

Centers for Population Health and Health Disparities Initiative

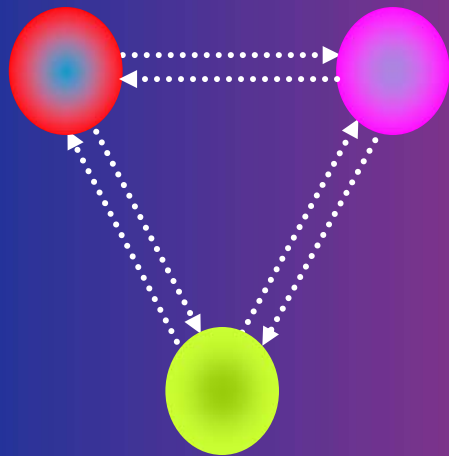
From Cells to Society:
Transdisciplinary Approaches
to Addressing Cancer Health
Disparities

Mission

- Integrate the basic, population, and clinical sciences.
- Develop innovative transdisciplinary methods.
- Create linkages with the community.
- Translate research to change policy and practice.

Research Teams of the Future

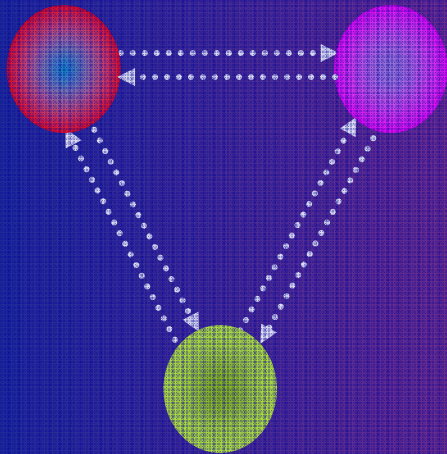
MULTIDISCIPLINARY



- Separate bodies of knowledge
- Different "languages"

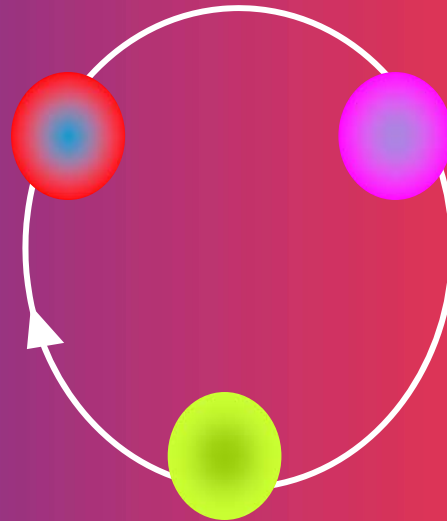
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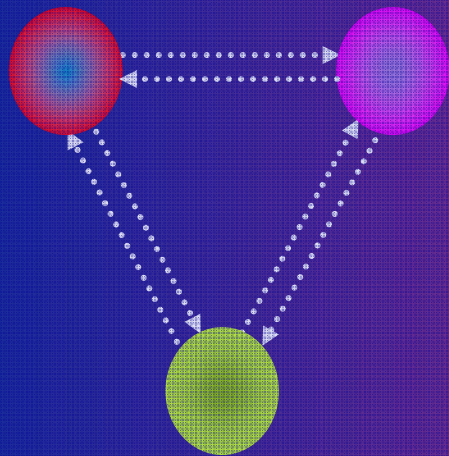
INTERDISCIPLINARY



- Shared bodies of knowledge
- Shared "vocabulary"

