard data collection forms, detailed flowcharts documenting clinical workflow, and completion of in-person semi-structured interviews with providers and office staff at each location. A student will work with the PI and two clinical faculty members in Pediatrics to make suggestions for tailoring the HIT system workflow to the three clinics. Expected outcomes include a poster presentation at UF with possibility of submission to a national meeting and collaboration on a manuscript. In addition, the student will gain joint mentorship from faculty within the Institute for Child Health Policy, the Department of Health Outcomes and Policy, and the Department of Pediatrics.

**Relevant publications:**

1. Staras SA, Vadaparampil ST, Livingston MD, Thompson LA, Sanders AH, Shenkman EA. Increasing Human Papillomavirus Vaccine Initiation among Publically-Insured Florida Adolescents. *Journal of Adolescent Health*. 2015. 56(5 Suppl):S40-6. PMID: PMC4394203.
2. Staras SAS, Vadaparampil ST, Patel RP, Shenkman EA. Parent Perceptions Important for HPV Vaccine Initiation among Low Income Adolescent Girls. *Vaccine*. 2014. 32(46):6163-9. PMID: PMC4198149
3. Malo TL, Staras SAS, Bynum SA, Giuliano AR, Shenkman EA, Vadaparampil ST. HPV vaccine administration among Medicaid providers who consistently recommended vaccination. *Sexually Transmitted Diseases*. 2014 Jan;41(1):24-8. PMID: PMC3962075.
4. Vadaparampil ST, Staras SAS, Malo TL, Eddleton KZ, Christie J, Rodriguez M, Giuliano AR, Shenkman EA. Provider factors associated with disparities in HPV vaccination among low-income 9- to 17-year-old girls. *Cancer*. 2013;119(3):621-8. PMID: PMC3800018.