

 Markey
Cancer Center



A Cancer Center Designated by the
National Cancer Institute

Taking ACTION to Reduce Cancer Disparities in Appalachian Kentucky

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Kentucky's Cancer Burden

Kentucky experiences the highest overall cancer incidence and mortality rates in the USA with the greatest burden in the eastern, Appalachian region of the state.

KY RANKS

1st in the
NATION

in overall cancer
incidence and mortality

KY EXPERIENCES

26,000
new cancer
cases
each year

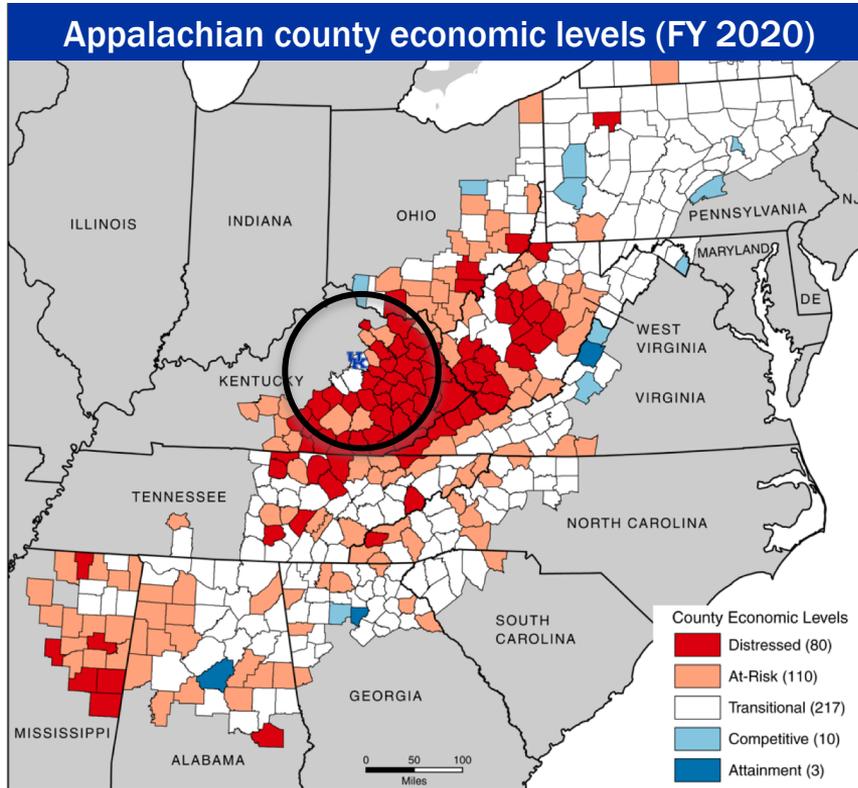
and over 10,000
cancer-related deaths

APPALACHIAN

residents are
8%
more likely

to die from a preventable
or screenable
malignancy

Appalachian Kentucky Disparities



Created by the Appalachian Regional Commission, June 2019

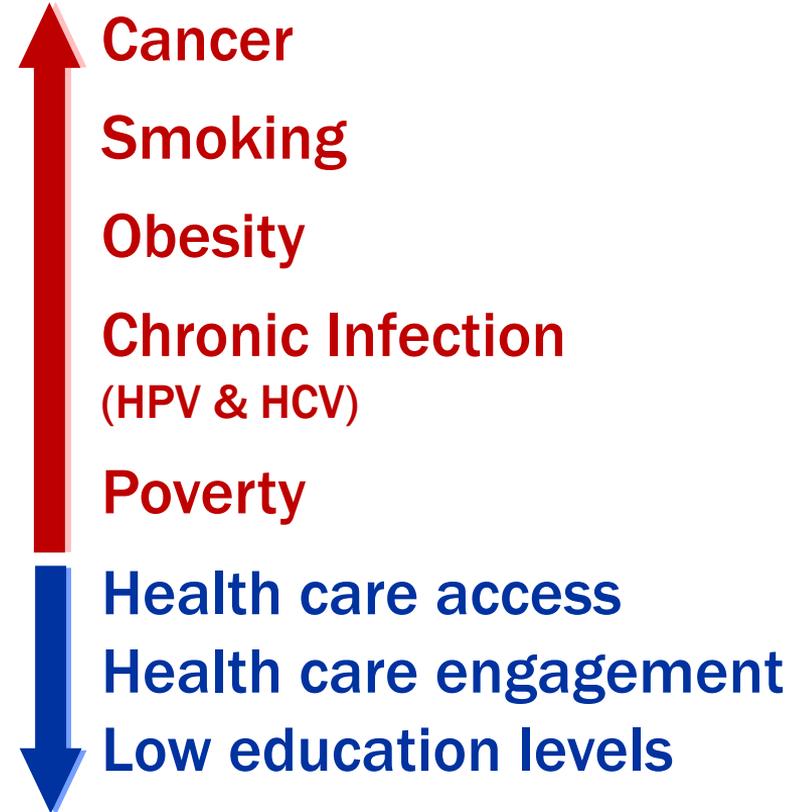
Data Sources:

Unemployment data: U.S. Bureau of Labor Statistics, LAUS, 2015–2017

Income data: U.S. Bureau of Economic Analysis, REIS, 2017