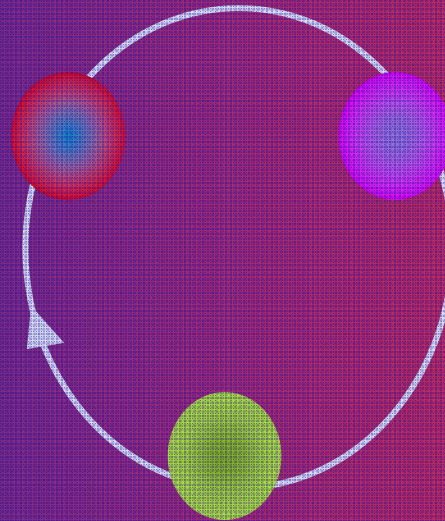
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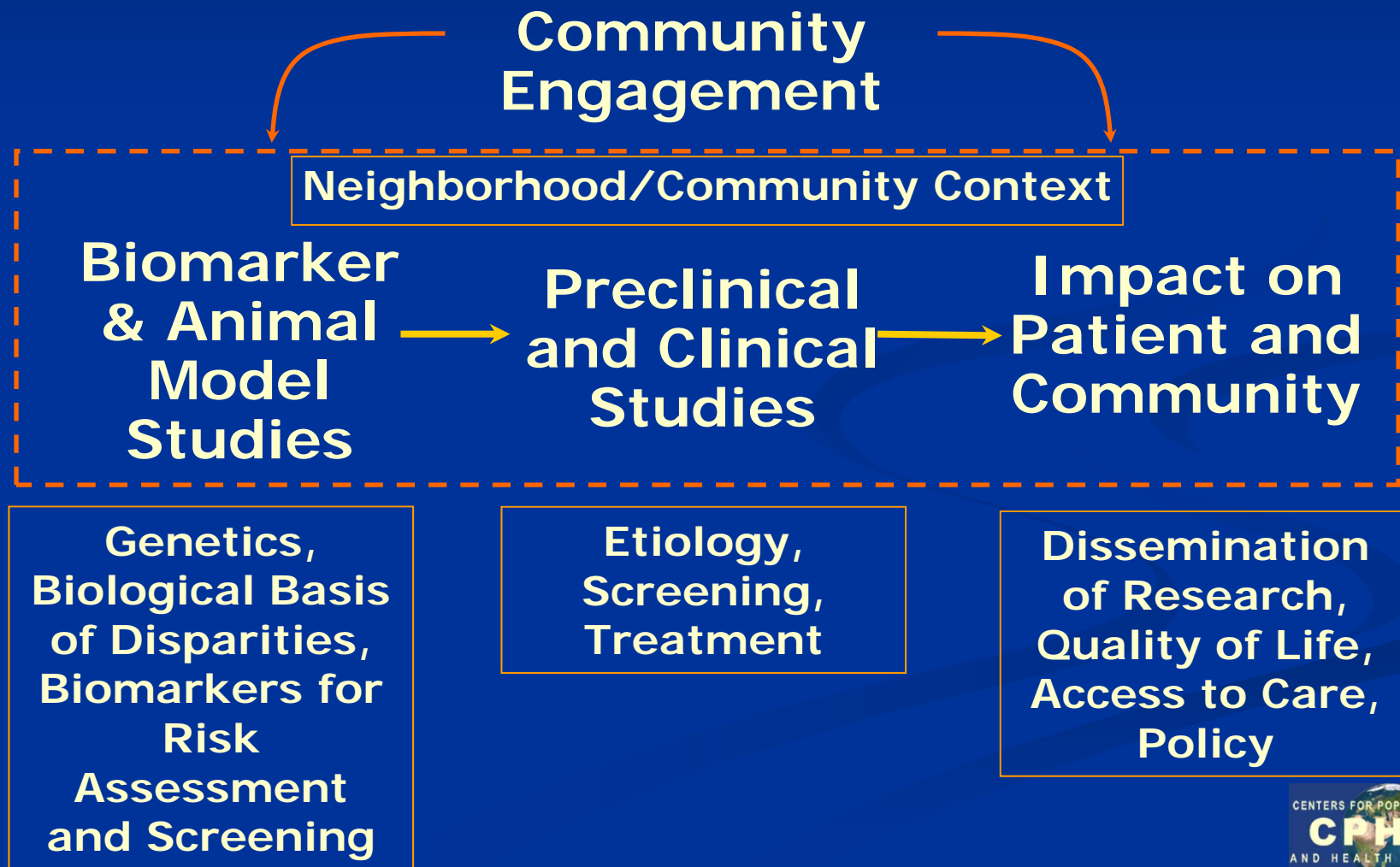
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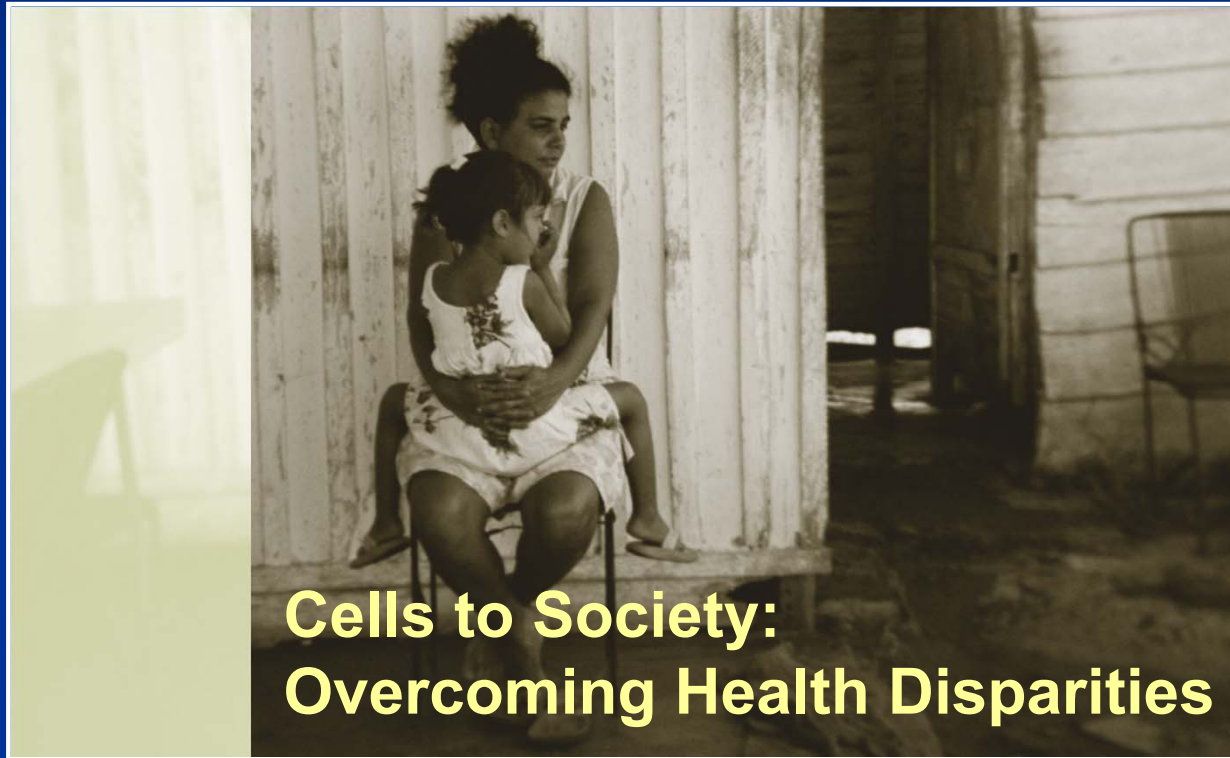
TRANSDISCIPLINARY



