

Increasing HPV vaccination through a pediatric and OBGYN collaboration

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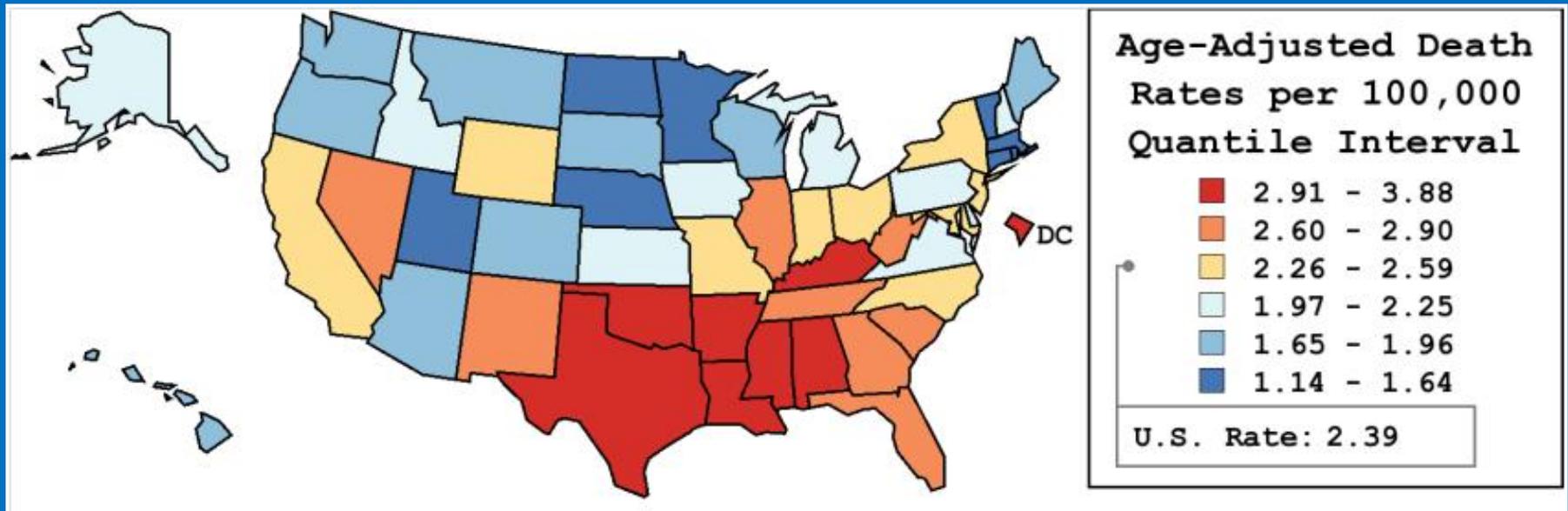
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Prevalence of HPV-related cancers

- Cervical cancer:
 - >12,000 new cases and >4,000 deaths in US in 2014
 - Incidence higher among Hispanic (vs non-Hispanic) and black (vs. white) women
- Oropharyngeal cancer:
 - >12,500 new cases in males annually
 - 4X more common in men than women
- Anal, vulvar, vaginal and penile cancers caused by HPV

Cervical cancer mortality rates



Texas ranks 7th in US for prevalence of cervical cancer
Texas ranks 9th for cervical cancer-related deaths

HPV vaccine is a game changer!

- 9vHPV vaccine could prevent:
 - >80% of cervical cancers
 - >65% of oropharyngeal cancers
 - 60–90% of anal, penile, vaginal, vulvar cancers
- 70–80% of males and females need to be vaccinated to eliminate most oncogenic types (herd immunity)

Current CDC recommendations

- Recommended for boys and girls at 11–12 yo
- Approved for use up to age 26 if not vaccinated at a younger age (referred to as catch-up vaccination)

Importance of catch-up vaccination (13–26 yo)

- Infection with all vaccine-types not reported
 - Even sexually active young adults can benefit
 - May prevent re-infection
- Will help achieve herd immunity faster

HPV vaccine initiation (≥ 1 dose)

- United States
 - 63% of girls & 50% of boys 13–17 yo
 - 42% of 19–26 yo women
- Rates lower at UTMB due to many barriers
 - Less than 20% of 11–12 year olds
 - 16% among 18–26 yo postpartum women from Galveston Co. who deliver an infant at UTMB

