

# Ottawa County Behavioral Risk Factor Survey

---

Research Results from the 2014  
Behavioral Risk Factor Survey

# A Research Project for



*mi*Ottawa Department of  
**Public Health**



North Ottawa Community  
Health System



**Prepared by:**  
**Martin Hill, Ph.D., President**



# Table of Contents

	<u>Page</u>
■ Introduction	4
■ Partners	5
■ Background and Objectives	6
■ Methodology	8
■ GIS Section Map	12
■ Summary	14
■ Detailed Findings	39
■ Perception of Community Problems	40
■ Health Status Indicators	43
■ Health Care Access	61
■ Risk Behavior Indicators	68
■ Clinical Preventive Practices	93
■ Chronic Conditions	120
■ Appendix	143
■ Respondent Demographics	144
■ Tables with Demographics	149

# ***INTRODUCTION***

---

# Partners

*The following community organizations are responsible for the funding and implementation of the Ottawa County Community Health Needs Assessment 2014:*

- Greater Ottawa County United Way
- Holland Hospital
- North Ottawa Community Health System
- Community Mental Health of Ottawa County
- Ottawa County Department of Public Health
- Spectrum Health Zeeland Community Hospital

# Background and Objectives

- VIP Research and Evaluation was contracted by the Community Health Needs Assessment (CHNA) team of Ottawa County to conduct a Behavioral Risk Factor Survey (BRFS) as part of their larger community-wide health needs assessment in Ottawa County.
- The Patient Protection and Affordable Care Act (PPACA) passed by Congress in March of 2010 set forth additional requirements that hospitals must meet in order to maintain their status as a 501(c)(3) Charitable Hospital Organization. One of the main requirements states that a hospital must conduct a community health needs assessment (CHNA) and must adopt an implementation strategy to meet the community health needs identified through the assessment. The law further states that the assessment must take into account input from persons who represent the broad interests of the community, including those with special knowledge of, or expertise in, public health.
- In response to the PPACA requirements, organizations serving both the health needs and broader needs of Ottawa County communities began meeting to discuss how the community could collectively meet the requirement of a CHNA. Currently these partners comprise a task force consisting of Ottawa County Department of Public Health, Community Mental Health of Ottawa County, Holland Community Hospital, North Ottawa Community Hospital, Spectrum Health Zeeland Community Hospital, and the Greater Ottawa County United Way.

# Background and Objectives (Cont'd.)

- Information collected from this research will be utilized in the Community Health Needs Assessment for the three hospitals in Ottawa County and in the Health section of the broader United Way Community Assessment.
- The overall objective of the BRFS is to obtain information from Ottawa County residents about a wide range of behaviors that affect their health. More specific objectives include measuring each of the following:
  - Health status indicators, such as perception of general health, satisfaction with life, weight (BMI), and levels of high blood pressure
  - Health risk behaviors, such as smoking, drinking, diet, and physical activity
  - Clinical preventative measures, such as routine physical checkups, cancer screenings, oral health, and immunizations
  - Chronic conditions, such as diabetes, asthma, and cancer, and their management
- The information collected will be used to:
  - Prioritize health issues and develop strategic plans
  - Monitor the effectiveness of intervention measures
  - Examine the achievement of prevention program goals
  - Support appropriate public health policy
  - Educate the public about disease prevention through dissemination of information

# Methodology

- A Behavioral Risk Factor Survey was conducted among 2,008 Ottawa County adults (age 18+) via telephone. The response rate was 35%.
- Disproportionate stratified random sampling (DSS) was used to ensure results could be generalized to the population of Ottawa County. Characteristics of DSS are:
  - Landline telephone numbers are drawn from two strata (lists) that are based on the presumed density of known household telephone numbers
  - Numbers are classified into strata that are either high density (listed) or medium density (unlisted)
  - Telephone numbers in the high density strata are sampled at the highest rate; in this case the ratio was 1.5:1.0
- In addition to landline telephone numbers, the design also targeted cell phone users. Of the 2,008 completed surveys:
  - 507 are cell phone completes (25.1%), and 1501 are landline phone completes (74.9%)
  - 373 are cell-phone-only households (18.6%)
  - 246 are landline phone completes (12.3%), and
  - 1384 have both cell and landline numbers (69.1%)
- For landline numbers, households were selected to participate subsequent to determining that the number was that of an Ottawa County residence. Vacation homes, group homes, institutions, and businesses were excluded.