Poverty data: U.S. Census Bureau, American Community Survey, 2013–2017

Effective October 1, 2019
through September 30, 2020



Appalachian Career Training In Oncology (ACTION) Program

GOALS

- To develop participants' cancer research knowledge and skills
- To enhance students' cancer-focused career preparation
- To conduct outreach activities in participants' communities
- To evaluate program progress and impacts

APPROACH

Participants are paired with both a research faculty mentor who provides an enriching research experience and a clinical faculty mentor who provides a clinical perspective on cancer. Participants obtain didactic and hands-on cancer education. Outreach activities focus on enhancing cancer literacy.



IMPACT:

Transformational cancer-focused training for students who otherwise may not have such an opportunity.

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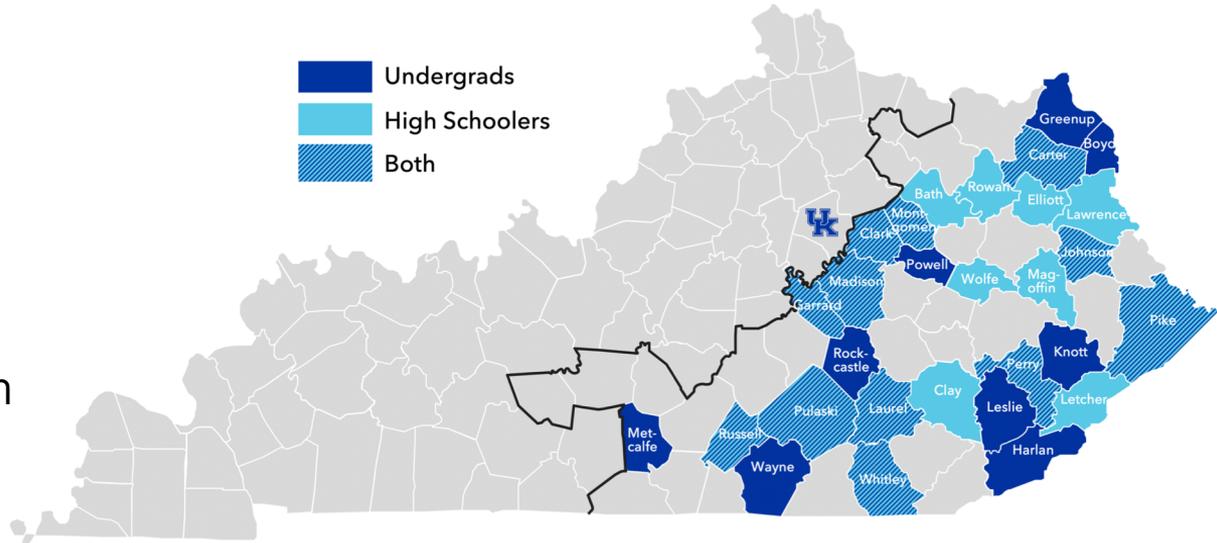


IMPACT:

Outreach that can drive a reduction in the region's cancer disparities.