- Shared language
- Pooled bodies of knowledge and theory
- Jointly-developed new methods

CPHHD Transdisciplinary Research Framework: Emerging Cross-Center Themes





Cells to Society: Overcoming Health Disparities



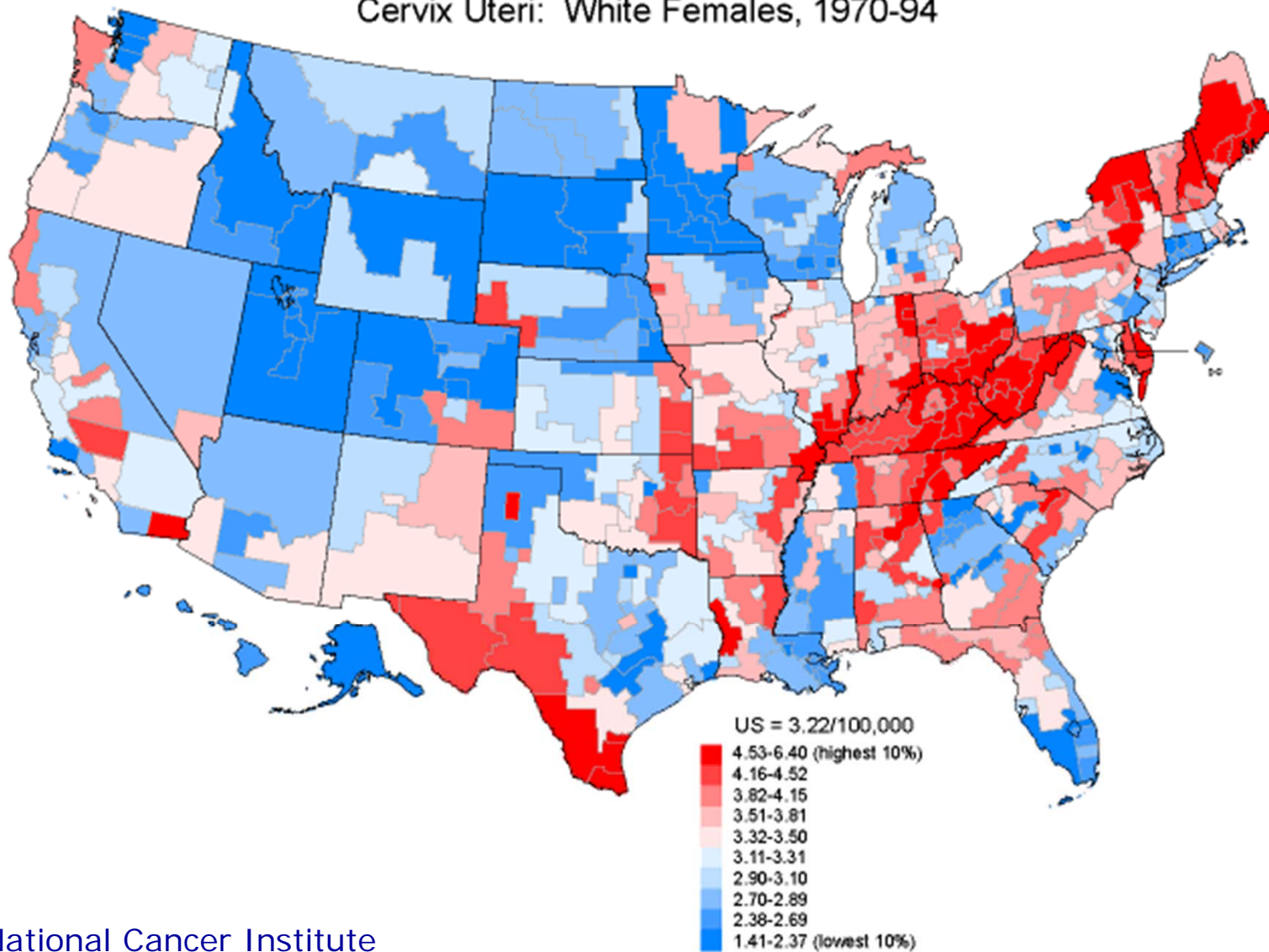
Reducing Cervical Cancer in Ohio Appalachia (CARE)

Electra D. Paskett, Ph.D.
Ohio State University

Supported by NCI Grant Number P50 CA105632



Cancer Mortality Rates by State Economic Area (Age-adjusted 1970 US Population)
Cervix Uteri: White Females, 1970-94