# Methodology

- Respondents were screened to ensure they were at least 18 years of age and resided in Ottawa County. In households with more than one adult, interviewers randomly selected one adult to participate based on which adult had the nearest birthday. In these cases, every attempt was made to speak with the randomly chosen adult; interviewers were instructed to not simply interview the person who answered the phone or wanted to complete the interview.
- Spanish-speaking interviewers were used where Spanish translation/interpretation was needed.
- The 2,008 households represent 2.1% of the 94,666 households in Ottawa County according to the 2009-2013 U.S. Census estimate.
- The margin of error for the entire sample of 2,008, at a 95% confidence level, is +/- 2.2%. This calculation is based on a population of roughly 198,386 Ottawa County residents 18 years or older, according to the 2009-2013 U.S. Census estimate.

# Methodology (Cont'd.)

- Unless noted, consistent with the Michigan BRFs, respondents who refused to answer a question or did not know the answer to a specific question were excluded from analysis. Thus, the base sizes vary throughout the report.
- Data weighting is an important statistical process that was used to remove bias from the BRFs sample. The formula consists of both design weighting and iterative proportional fitting, also known as “raking” weighting. The purpose of weighting the data is to:
  - Correct for differences in the probability of selection due to non-response and non-coverage errors
  - Adjust variables of age, gender, race/ethnicity, marital status, education, and section to ensure the proportions in the sample match the proportions in the population of Ottawa County adults
  - Allow the generalization of findings to the whole Ottawa County adult population
- Design weighting takes into account the number of landline phones and the number of adults in each household. It also takes into account the number of available phone numbers and the number of phone numbers selected within each geographic strata and density strata. The first step is to calculate the stratum weight (STRWT) from the number of records in the strata and the number of records selected.

# Methodology (Cont'd.)

- The components of the design weighting formula are as follows:
  - STRWT – accounts for differences in the basic probability of selection among strata (subsets of area code/prefix combinations).  $\text{STRWT} = \text{number of available phone numbers} / \text{number of phone numbers selected}$ .
  - IMPNPH – the number of residential telephone numbers in the respondent's house
  - NUMADULT – number of adults in the respondent's household
- The formula used for design weighting the BRFS data is:

$$\text{Design Weight} = \text{STRWT} * 1/\text{IMPNPH} * \text{NUMADULT}$$

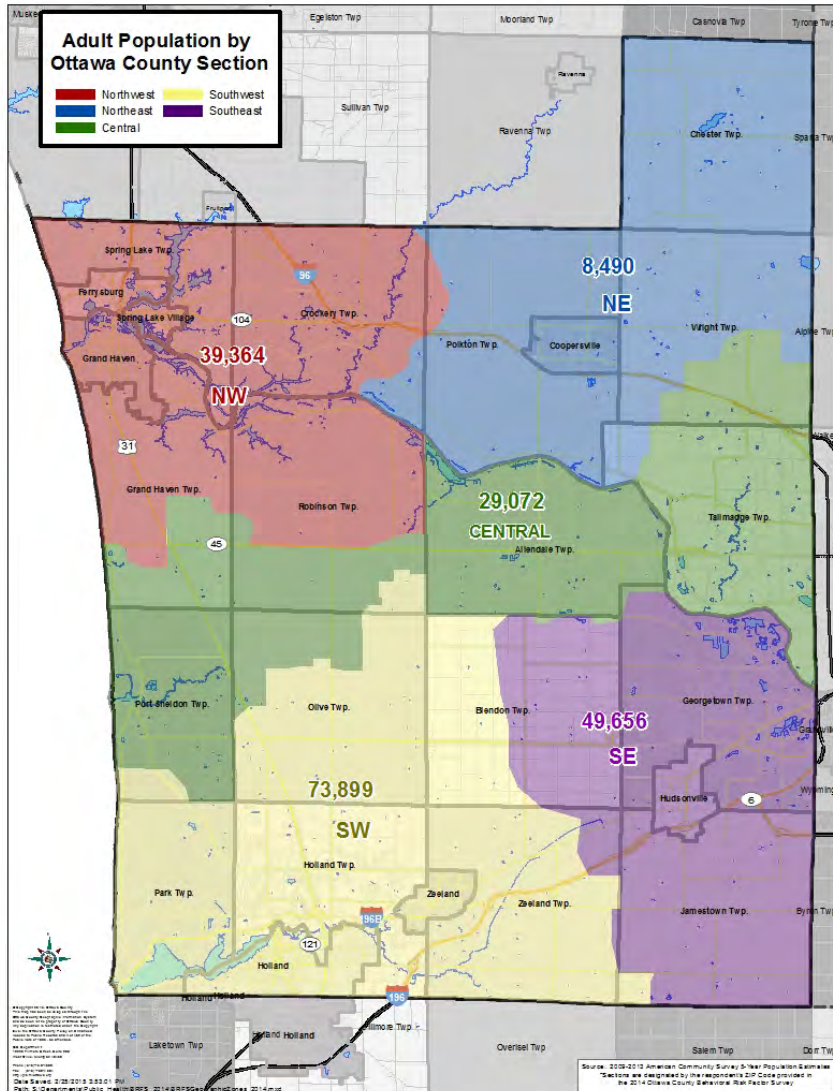
- Raking weighting ensures the data are representative of the population of adults in Ottawa County on a number of demographic characteristics, such as age, gender, race/ethnicity, marital status, education, and section. Raking weighting incorporates the known characteristics of the population into the sample. For example, if the sample is disproportionately female, raking will adjust the responses of females in the sample to accurately represent the proportion of females in the population. This is done in an iterative process, with each demographic characteristic introduced into the sequence. This process may require multiple iterations before the sample is found to accurately represent the population on all of the characteristics named above.
- The formula used for the final weight is:

$$\text{Design Weight} * \text{Raking Adjustment}$$

# GIS Section Map

- The following Geographic Information System (GIS) map shows the five sections in Ottawa County that were used to **compare each key BRFS measure**. These sections are formed by combining ZIP codes in Ottawa County; each survey respondent is assigned to one of the five sections according to their reported residential ZIP code.
- The population shown on the map within each section is the total population of adults ages 18 and over within Ottawa County. The Behavior Risk Factor Survey is a survey of adult residents ages 18 and over.
- These five sections are the same as those utilized by the Greater Ottawa County United Way Community Assessment.

# Ottawa County Map with Sections



Section Name	Community Area	ZIP Codes*
Northwest Section	Ferrysburg Grand Haven Spring Lake & surrounding areas	49409, 49417 49456, 49448
Northeast Section	Coopersville Chester Wright & surrounding areas	49404, 49403
Central Section	Allendale Port Sheldon Tallmadge & surrounding areas	49401, 49430 49435, 49460 49534
Southwest Section	Holland Olive Park Zeeland & surrounding areas	49423, 49424 49464
Southeast Section	Georgetown Hudsonville Jamestown & surrounding areas	49315, 49418 49426, 49428

\*For ZIP codes that cross county lines, only Ottawa County residents were surveyed

# ***SUMMARY***

---

# Summary of Findings

## Disparities in Health and Health Care

- There is a direct relationship between health outcomes and both education and income. Positive outcomes are more prevalent among adults with higher levels of education and adults from households with higher income levels and negative outcomes are more prevalent among those with less education and lower incomes. Examples of this disparity include:
  - General health status
  - Satisfaction with life
  - Likelihood of receiving social/emotional support
  - Poor mental health
  - Activity limitation due to poor physical and/or mental health
  - Having health care coverage
  - Having a personal health care provider
  - Engaging in leisure time activity
  - Adequate fruit and vegetable consumption
  - Smoking cigarettes
  - Having a mammogram **and** one that is appropriately timed
  - Having a Pap test **and** one that is appropriately timed
  - Having a colonoscopy **and** one that is appropriately timed
  - Having a PSA test
  - Visiting a dentist
  - Food sufficiency in the household
  - Experiencing psychological distress
  - Having diabetes
  - Having COPD