Participants: Students From Appalachian KY

- 16 undergraduates/year
- 20 high school students/year
- Participants from 30/54 counties
- 100% disadvantaged
- 84% low income, first gen, female/URM
- 12 alum in med school, 2 in pharmacy school, 1 in grad school, 1 in PA school
- First group of high school students graduate this year



Outreach Overview

- School visits for recruitment and cancer education programming
- Interviews with local NPR stations
- *Cancer Conversation* podcast with UK Agriculture Extension
- Participation in community events
- Participation in cancer advocacy (ACS CAN Day at the Capital Event)
- Oral history project with the UK Nunn Center for Oral history
- Creation and dissemination of an HPV vaccine information card
- Documentary photograph project (Instagram)
- Book
 - *The Cancer Crisis in Appalachia: Kentucky Students Take ACTION*

Outreach Examples



HUMAN PAPILLOMAVIRUS (HPV) is a common virus that can infect teens and adults. It can cause a number of cancers, including:

- Cancers of the cervix, vagina and vulva in women
- Penile cancer in men
- Throat cancer

A vaccine to prevent certain types of these cancers is available for kids and young adults, but timing is important. Together with your parents, talk with your doctor to see how you can prevent HPV-related cancers by getting vaccinated.

Find out more about the HPV vaccine at www.cdc.gov/hpv.

Source: https://www.cdc.gov/cancer/hpv/basic_info/cancers.htm
Brought to you by the Appalachian Career Training in Oncology (ACTION) Program.
An NCI Youth Enjoy Science R25-funded program (R25 CA221765).

MKTG-118



Instagram

Search



cancer_in_appalachia

Follow



25 posts 27 followers 0 following

Cancer In Appalachia

Appalachia faces some of the highest cancer rates in the US. Here we share images that remind us of cancer within the region.



ACTION



CIA

POSTS

TAGGED



Cancer Literacy Intervention

In-school cancer education program aimed at increasing cancer literacy among youth and to ultimately decrease cancer disparities across Kentucky.

1

Assess cancer health literacy within student populations in Kentucky

2

A baseline cancer literacy pretest consisting of 10 items was given to 349 participants

