

OUR HERD: Alabama to champion the elimination of cervical cancer and HPV-related cancers and be a model that can be followed by the nation and the world

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Description of the problem to be addressed, including its importance to the state of Alabama and how it is generalizable to other states, the U.S. and the world

Although cancer is a complex disease and the overall cure may be in the distant future, we can do better than a cure for cancer. We can eliminate cervical and other HPV-related cancers in the world BEFORE cancer is developed, which will have a remarkable public health impact that can open doors for the elimination of other preventable cancers. But, it will take a village and we will need the input, expertise, and a “can do it” attitude from all disciplines and segments of society.

Great progress has already been made in reducing cervical cancer rates in the U.S., but in Alabama we are not making the strides we had hoped. Alabama is among the top four states with the highest cervical cancer incidence and the state with highest cervical cancer mortality in the U.S. Being a preventable cancer that can be detected BEFORE it turns into cancer, this is an unacceptable scenario that can be turned into an opportunity.

The discovery that virtually all cervical cancer is caused by persistent cervical infections with certain carcinogenic human papillomavirus (HPV) genotypes has led to two major technologic advances: (1) HPV vaccination; and (2) screening through HPV DNA testing, which can identify and treat cervical precancer and, consequently prevent this cancer. Both have demonstrated high degrees of efficacy with maximum effectiveness in an age-appropriate manner. That is, vaccinating boys and girls 11-12 (starting even earlier at age 9) and catching up with men up to age 21 and women up to age 26, and screening women 30 years of age and older with HPV DNA testing. However, HPV vaccination has been a major challenge for all U.S. states as well as the world and everyone is looking for a solution! According to recent data from Blue Cross Blue Shield, only 30% of boys and 37.7% of girls between the ages of 10 and 13 have completed the HPV vaccination recommended series in Alabama. The most recent data from the Alabama Department of Public Health indicated that 39% of boys and girls have received at least one dose of the HPV vaccine.

Thus, we have the tools to prevent or detect cervical cancer early, as well as other HPV-related cancers (head/neck, vulvar, anal cancers) and most health insurance programs cover screening and vaccination. Also, publically funded programs are available for individuals who cannot afford screening and vaccination. Why are we lagging behind? This proves that having the tools is not enough to eliminate these cancers. Looking at polio as an example... The SALK vaccine was available in 1955 followed by the SABIN vaccine in 1961. The World Health Organization (WHO) mandated polio vaccination in 1974, and 14 years later (1988) we still had 350,000 polio cases worldwide. It was not until Rotary International joined forces with WHO and other organizations as part of a grand challenge, that polio was almost eliminated worldwide. Such a scenario shows that the elimination of cervical and HPV-related cancers is no longer in the hands of the medical community. The discoveries have been made. We are now challenged with assuring these powerful tools get to the “streets” and turn Alabama from being one of the states with the highest cervical cancer burden, to the first to eliminate this devastating disease. If successful, this ‘grand challenge’ can be a model for other states and the world and we need people from different disciplines and segments of society to come together to develop and implement transformative strategies. That is, this work can serve as a roadmap for Rotary Club or Kiwanis worldwide (with boots on the ground organization) that can adopt this as its NEXT GRAND CHALLENGE similar to what it was done with polio eradication.

Desired outcomes and the conceptualization of the plan of work to achieve them

We want to make a difference in the health of Alabamians, and, in the process, produce a model that will help those beyond our state and national borders. Also, a transformative model to eliminated HPV-related cancers can serve as the roadmap for other preventable cancers such as liver, and colorectal cancer. More specifically, we strive to achieve three major outcomes: (1) 95% two-dose completion of HPV vaccination among boys & girls between 11 and 14 years of age in Alabama; (2) 95% coverage of cervical cancer screening of women between the ages of 30 and 65; and (3) A comprehensive model with step-by-step guidance to other states and countries toward elimination of the HPV-related cancers as a public health problem.

Plan of Work

Preliminary evidence already exists to indicate that this is doable given our recent partnership in Sri Lanka through an academic-public-private partnership (<https://www.uab.edu/news/health/item/9325-cancer-center-and-rotary-club-of-birmingham-work-to-end-cervical-cancer-in-sri-lanka>). Also, a thriving state-wide Alabama HPV Vaccination Coalition has already been established that can be expanded through this Grand Challenge opportunity as we need new ideas and strategies. One way to tackle the issue is through something called the socio-ecological framework that includes integrated strategies at the policy/society, organization, community, interpersonal, and individual levels. The Grand Challenge offers the opportunity for individuals to come together and collaboratively work through these levels. In our conversations with our proposed partners, we have begun to discuss some strategies at each of the aforementioned levels based on promising models from other countries (e.g., Australia) and our experience in the U.S. and abroad:

Policy/Society: Establishment of a state-wide registry for screening and strengthening of the state-wide registry for HPV vaccination; engagement of policy makers to make HPV vaccination available at schools; engagement of policy makers to follow the Rhode Island model to make HPV vaccination mandatory (opt-out approach); endorsement from the Governor.