National Cancer Institute

**OSU Center For Population
Health
And Health Disparities**

Goal

**To understand why Appalachian
Ohio women have high
incidence and mortality rates
for cervical cancer.**

CPHHD Transdisciplinary Research Framework: Cervical Cancer

Community Engagement

Neighborhood/Community Context

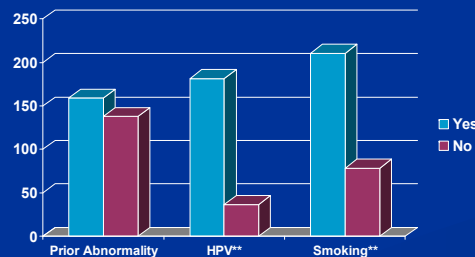
Chronic EBV
Infection,
HPV
Persistence



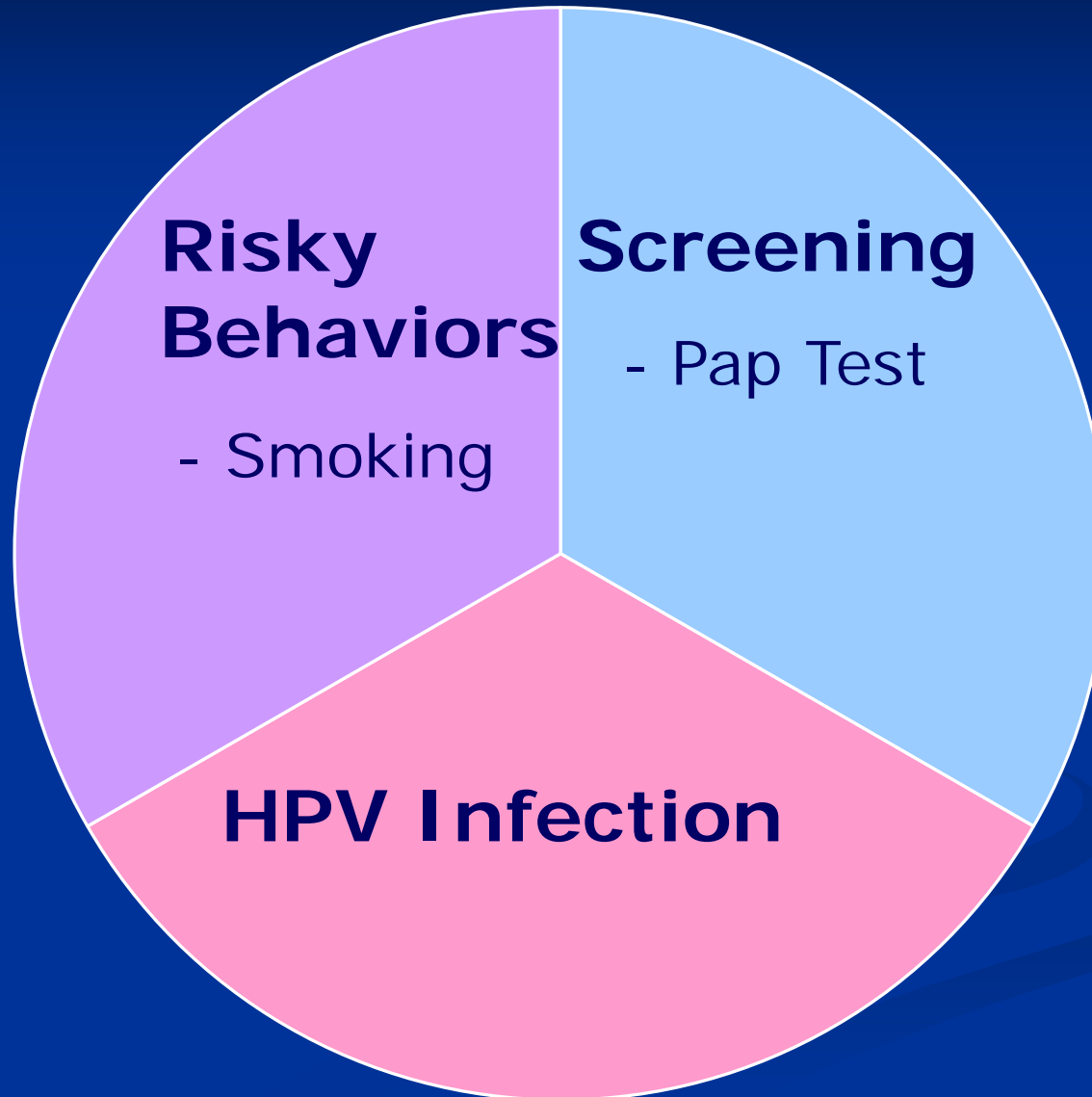
Pap testing,
Smoking
cessation



Dissemination:
HPV vaccine,
screening
policy

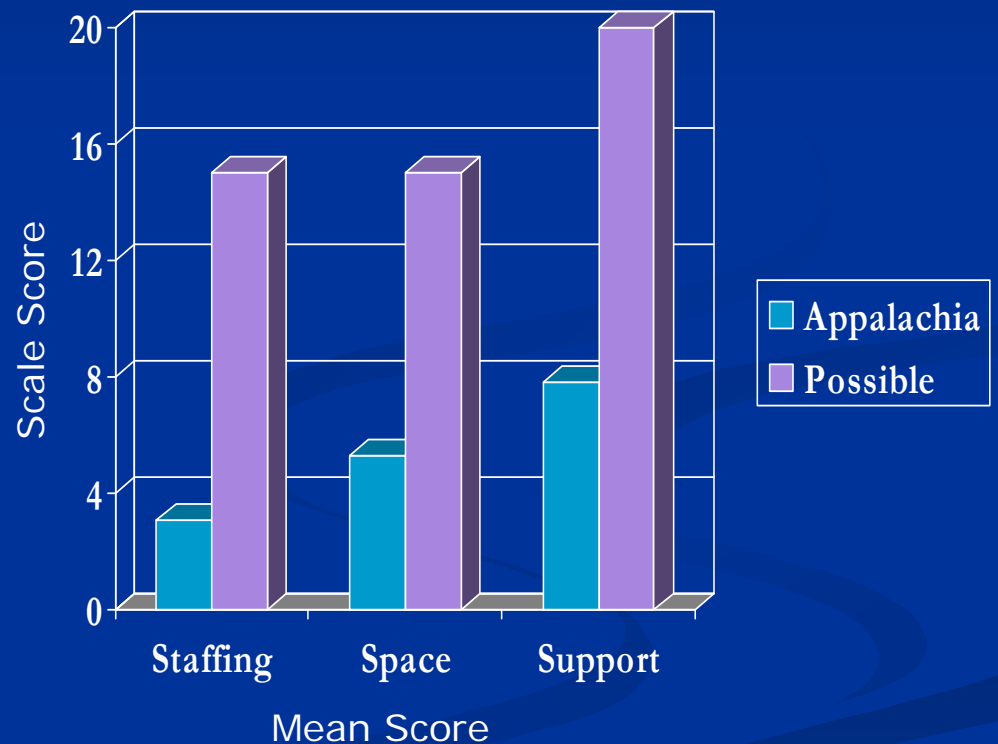


Cervical Cancer



Pap Test Utilization

- 79% of women at high risk for developing cervical cancer (*biology*)
- Only 69% screened appropriately (*behavior*)