# Summary of Findings (Cont'd.)

## Disparities in Health and Health Care (Cont'd.)

- The link between both education and income and positive health outcomes goes beyond the direct relationship. Those occupying the very bottom groups, for example no high school diploma and/or household income less than \$20K (or living below the poverty line), are most likely to experience the worst health outcomes.
- There is also a direct relationship between health outcomes and age. In many cases, negative outcomes are more often associated with younger adult age groups, for example:
  - Poor mental health status
  - No health care coverage
  - Smoking cigarettes
  - Binge drinking
  - Food insufficiency
  - No personal health care provider
  - No routine physical checkup
  - Having cholesterol levels checked



# Summary of Findings (Cont'd.)

## Disparities in Health and Health Care (Cont'd.)

- In other cases, negative outcomes are more associated with **older** adult age groups, such as:
  - Poor physical health status
  - Having hypertension (HPB)
  - Having various chronic diseases:
    - Diabetes
    - Arthritis
    - Skin cancer
    - Other cancer (non-skin)
    - Heart attack
    - Angina
    - Stroke

# Summary of Findings (Cont'd.)

## Disparities in Health and Health Care (Cont'd.)

- Adults living in the central section of Ottawa County fared better than adults in other sections on the following measures:
  - Activity limitation (lowest)
  - Hypertension (lowest)
  - Having cholesterol checked (highest)
  - Having high cholesterol (lowest)
  - No health coverage (lowest)
  - Leisure time activity (highest)
  - Having a mammogram and having a timely one (highest)
  - Having a Pap test (highest)
  - Having a timely colonoscopy (highest)
  - Lowest proportions of the following chronic diseases:
    - Diabetes
    - Arthritis
    - Asthma
    - Angina
    - COPD
- On the other hand, adults living in the central section of Ottawa County were more likely to have no health care provider, smoke cigarettes, binge drink, and consume inadequate amounts of fruits and vegetables.

# Summary of Findings (Cont'd.)

## Health Status

- Ottawa County adults are physically and emotionally healthy, as supported by the following major measures of health status which are all higher than the corresponding measures for adults living elsewhere in Michigan:
  - 89.5% **perceive their health as good or better** (very good/excellent)
  - 96.7% are **satisfied or very satisfied with their life**
  - 83.3% say they **receive needed social and emotional support**
- Fewer than one in ten are considered to be in **poor physical health** (6.1%) or **poor mental health** (8.6%).
  - A small proportion (5.7%) of adults report their poor physical or mental health **prevents them from conducting their usual activities**, such as self-care, work, or recreation, for fourteen or more days in the past month
- More than eight in ten (83.6%) Ottawa County adults are considered to be **psychologically well/healthy** per the Kessler 6 questionnaire that was part of the BRFS instrument this year.
  - Still, 13.7% are classified as having **mild to moderate psychological distress** and 2.7% have **severe psychological distress**.

# Summary of Findings (Cont'd.)

## Health Status (Cont'd.)

- Despite low proportions of adults with poor mental health or severe psychological distress, one area of opportunity for local health professionals is to formulate a plan to address the fact that sizeable portions of people with mental health challenges do not take medication or receive treatment for their condition.
  - For example, the proportion of adults who currently take medication or receive treatment for a mental health condition or emotional problem is 23.1% among those with mild to moderate psychological distress and 38.9% among those with severe psychological distress
  - Further, less than one-third (30.1%) of adults who have poor mental health currently take medication or receive treatment for their mental health
- It is surprising that so few people engage in treatment or medication for mental health conditions considering that nearly all adults (84.3%), regardless of mental health status, believe treatment can help people with mental illness lead normal lives.
  - Reluctance to seek treatment or take medication might result from a perceived stigma attached to the label of mental illness
    - More than one-third (33.6%) of all adults do not view people as “caring and sympathetic to people with mental illness”
    - Moreover, 73.1% of adults with severe psychological distress view others as uncaring and unsympathetic

# Summary of Findings (Cont'd.)

## Health Status (Cont'd.)

- Less than one-fourth (23.9%) of the adults in Ottawa County are considered to be **obese** per their BMI, while an additional 35.3% are **overweight** (but not obese).
  - Both of these proportions are lower (better) than they were three years ago
  - Although obesity is a problem across socio-demographic groups, adults who have college degrees and/or are in the highest income brackets (\$75K+) are least likely to be obese
  - Men are more likely than women to be overweight (but not obese)
  - Respondents consider obesity to be the top health issue in Ottawa County

