

Assessing Population Health in the Abramson Cancer Center Catchment Area

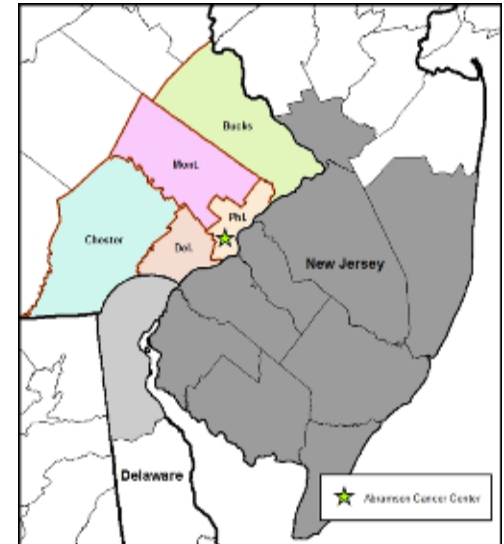
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Catchment Area

- ◆ Greater Delaware Valley (intersection of Pennsylvania, NJ and Del.)
- ◆ 15 counties; 7.3 million residents
- ◆ Urban, suburban and rural
- ◆ Majority live in 5-county SE Pennsylvania region
- ◆ Economically, racially, ethnically diverse
- ◆ Outcome disparities observed for most common cancers (breast, colorectal, lung, and prostate)
- ◆ Greater cancer burden on blacks and those with lower SES



Project Overview

- ♦ **Goal:** assess the needs of residents of the Abramson Cancer Center catchment area; specifically in cancer prevention, detection, care and survivorship, and health communication
- ♦ Quantitative research design; multi-level analysis
- ♦ Based on the ecological model of health behavior
- ♦ **Individual** participant level data will be collected through surveys
- ♦ **Neighborhood** level information will be collected through multiple sources of geospatial data

Primary Constructs

Table 1. Measures Topics	SOURCE(S), EXAMPLES	LEVEL OF MEASUREMENT
SURVEY DATA		
Demographics	SEPa/HINTS: age, sex, race/ethnicity, zipcode, education, housing, employment, marital status, family, access to transportation	Individual
Health status, access to care, barriers to care	SEPa HHS/HINTS: source of care, insurance coverage, language barriers	Individual
Health behavior	SEPa HHS/HINTS: Tobacco use, food intake, physical activity, UVR exposure	Individual
Cancer screening/detection	SEPa HHS/HINTS: Pap test, mammo, CRC screening, prostate ca screening	Individual
Information seeking and scanning, cancer communication related topics	From Kelly BJ et al., ^{14,39} for cancer prevention & screening behaviors; treatment/survivor behaviors from Nagler et al., ¹² Tan et al. ¹⁵	Individual
Cancer perceptions, knowledge	HINTS: beliefs, awareness, misconception	Individual
Risk perceptions	HINTS: perceived risk of lung, colon, breast (F), prostate (M) cancers	Individual
Neighborhood and social factors	SEPa HHS: reported social capital, use of social media, neighborhood access to prevention resources	Individual
GEOSPATIAL AND SOCIAL DATA		
Neighborhood demographics	US Census, American Community Survey	Neighborhood
Built environment	Regional Planning Commission, Police Departments, TradeDimensions, ESRI: walkability, food sources, transportation, crime, vacant lots, social context	Neighborhood
Health and cancer-related	PA Cancer Registry, PolicyMap, Social Explorer, County Health Rankings: health and cancer statistics, health services	Neighborhood
CHEMICAL EXPOSURE DATA		
Air toxicant exposure	EPA My Environment mapping tool	Neighborhood
Industrial waste-water discharge	EPA Toxic Release Inventory, RSEI, C-FERST	Neighborhood

Core Measures

- ◆ Demographic information
- ◆ Health information seeking
- ◆ Health information access
- ◆ Cancer screening and detection
- ◆ Tobacco and smoking
- ◆ Risk perception and beliefs
- ◆ Access to care, insurance, and barriers



Geospatial and Social

- ◆ Neighborhood demographics
- ◆ Built environment characteristics
- ◆ Health and cancer related variables



<http://center4leadership.org/built-environment/>

Chemical Exposure Data

- ♦ Air toxicant exposures
- ♦ Industrial waste water discharge/water quality assessments
- ♦ Other environmental carcinogens



<https://www.focusforhealth.org/environmental-toxins-your-health/>

Project Timeline

- ♦ IRB approved: January 2017
- ♦ Final survey developed: February 2017
- ♦ Survey testing and piloting: End of February/early March 2017
- ♦ Survey fielding: Spring 2017
- ♦ Data analysis and reporting: Summer 2017

Target Population

- ♦ 18 to 75 years old
- ♦ English or Spanish-speaking
- ♦ Completed the Southeastern Pennsylvania Household Health Survey (SEPa HHS) in 2015 and gave permission to be re-contacted
- ♦ Lives in Philadelphia County or one of 4 neighboring Pennsylvania counties
 - Majority of the ACC catchment area's population lives in this region
 - Includes most of the minority race/ethnicity population in the catchment
 - Accounts for the majority of ACC cancer cases and of cancer patient deaths over 5 years (2006-2010)

Sampling Strategy

- ♦ The full 2015 SEPA sample comprise of 10,006 cases with 80% of the sample coming from landline frame and 20% of sample from cellular frame.
- ♦ We will divide the 2015 SEPA sample into smaller replicates of about 500 respondents.
- ♦ We will field these replicates until the desired sample size of $n=1,000$ respondents is achieved.
- ♦ The survey will consist of some questions from the original survey and some new, cancer-specific items.
- ♦ We will link these responses to the full 2015 SEPa HHS data set and to neighborhood-level data sources.

Using data to inform outreach/interventions

◆ Collaborations with existing Penn/ACC programs

- Cancer Control Program
- Tobacco and Environmental Carcinogenesis
- UPenn Prevention Research Center

◆ Research foci

- Increasing clinical trials accrual among underrepresented minorities
- Health cancer communication research
- Population sciences planning across all ACC programs