- Local clinics do not have sufficient staff, space or resources (*institution*)



Can a Lay Health Advisor Intervention Improve Pap Test Use?

Summary of Self-Reported Pap Test Status (N=235)

Treatment Arm	Did not have Pap test after intervention	Had Pap test after intervention	Total
Control	55 (46%)	64 (54%)	119
Intervention	31 (27%)	85 (73%)	116
Total	86 (37%)	149 (63%)	235

Missing survey results for 50 participants (18% of 285 total)

Odds Ratio= 2.43; 95% confidence interval (1.39, 4.25); p=0.002

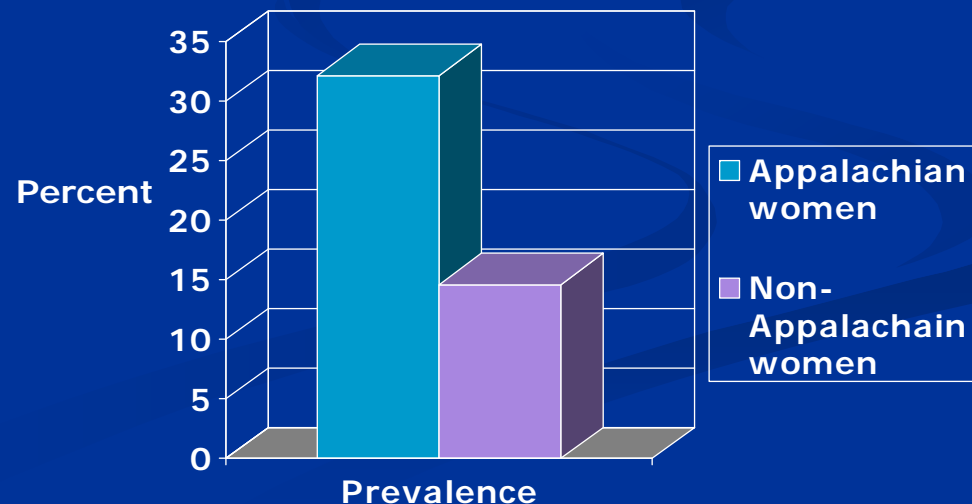
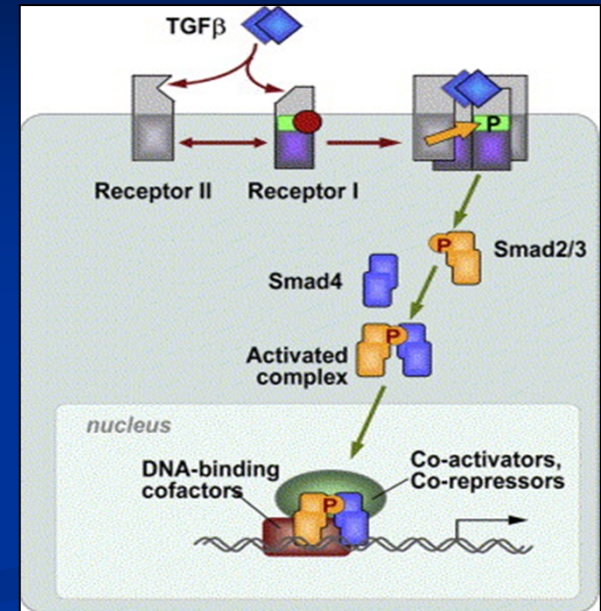
Lesson Learned:

Lay advisors are effective in improving Pap test use among an at-risk population in low resource area.