# Summary of Findings (Cont'd.)

## Health Care Access

- Among adults aged 18-64, 90.7% currently have health care coverage.
  - Over half (57.8%) have coverage through a plan at work or through a union
  - Non-White adults are less likely to have health care coverage compared to White adults
- One in ten (9.8%) adults had to forego needed medical care in the past year due to **cost**.
  - Moreover, in the past year, 8.5% delayed seeking medical care because of the general cost of care while 4.6% delayed seeking medical care because of the **cost of co-pays and/or deductibles**
- More than one in five (23.8%) Ottawa County adults have visited an Urgent Care Center in the past year, and 17.5% have visited the Emergency Room
- While a large majority (81.4%) are at least somewhat confident they can navigate the health care system, 18.7% are not confident.
  - Older adults (55+), college graduates, and those who have higher incomes (\$50K+) are most confident
  - Conversely, low confidence is most often seen among the youngest adults (18-24), those who have less than a high school diploma, those living in households with incomes less than \$20K, and Hispanics

# Summary of Findings (Cont'd.)

## Health Risk Behaviors

- Eight in ten adults (79.5%) participate in some form of leisure time physical activity, such as running, calisthenics, walking, golfing, or gardening.
  - On the other hand, only four in ten adults participate in physical activities to strengthen their muscles
- The prevalence of cigarette smoking among Ottawa County adults is 18.6%.
  - Smoking is far more common among non-Hispanic minorities compared to Whites or Hispanics
- Half (50.4%) of Ottawa County adults are considered non-drinkers of alcohol, meaning they consumed no alcohol in the past month. Additionally, 42.8% are light to moderate drinkers and 6.5% are heavy drinkers.
  - 19.3% of adults are binge drinkers, meaning they have consumed at least 4 (if female) or 5 (if male) drinks on at least one occasion in the past month
  - Binge drinking is most common among non-Whites and adults less than 35 years old
- Three in ten (29.5%) adults consume an adequate amount (five or more times) of fruits and vegetables per day.
  - Adults' average fruit (including 100% fruit juice) and vegetable consumption is 1.8 times per day for each. Taken together, adults' average fruit and vegetable consumption is 3.6 times per day

# Summary of Findings (Cont'd.)

## Health Risk Behaviors (Cont'd.)

- When eating at fast food restaurants, more than one-fourth (28.0%) of adults say that calorie information impacts their decision on what to order at least half the time.
  - Still, 44.2% report this type of information never helps them decide what to order
- Nine in ten adults (92.0%) say they always have enough to eat and it is always (90.0%) the type of food they want to eat.
  - Insufficient food access is most prevalent among those who are younger (<35 years old), Hispanic, less educated, and lower income
- Nine in ten adults (94.0%) purchase fresh fruits and vegetables within their own community or neighborhood, and 97.7% say it is easy to find fresh produce locally.
  - Among those who don't buy fresh produce locally the most common reasons are: they prefer farmer's markets elsewhere, local grocery stores are too expensive, local stores have produce of poor quality, and there are no stores in their neighborhood
- Slightly more than one-fourth (26.4%) of all adults have been told by a health professional they have high blood pressure (HBP).
  - Of these, 79.0% are currently taking medication for their HPB



# Summary of Findings (Cont'd.)

## Clinical Preventive Practices

- Three-fourths (77.4%) of adults have had their cholesterol checked, and of these, 77.2% have had it checked within the past year.
  - More than one in four adults (26.8%) who have had their cholesterol checked have been told by a health care professional that their cholesterol was high.
  - However, 42.8% of those who have been told they have high cholesterol are not currently taking medication for this condition
- Nearly nine in ten adults (88.6%) have a medical home (have a personal care provider) and 4.6% have more than one.
  - Eight in ten (80.1%) adults have visited a doctor for a routine checkup within the past year
  - Men and non-Whites are less likely to have a medical home than women and Whites, respectively
  - Men are also less likely than women to have had a routine checkup within the past year
- Almost all (93.1%) women 40 years or older have had a mammogram to screen for breast cancer.
  - Of these, 71.8% had one within the past year (66.8% of all adult women)