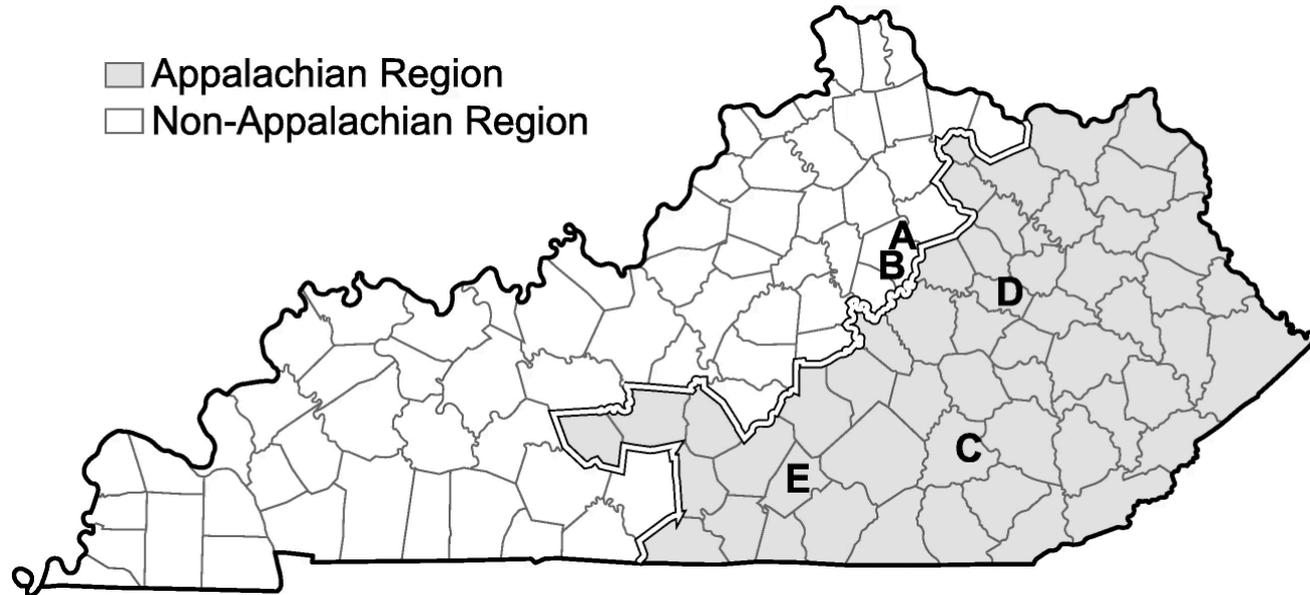
3

Following the pretest was the delivery of a cancer education presentation

4

Afterward, participants were given a posttest with identical items to the pretest

Location Of Participating Schools

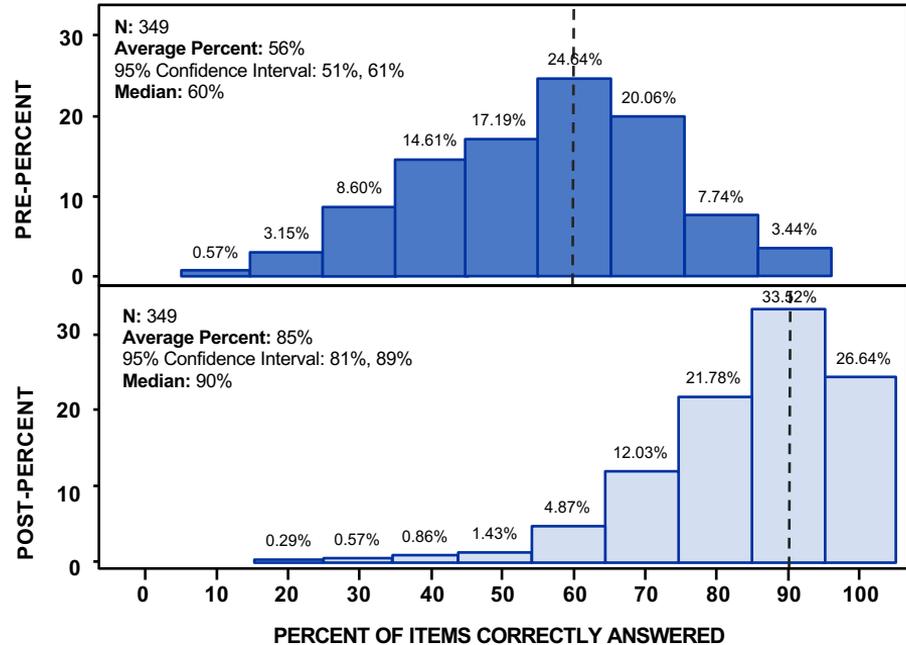


Increased Cancer Literacy

We found a significant improvement in the overall median score on a 10-item knowledge measure

- N = 349
- pre-intervention median: 60%
- post-intervention median: 90%

There was also significant improvement in response to each question of the measure.



These data suggest that brief cancer education interventions can enhance students' cancer literacy.

Summary

- The use of educational interventions, especially among youth, could help increase cancer literacy.
- Such interventions can help students understand the basics of cancer, which could aid decision-making around modifiable cancer risk factors and health-seeking behaviors.
- We recommend that school systems integrate evidence-based cancer education modules into their science or health education curricula.