Is Getting a Pap Test Enough to Prevent Cervical Cancer?

Genetic Susceptibility to Cancer

- TGF- β *6A tumor susceptibility allele shown to be more prevalent in colon, breast cancers.
- What about cervical cancer?
What about Appalachian populations?

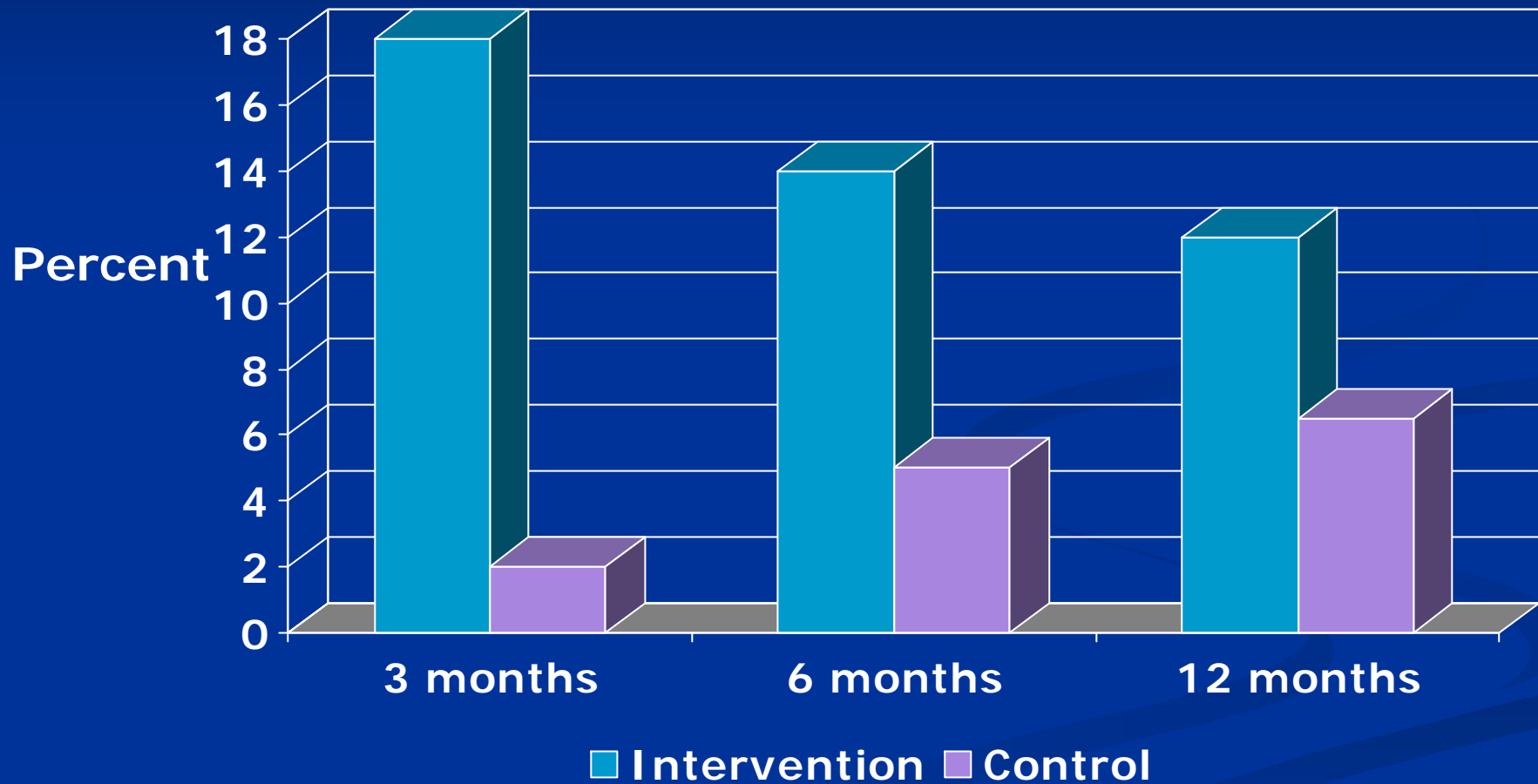


Tobacco Use in Appalachia

- High rate of smoking – 28% vs. 21% in U.S.
- High rate of smoking among women with abnormal Pap tests – 69%
- Smokers had fewer social contacts
- Depression more common among smokers

Can a Lay Health Advisor Intervention Improve Tobacco Cessation Rates?