# Summary of Findings (Cont'd.)

## Clinical Preventive Practices (Cont'd.)

- Further, nearly nine in ten (87.7%) adult women have had a Pap test to screen for cervical cancer.
  - Of these, 81.3% had one within the past three years (71.2% of all adult women)
  - Women aged 18-24 are least likely to have had a Pap test
- More than half (65.8%) of men aged 50 or older have had a PSA test to screen for prostate cancer.
  - The lowest rates are found among men who are aged 50-54, Hispanic, those with less than a high school education, and those living below the poverty line
- Three-fourths (74.4%) of adults aged 50 or older have had a sigmoidoscopy or colonoscopy to screen for colorectal cancer.
  - Of these, 83.6% have had one in the past five years (27.1% in the past year)
  - Hispanics, adults aged 50-54, those below the poverty level, and those with less than a high school education are least likely to have ever been screened for colorectal cancer and least likely to have been screened within an appropriate timeframe (past 5 years)

# Summary of Findings (Cont'd.)

## Clinical Preventive Practices (Cont'd.)

- Although the vast majority of adults (91.4%) have had no problem obtaining needed dental care, one in five adults (21.3%) have not visited a dentist in the past year.
  - Those who have experienced problems accessing needed dental care say ***inability to afford treatment*** and ***lack of insurance*** are the main barriers
- Two-thirds (66.9%) of Ottawa County adults aged 65 or older have had a pneumonia vaccine. Additionally, 72.1% have had a flu vaccine in the past year.
  - The lowest rates are among those below the poverty level and those with less than a high school education
- Almost all pregnant women surveyed receive prenatal care (94.6%) and three-fourths (77.6%) take folic acid.
  - Prenatal care begins in the first trimester

# Summary of Findings (Cont'd.)

## Chronic Conditions

- The prevalence estimates of all chronic conditions measured are lower than state and national estimates, and the rates are as follows:
  - Arthritis (18.3%)
  - Asthma (6.5%)
  - Diabetes (7.8%)
  - Cancer (non-skin) (5.4%)
  - Skin cancer (4.7%)
  - COPD (3.0%)
  - Angina/coronary heart disease (2.9%)
  - Heart attack (2.1%)
  - Stroke (2.1%)
- People with diabetes see a health care professional for the condition, on average, more than three times a year (3.3). Additionally, they have been checked for A1c, on average, almost three times (2.9) in the past year.
  - Almost all (94.9%) have received information on how to care for their diabetes in the past year

# Summary of Findings (Cont'd.)

## Chronic Conditions (Cont'd.)

- Regarding the management of chronic conditions other than diabetes, the proportion of people who received information on managing their chronic condition within the past 12 months varies, but in general, is much better than three years ago:
  - Heart attack (95.9%)
  - Angina/coronary heart disease (95.2%)
  - COPD (91.1%)
  - Stroke (89.7%)
  - Skin cancer (88.0%)
  - Cancer (non-skin) (87.6%)
  - Arthritis (84.5%)
  - Asthma (74.2%)
- By far, the most common source of information for managing chronic illness is one's ***physician or health care professional***. Other useful sources are the Internet, family/friends, books/magazines/publications.