THE CANCER CRISIS IN APPALACHIA

KENTUCKY STUDENTS
TAKE ACTION

with contributions by

Abigail Isaacs • Alyviah Newby •

Andrew Davison • Brianna Reyes

• Carrigan Wasilchenko • Emory Wilds

• Ethan Tiller • Haleigh Thompson • Holly Dickens •

Julie Kiser • Kaitlin Schumaker • Katelyn Nigro

• Kinley Lewis • Lauren K. Collett • Matthew Melton

• Megan Schlosser • Natalie Barker • Nolan Marcum •

Rachel Collins • Shahid Jabbar • Solomon Patton

• Spencer Shelton • Susanna Goggans •

William Adams • Zachary Hall

NATHAN L. VANDERFORD • LAUREN HUDSON • CHRIS PRICHARD EDITORS

- 25 ACTION participants wrote culturally-focused essays detailing the **effects of cancer in Appalachian Kentucky.**
- Cancer statistics are clearly important, **but data and facts can hide the personal stories** of how cancer affects individuals and communities.
- The essays provide an **understanding of how cancer impacts the region's youth.**

Identified Themes That Drive High Cancer

GEOGRAPHY

Natural Resources & Industry

- Tobacco
- Coal Mines

Decreased Access to Healthcare

- Long distance to quality cancer care facilities
- Decreased opportunity for screenings, treatment, and routine checkups

CULTURAL OF TOBACCO USE

Celebration & Acceptance of Tobacco Use

- Symbol of heritage
- Culturally accepted
- Tobacco Festival

Generational Tobacco Use

- Smoking addiction
- Begin using tobacco in youth, enabled by elders

EDUCATION

Low Education an Enabler of Participation in High-Risk Behaviors

- Tobacco use
- Prolonged UV radiation
- Poor diet
- Alcoholism
- Substance Abuse

Decreased Awareness

- High cancer rates in Kentucky
- Cancer Symptoms
- Recommended screenings

ENVIRONMENT

Water Contamination

- Carcinogens from coal mines
- Chemicals such as arsenic, lead, copper, benzene, carbon disulfide, naphthalene, dimethyl disulfide

Reduced Accessibility to Proper Waste Disposal & Recycling

- Commonly burn items such as tires, shingles, and building materials which contain asbestos and lead

POVERTY

Decreased Health Opportunities

- Screenings
- Insurance

Food Deserts and Swamps

- Elevated consumption of fast food and cheap, processed foods increase obesity rates

