INDIANA UNIVERSITY

IU SIMON CANCER CENTER

Indiana University Melvin and Bren Simon Cancer Center

Population Health in the Indiana University Simon Cancer Center Catchment Area

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Aim 1

Describe knowledge, beliefs, and behaviors regarding cancer screening and cancer prevention strategies (physical activity, tobacco use) among adults residing in the IUSCC catchment area

- Tobacco (core measures)
- Physical Activity (HINTS)
- Diet - challenge to perform efficiently in mail survey
- Colorectal & breast (core measures)
- Cervical & lung cancer screening (priority areas of IUSCC)

Aim 2: ***Describe cancer information-seeking behaviors and preferences among adults residing in the IUCC catchment area***

In the past 12 months, have you used the following ways to communicate with your doctor or a doctor's office?

Email	1 yes 2 no
Electronic health record messaging systems like Epic MyChart	1 yes 2 no
Text message	1 yes 2 no
Facebook or other social media sites	1 yes 2 no
Skype, Facetime, or other video conference systems	1 yes 2 no

Aim 2 (cont.)

Please indicate if you have any of the following:

Tablet computer like an iPad, Samsung Galaxy, Motorola Xoom or Kindle fire	1. Yes 2. No
Smartphone, such as an iPhone, Android, Blackberry, or Windows phone	1. Yes 2. No
Basic cell phone only	1. Yes 2. No

In the past 12 months, when you have use the Internet, did you access it through:

A regular dial-up telephone line	1. Yes 2. No
Broadband such as DSL, cable or FiOS	1. Yes 2. No
A cellular network (i.e., phone, 3G/4G)	1. Yes 2. No
A wireless network (Wi-Fi)	1. Yes 2. No

Aim 3

Examine differences in knowledge, beliefs and behaviors by race (African American vs. Caucasian) and area of residence (urban vs. rural)

After creating the overall sampling frame, we will create 2 strata:

1. Race
2. Urban/rural

Sampling steps:

1. up to 2,000 African-American individuals with rural zip codes, as they are available.
2. 2,000 African-Americans with urban zip codes to obtain 4,000 total African-Americans.
3. then 2,000 White individuals with rural zip codes and 2,000 Whites in urban zip codes (total sampling frame of 8,000 individuals)

Aim 4

Establish the infrastructure to combine multi-level and longitudinal data in order to contextualize survey findings and inform future research, interventions and cancer communications.

An ecological view holds that multiple levels of influence affect behaviors through interdependent interactions…

<u>Multilevel</u>

a. Patient surveys (ePRO)
b. Geospatial data (community-level, social determinants)

<u>Longitudinal data/electronic health record</u>

i. Comorbidities
ii. Health care utilization
iii. Extended duration of follow-up (10 years)

IUSCC Catchment Area

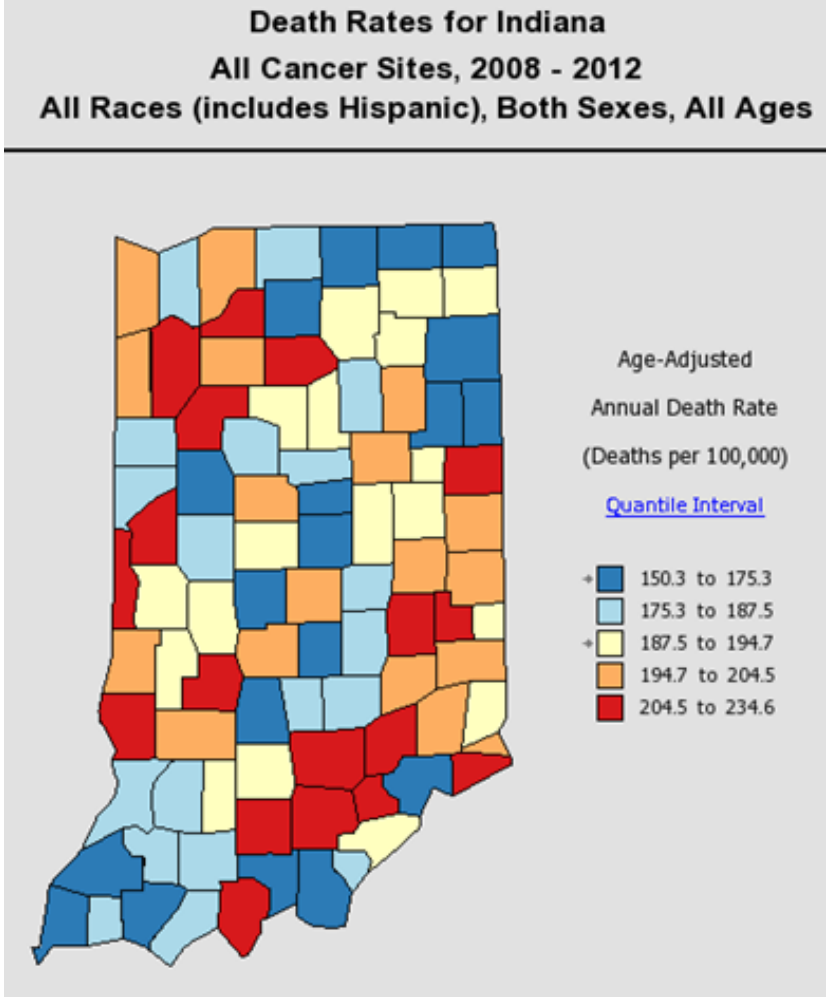
- Catchment area = state of Indiana
- **Rationale**: only NCI-designated Cancer Center in the state

