THE IMPOSSIBLE TAKES A LITTLE LONGER ....
42,700 HPV-associated cancers per year in the US: 24,400 in women (57%) and 18,300 in men (43%)
CERVICAL CANCER AS A DISEASE OF POVERTY

Figure 5: Age-adjusted DALYs per 100,000 population for cervical and breast cancer in 2008 according to Human Development Index quartile
(A) Cervical cancer. (B) Breast cancer. DALYs = disability-adjusted life-years. Data are from Soerjomataram and colleagues.²

Copied from Ginsburg et al., 2016
Adapted from:
Woolf, The meaning of translational research and why it matters, JAMA, 2008
Drolet & Lorenzi, Translational research: understanding the continuum..., Translational Research, 2011.
This *discovery to delivery* “disconnect” is a key determinant of the unequal burden of cancer.

*Voices of a Broken System: Real People, Real Problems*
President’s Cancer Panel, Harold Freeman, March 2002
### BUILDING BLOCKS...

|✓| Engagement of all stakeholders  |
|---|---|---|---|
|✓| Policy makers | individuals |
|✓| Qualitative assessments  |
|✓| Social construction of health, cancer, and screening |
|✓| Quantitative assessments  |
|✓| Confirmation of qualitative findings |
|✓| Feedback to the community regarding the findings & their input - intervention development |
|✓| Development, implementation, an evaluation of interventions – research, education, and outreach |

**Theoretical Framework for Behavior Change**
The Promise of Cervical Cancer Prevention

HPV vaccination

HPV testing

Schiffman & Castle, NEJM, 2005
OUR WORK HAS EVOLVED ...

Cervical cancer prevention: new tools and old barriers.
Scarnio IC, García FA, Kobetz T, Partridge EE, Bennett HM, Bell MC, Cisneros M, de S, Oliver J, Croyle PE.

Awareness and knowledge about human papillomavirus among Latina immigrants.
García FA, Ispanish, Partridge EE, Scarnio IC.

Comparative community outreach to increase cervical cancer screening in the Mississippi Delta.
Castle PE, Rouse A, Wadley T, Grovitt PE, Partridge EE, Oliver V, Niver S, Montgomery KG, Tucker L, Kado H, Scarnio I.

Overcoming the barriers to HPV vaccination in high-risk populations in the US.

Acceptability and usability of self-collected sampling for HPV testing among African-American women living in the Mississippi Delta.
Scarnio IC, Litton AG, Garido-Palaceo IC, Partridge EE, Castle PE.
The challenge of HPV vaccination uptake and opportunities for solutions: Lessons learned from Alabama.

Dilley SE¹, Peral S², Straughn JM Jr³, Scarinci IC².
AND BEYOND…

Americas: Brazil, El Salvador, Colombia

Asia and Africa: Uganda & Sri Lanka

Pacific Islands: Northern Mariana Islands & Yap
Discovery & development will continue particularly with regard to other HPV-related cancers

We know what works …
Most of the research has been done…
It will take a bigger investment (and I do not mean $$$)

https://mathequalslove.blogspot.in/2015/08/free-grit-poster.html
Why do I believe we can?
350,000 cases of polio in the world in 1988 (125 countries) to 1,651 cases in 2008. This represents a 99% reduction in 20 years.

Courtesy of CDC

105 cases in 2018
“How can we tolerate polio when we have the technical expertise to get rid of it?”

Dr. Harry Hull
YES... BUT NOT REALLY...

• 1955 - Salk vaccine

• 1961 – Sabin vaccine (live)

• 1974 – mandate from WHO to make the vaccine available worldwide

• 14 years later, we still had 350,000 cases !!!!
105 CASES IN 2018 !!!
WHAT IS THE RELEVANCE TO CERVICAL CANCER?

• 569,847 new cases in 2018 and 311,365 deaths worldwide (55%) (Bray et al., 2018)

• 13,170 estimated new cases in the US in 2019; 4,250 deaths (32%) (ACS, 2019)
WHAT IS THE RELEVANCE TO CERVICAL CANCER?

• I hope it will take us less than 20 years to change these statistics…

• And, we are the people to do it…

“To whom much is given, much will be required”
(Luke 12:48)
Because …

It is up to me to finish her puzzle …

1938-2018
THE IMPOSSIBLE TAKES A LITTLE LONGER ....