Cotinine-Validated Cessation Rates



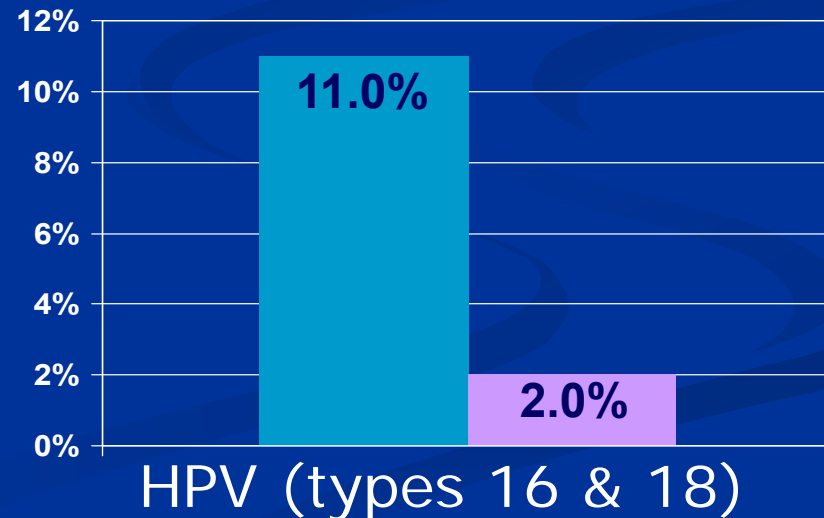
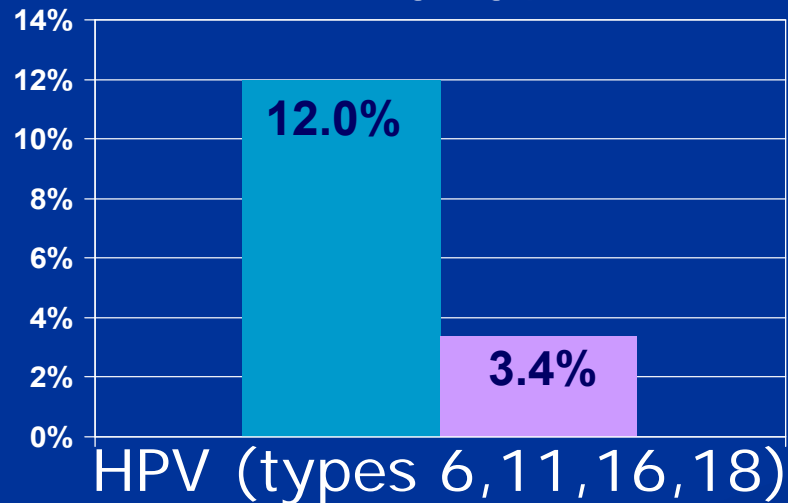
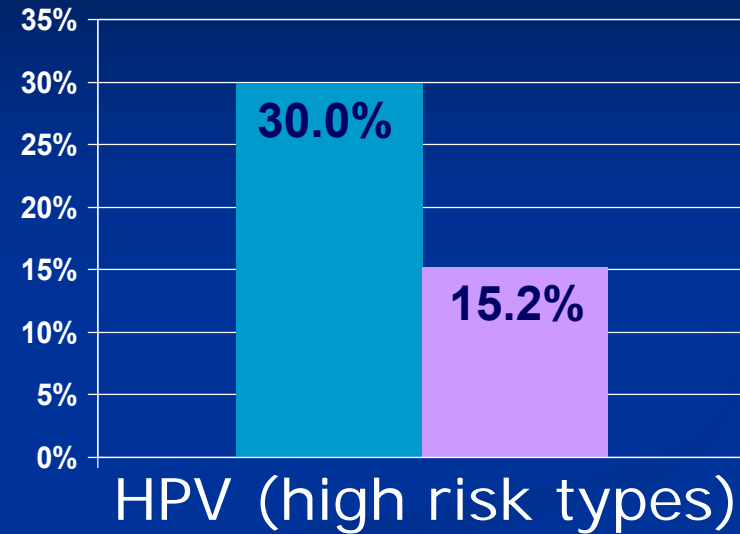
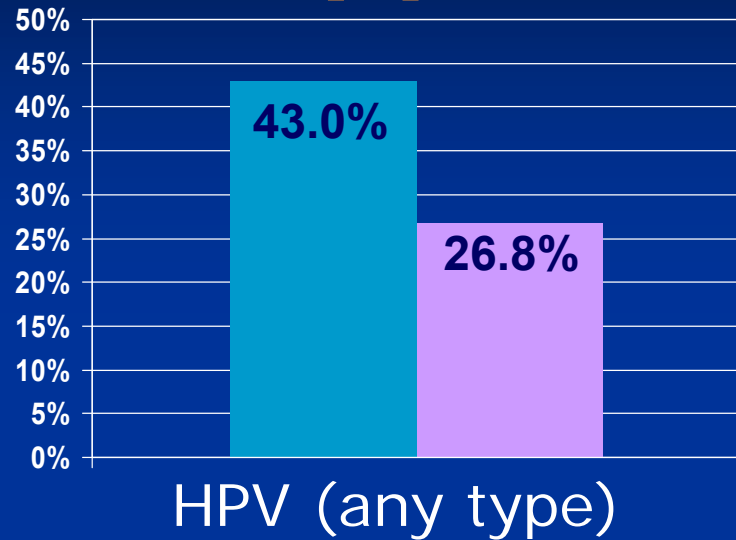
All p-values are <0.02 except for 12 month ($p=0.09$)

Lesson Learned:

Lay advisors are effective in improving tobacco quit rates.

***But What About Those Women
Who Continue to Smoke?***

HPV Prevalence in Appalachian Women



■ CARE ■ U.S.