6 barriers identified among UTMB's low income pp patients

- **No insurance to pay high cost:** >\$600 for 3 doses
- **Lack of access & information:** 54% didn't know where to get it or know enough about it
- **Fear of side effects:** 14% (1 in 7) feared side effects
- **Lack of provider recommendation:** Not discussed by providers during prenatal or postpartum care
- **Difficulty with completion:** Did not make or keep f/u appointments
- Vaccine hesitancy against all vaccines not the primary issue

Development of HPV vaccination program for UTMB pp women

- **Evidence-based:** Young, postpartum women willing to initiate HPV vaccine while hospitalized and complete at follow-up visits (Columbia University)
- **Safety established:** HPV vaccine safe to administer while breastfeeding
- **Model available:** Rubella and Tdap vaccines routinely administered on postpartum unit if needed
- **Could leverage funding:** Medicaid lasts until 8 wks pp

Barriers addressed in CPRIT proposal

- Eliminate access problem: Give 1st dose in hospital
- Increase follow-up rates :
 - Give 2nd dose at pp check
 - Give 3rd dose at pediatric clinics when mother brought baby in for baby's vaccines
- Decrease cost to CPRIT: Give first 2 doses before Medicaid expires

Additional barriers addressed by PNs

- Lack of information or provider recommendation and fear of side effects:
 - PNs provide individual counseling
- Lack of follow-up:
 - PNs schedule appointments and remind patients; reschedule appointments as needed
- Clinic barriers:
 - PNs make certain vaccine is kept in stock
 - PNs help educate clinic staff

Duties of patient navigators

- **Identify unvaccinated pp patients** each day in EMR
- **Counsel mothers** and obtain consent
- **Communicate with physician** to inform them when mothers desire vaccination in hospital
 - **Physician places order in EMR and nurse administers 1st dose prior to discharge**
- Schedule follow-up doses with **well-baby visits or postpartum checkups**
- Call mothers to **remind** them of upcoming appointments
- Call mothers to **reschedule** missed appointments until series completed

Challenges to implementation

- Hiring and maintaining bilingual staff willing to work on weekends and all holidays
- Obtaining support of nurses on pp unit
- Timely entry of orders in EMR by physicians caring for patients on pp unit and in clinics
- Explaining to billing how to correctly charge vaccine costs
- Ensuring vaccine was in stock at all times at multiple clinics
- Tracking of population who frequently change phone numbers

Final results from Cycle 1

- Increased HPV vaccination initiation rate from 16% to **78%** among women from Galveston County who delivered at UTMB
- Among initiators, **76%** completed 3-dose vaccine series

Qualitative assessment of program

- Interviewed 18 providers near end of Cycle 1
- Demonstrated that pp intervention was well-accepted and had been integrated into clinics
 - Physicians & nurses support postpartum vaccination
 - Initial challenges of communicating vaccine orders and vaccinating mothers at pediatric appointments overcome
 - Postpartum vaccination is now standard of care

Cycle 2 (2016–2019)

- Expanded services to **all** women who deliver at John Sealy Hospital
 - New inclusion criteria adds **37 Texas counties**
 - **Added standing orders in EPIC** for HPV vaccine to be given to eligible postpartum women who consent
- Estimated 2,121 women would be eligible and consent to HPV vaccination during Cycle 2

Cycle 2 progress to date

- Volume of deliveries at UTMB has increased!
- Completed Year 1 of Cycle 2
 - Ahead of all project goals for HPV vaccination
 - 1,782 women counseled (65% of 3-year goal)
 - 2,181 vaccine doses administered to 1,204 women (41% of 3-year goal)

Long-term goals

- To permanently change the standard of care so that offering the HPV vaccine postpartum is routine for women not vaccinated at younger age
- To increase HPV vaccination rates in Texas and achieve herd immunity which will:
 - Decrease the psychological, physical, and economic burden of abnormal Pap smears among our patients
 - Ultimately prevent most HPV-associated cancers

New collaboration (PP150004)

- Postpartum project led to development of new project to vaccinate 9–17 yo boys and girls seen in UTMB pediatric clinics
- This project benefitted from education performed in pediatric clinics during postpartum project

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CANCER PREVENTION & RESEARCH
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