PREVENTION

Lack of Screenings Due to Fear

- Desire to not know
- Negative outcomes are most remembered

Appraisal as Unnecessary

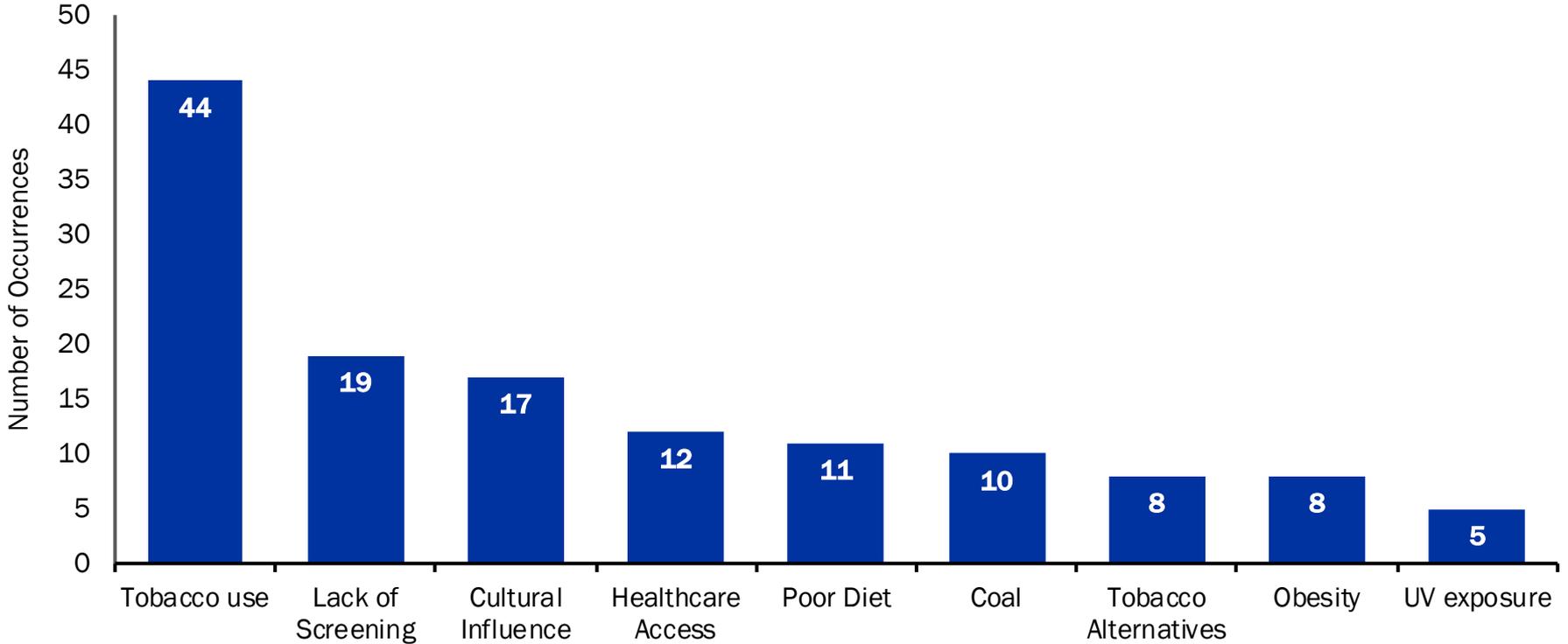
- “Not me”
- No Symptoms

MISTRUST

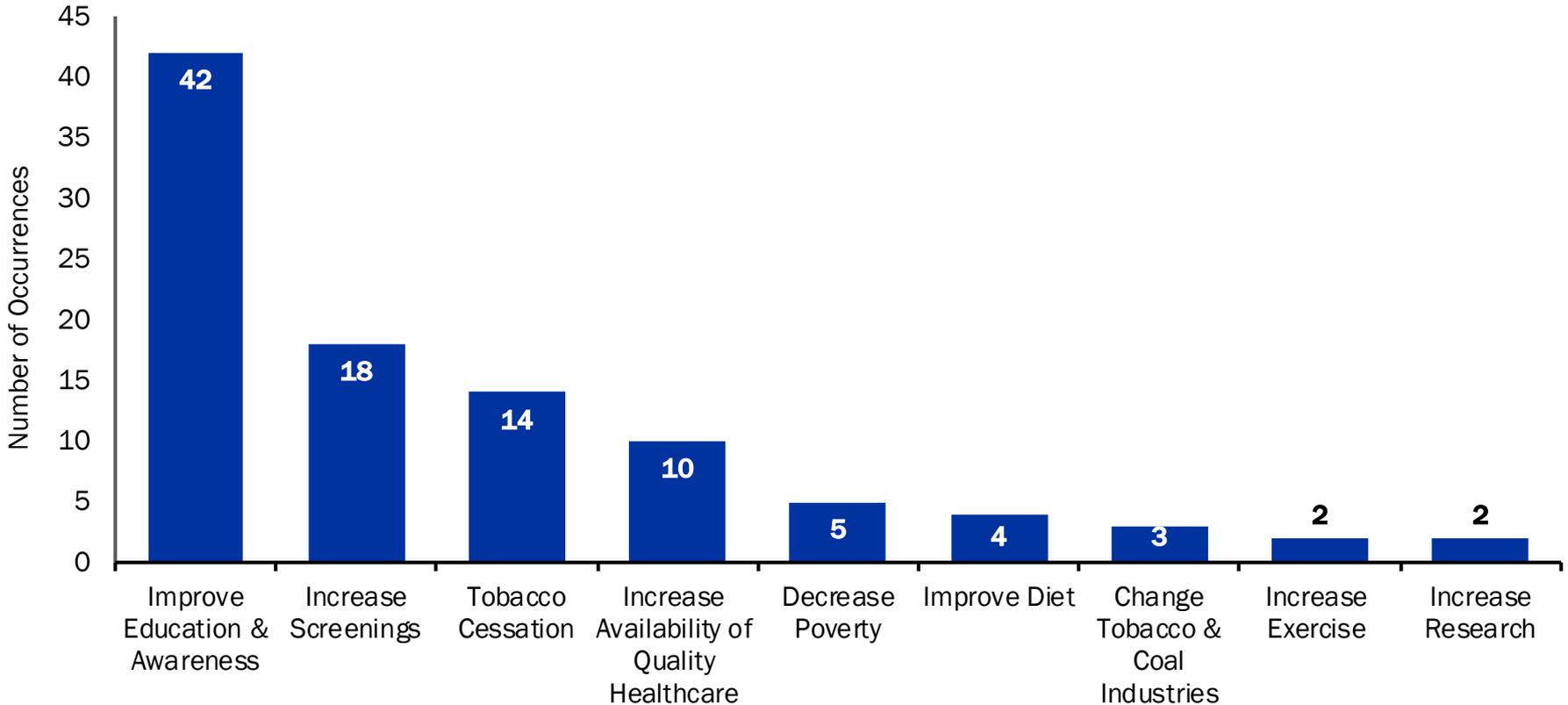
Cultural Differences

Questioned Motives

Referenced Cancer Risk/Contributing Factors



Referenced Solutions

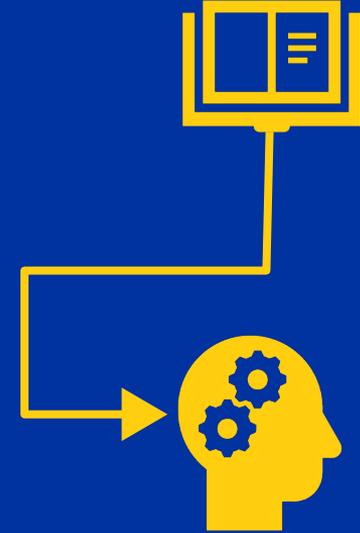


Summary

Through storytelling participants:

- Learned data does not tell the whole (personal) story of cancer's impact.
- Gained a better understanding of the cancer disparities in their communities.
- Envisioned culturally-tailored community-based intervention strategies that could aid in reducing the cancer burden in the area.