- IUCC External Advisory Board suggested that the Cancer Center identify populations (including rural) where the cancer need and disparities are ***most urgent***.
  - Thus, proposal focuses upon high cancer mortality areas, as well as population groups at high risk for disparities

- This approach may enable our Cancer Center to define a more targeted approach towards its catchment area

Figure 1. IU Health hospital locations

Target Population & Sample

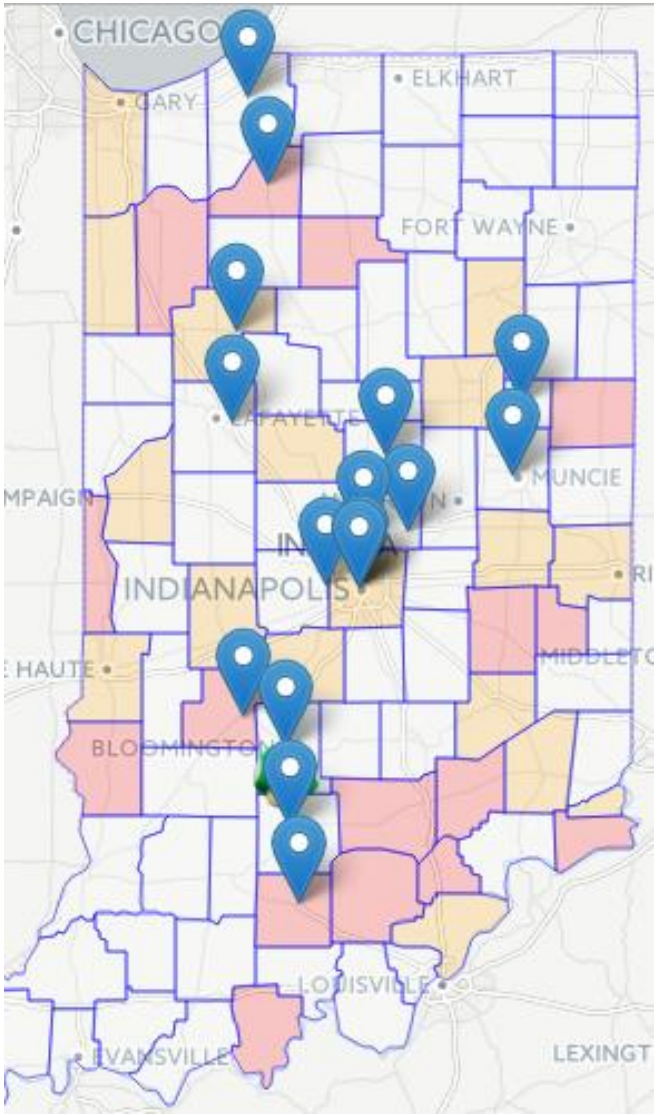


Sample

- 1,000 adults
- age 21-75 years
  - include young, middle-aged, and older adults to obtain a "*generational perspective*", esp. for cancer information-seeking behavior
- residing in counties in the IUCC catchment area (Indiana)
- with high cancer mortality rates
  - 36 counties with above average cancer mortality (194.7 to 234.6 per 100K)

Sampling Strategy

- Individuals with at least 1 visit to IU Health in the past year.
- Patient lists will be generated that include name & address to be use for:
  - mailing
  - identify urban/rural residence (RUCA) for weighting purposes
  - identify race for weighting purposes
- Random, weighted survey sample of 8,000 individuals (drawn from patient lists)
  - Assume response rate 13%



Using data to inform outreach & interventions

PARTNERS:

1. Indiana State Department of Health (ISDH)
2. Indiana Cancer Consortium. In collaboration with ISDH and the American Cancer Society, the IUSCC helped establish the Indiana Cancer Consortium (ICC). The ICC is a statewide partnership of 200+ organizational and individual members.

- The *Indiana Cancer Control Plan 2016-2020* provides a roadmap x 5 years.
  - The communications plan of the ISDH will result in the sharing of consistent, accurate, and effective cancer prevention and control messages.
  - Areas of focus include primary prevention and early detection.

Data from survey will provide information to guide ISDH & Indiana University Health

- most vulnerable target populations (sociodemographic/geographic)
- content needs (where are the gaps in knowledge & behavior)
- research/technology intervention mode (apps, websites)

IRB and Data Collection

- Status of IRB: application is pending
  - Expedited/waiver of informed consent/information sheet
  - HIPAA authorization (for review of medical records)

- Data Collection
  - Anticipate 1st survey fielded – April 1
    - 1st mailing will include a cover letter, self-administered survey & HIPAA authorization form with a $2 incentive.
    - 2nd mailing will be a postcard reminder (April 15 – June 30)
    - 3rd mailing will include a revised cover letter, the survey and HIPPA authorization form to non-respondents (May 1 – July 31)

Questions

Specific Aims

1) Describe knowledge, beliefs, and behaviors regarding cancer screening and cancer prevention strategies (healthy diet, physical activity, tobacco use) among adults residing in the IUCC catchment area

2) Describe cancer information-seeking behaviors and preferences among adults residing in the IUCC catchment area

3) Examine differences in knowledge, beliefs and behaviors by race (Black/African American vs. Caucasian) & area of residence (urban vs. rural)

4) Establish the infrastructure to combine multi-level (patient-reported and geospatial) and longitudinal (electronic health record) data in order to contextualize survey findings and inform future research, interventions and cancer communications.