Lesson Learned:

HPV prevalence is extremely high, especially among women with abnormal Pap tests.

Is the HPV Vaccine a Solution?

HPV Vaccine

US uptake – 25%

Appalachia – 10%

Acceptability

Access

Host Response

Knowledge

Beliefs

Cost

Supply

Immune System

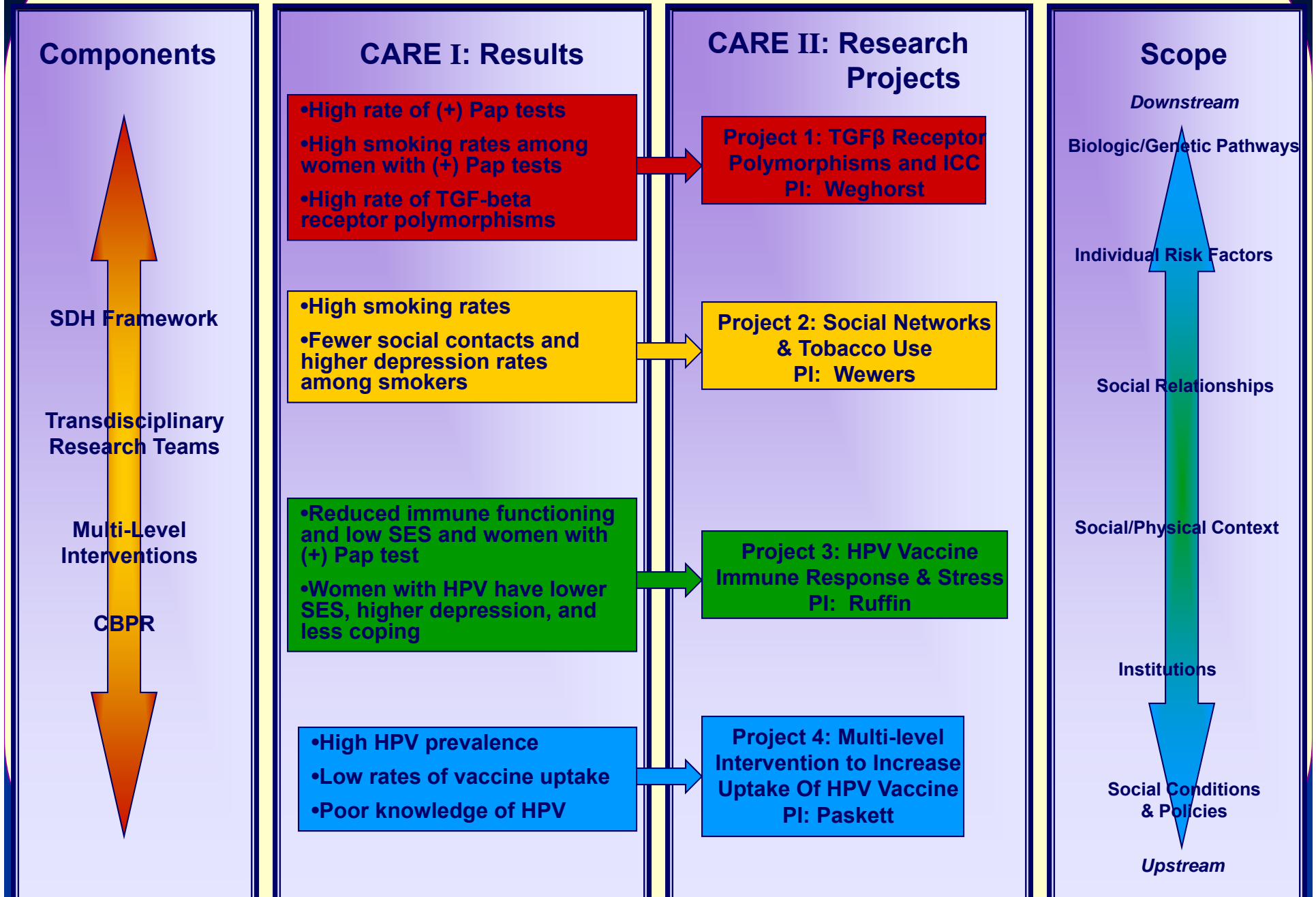
Attitudes

High costs, limited supply

Poor in Appalachia

Poor Immune Function

Progression of Research Scope & Results: CARE I to CARE II



***Center For Population Health And Health Disparities
"Reducing Cervical Cancer In Appalachia"***

Comprehensive Cancer Center

Cathy Tatum
Cecilia DeGraffinreid
Melissa Hicks
Darla Fickle
Jill Oliveri

College of Public Health

Electra Paskett
Mary Ellen Wewers
Stanley Lemeshow
Mira Katz
Amy Ferketich
Ann McAlearney

Center For Biostatistics

Amy Lehman
Erinn Hade
Bryan Ball
Dale Rhoda

College of Nursing

Karen Ahijevych
Judy Harness
Pamela Salsberry

Medicine and Family Medicine

Douglas Post
David Cohn

University of Michigan

Mack Ruffin
Paula Lantz

Department of Economics

Patricia Reagan

Consultants

Beti Thompson
Elizabeth Unger

Department of Pathology

Scott Jewell

THANK YOU TO OUR FIELD STAFF AND PARTICIPANTS!!!!