Storytelling



promotes better understanding through cultural framework.

Outreach During The Pandemic

Challenges

- Hard to get engaged with schools
- Difficult to virtually engage students in Internet deserts

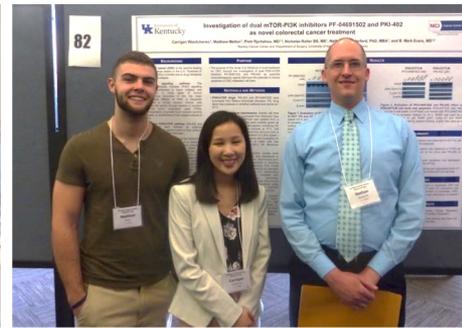
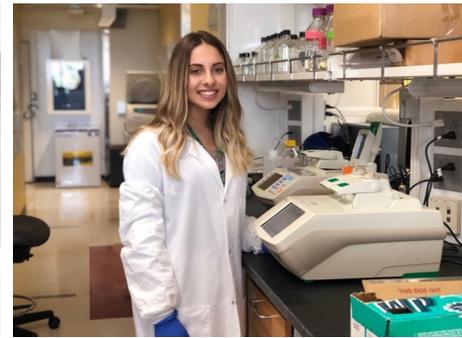
Wins/Successes

- Success with student projects (essay writing and photo project)
- Participants are disseminating *The Cancer Crisis* and HPV cards

Conclusions

ACTION engages Appalachian Kentuckians to:

- Increase participant's academic success and preparation for cancer careers
- Enhance cancer literacy to drive a reduction in cancer disparities



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Questions?