Organization: Facilitate access to HPV vaccination by expanding the sites that provide the vaccine; increase capacity at the state-wide vaccination registry at the Alabama Department of Public Health to facilitate tracking of vaccination uptake; increase capacity at the Alabama Breast and Cervical Cancer Early Detection Program to facilitate screening and follow-up, including trained navigators who can help women navigate the health care system through follow-up and cancer care, if needed; increase colposcopy capacity across the state to facilitate access to abnormal cervical cancer screening follow-up; increase the capacity at the UAB Comprehensive Cancer Center and other cancer centers across the state to treat the cervical cancers we find; engage UAB students on the development of a UAB-wide campaign (e.g., choose the book “The Immortal Life of Henrietta Lacks” as the recommended book for all UAB students with discussions); engage medical students in the delivery of education, and screening.

Community: Engagement of Rotary and Kiwanis Clubs in a model similar to the Polio Plus campaign mobilizing the business community and opinion leaders as well as community members to increase awareness of the HERD campaign; engagement of faith leaders to reinforce the HPV vaccination and screening messages; training of community volunteers to promote HPV vaccination and cervical cancer screening; dissemination of the self-collection for HPV testing for women who are resistant to come to the clinics for their Pap test; engagement of the non-profit organizations (e.g., cervical cancer prevention Girls Scout and Boy Scout Badge; common messaging through the organizations funded by the United Way).

Interpersonal: Social media campaign to promote interpersonal influence (e.g., “#Our Herd” targeting pre-adolescents/adolescents, Barons & Montgomery Biscuits games – at least one night dedicated to the campaign); mother-children messaging (mother – screen; vaccine - children).

Individual: Eliminate barriers to screening and HPV vaccination by addressing the intrapersonal barriers already identified through our ongoing work (e.g., capacity building of pediatricians to deliver a concise and firm message; parental education on the safety of the vaccine and protection of their children; self-collection for HPV testing where women who are resistant to screening can collect their own sampling at home).

List of potential team members (individuals & organizations) from inside & outside UAB

- ***Alabama HPV Vaccination Coalition***, which was established by Dr. Scarinci and her team at the UAB Comprehensive Cancer Center, has been a model that other states have followed. The following organizations are active members of the coalition, and consequently, are already engaged members of the Grand Challenge:
 - UAB Comprehensive Cancer Center
 - American Cancer Society Mid-South Division (ACS)
 - Alabama Department of Public Health Immunization Division
 - Alabama Comprehensive Cancer Coalition
 - Alabama Breast and Cervical Cancer Early Detection Program
 - Alabama Vaccines for Children Program
 - Alabama Medicaid Agency
 - Alabama Pharmacy Association
 - Alabama Child Health Improvement Alliance, Area Health Education Center – Alabama Chapter
 - Alabama Parent Teacher Association
 - Alabama Regional Medical Services
 - American Academy of Family Physicians – Alabama Chapter
 - American Academy of Pediatrics – Alabama Chapter
 - Children’s of Alabama
 - Blue Cross and Blue Shield of Alabama
 - VIVA Health
 - Mitchell Cancer Institute, University of South Alabama
- ***Rotary Club Districts 6880 and 6860*** which encompass all of the Rotary Clubs in Alabama. We already have an ongoing partnership with the Rotary Club of Birmingham and the Rotary Club of Colombo (Sri Lanka), largest Rotary Club in the world, to eliminate cervical cancer as public health problem in Sri Lanka. Also, the Rotary Clubs will be our entryway to the business community.
- ***Kiwanis International – Alabama***
- ***Community Foundation of Greater Birmingham***
- ***Black Belt Community Foundation***
- ***Community Foundation of South Alabama***
- ***United Way of Central Alabama***
- ***Women’s Fund of Greater Birmingham***
- ***Alabama Department of Education***
- ***Tuskegee University***
- ***Miles College***
- ***Gulf States Health Policy Center***
- ***UAB School of Public Health***
- ***UAB School of Nursing***
- ***UAB College of Arts and Science***
- ***UAB School of Business***
- ***UAB School of Medicine***
- ***UAB medical students***
- ***Girls Scouts of North Central Alabama***
- ***Greater Alabama Council Boys Scouts of America***
- ***Birmingham Barons – Minor League Baseball***
- ***Montgomery Biscuits – Minor League Baseball***
- ***Alabama Girls in STEM (ALGirls) Collaborative***
- ***Alabama Honorary Consuls of Germany, Spain, Japan, Ukraine, and Brazil***
- ***Dr. Regina Benjamin, 18th Surgeon General of the United States***