# Summary of Measures

## Strengths

<ul style="list-style-type: none"> <li>✓Ottawa County better than MI or US on most indicators measured</li> <li>✓Good or better general health status, physical health, and mental health</li> <li>✓Satisfaction with life</li> <li>✓Adequate social and emotional support</li> <li>✓Low prevalence of psychological distress</li> <li>✓Most have health care coverage and a primary care provider (PCP) and both of these measures are better than 2011</li> <li>✓Most buy fresh fruits/vegetables locally and feel fresh produce is readily available in their community</li> </ul>	<ul style="list-style-type: none"> <li>✓Most engage in leisure time physical activity</li> <li>✓Most believe treatment is effective for mental illness</li> <li>✓More than four in ten adults are light to moderate drinkers</li> <li>✓Almost nobody drives after drinking</li> <li>✓Almost all pregnant women receive prenatal care and all receive it in the first trimester</li> <li>✓Most have enough to eat and it is the type of food they want</li> <li>✓Most have had no problems receiving needed medical care</li> </ul>	<ul style="list-style-type: none"> <li>✓Large majority of adults aged 65+ immunized against pneumonia and flu</li> <li>✓Vast majority have routine physical checkups and health screening/tests, such as mammograms, Pap tests, PSA tests, and colonoscopies</li> <li>✓Lower prevalence than MI or US on chronic conditions such as asthma, heart attacks, angina/coronary heart disease, stroke, diabetes, COPD, arthritis, and cancer</li> <li>✓Vast majority receiving information on how to manage arthritis, diabetes, heart attack, angina/CHD, stroke, cancer, COPD, and arthritis</li> </ul>
---	--	--

## Opportunities for Improvement

<ul style="list-style-type: none"> <li>✓One-fourth of adult population obese</li> <li>✓More than one-third overweight (but not obese) (greater than MI)</li> <li>✓One-third think people are not generally caring/sympathetic to those w/mental illness</li> <li>✓Three in ten have hypertension, greater proportion than MI or US</li> <li>✓One-fifth of adults have arthritis</li> </ul>	<ul style="list-style-type: none"> <li>✓More than one-fourth have high cholesterol and four in ten are not taking medication for high cholesterol</li> <li>✓Almost one in five smoke cigarettes</li> <li>✓Larger proportions of “heavy” and “binge” drinkers than MI or US</li> <li>✓Inadequate consumption of fruits and vegetables, but better than MI or US</li> <li>✓One in four have not visited the dentist in the past year for any reason</li> </ul>	<ul style="list-style-type: none"> <li>✓One-fourth not receiving information on how to manage their asthma</li> <li>✓One in four not confident in how to navigate health care system</li> <li>✓Less than half who are considered in poor mental health or are psychologically distressed are taking medication for their condition</li> </ul>
--	--	---

# Comparison of BRFs Measures Between Ottawa County, Michigan, and the United States

## Health Status Indicators

	Ottawa County	Michigan	U.S.
General Health Fair/Poor	10.5%	17.7%	16.9% (2013)
Poor Physical Health (14+ days)	6.1%	12.7%	--
Poor Mental Health (14+ days)	8.6%	12.0%	--
Activity Limitation (14+ days)	5.7%	8.8%	--
Dissatisfied/Very Dissatisfied with Life	3.2%	6.1% (2010)	--
Rarely/Never Receive Social and Emotional Support	5.5%	6.5% (2010)	--
Obese	23.9%	31.5%	28.9% (2013)
Overweight	35.3%	34.7%	35.4% (2013)
Healthy Weight	37.7%	32.5%	33.4% (2013)
No Health Care Coverage (18-64)	9.3%	17.4.6%	20.0% (2013)
No Personal Health Care Provider	11.4%	17.0%	22.9% (2013)
No Health Care Access Due to Cost	9.8%	15.5%	15.3% (2013)



= best measure among the comparable groups

Sources: Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Selected Tables, Michigan BRFs, 2013  
Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2013

# Comparison of BRFs Measures Between Ottawa County, Michigan, and the United States (Cont'd.)

## Risk Behavior Indicators

	Ottawa County	Michigan	U.S.
No Leisure Time Physical Activity	20.5%	24.4%	25.5% (2013)
Inadequate Fruit and Vegetable Consumption (<5 Times Per Day)	70.5%	84.7%	76.6% (2009)
Consume Fruits <1 Time Per Day	20.6%	37.5%	39.2%
Consume Vegetables <1 Time Per Day	17.1%	23.9%	22.9%
Current Cigarette Smoking	18.6%	21.4%	19.0% (2013)
Former Cigarette Smoking	22.6%	27.0%	25.2% (2013)
Binge Drinking	19.3%	18.9%	16.8% (2013)
Heavy Drinking	6.5%	6.2%	6.2% (2013)
Ever Told High Blood Pressure	26.4%	34.6%	31.4% (2013)
Cholesterol Ever Checked	77.4%	83.2	80.1% (2013)
Ever Told High Cholesterol	26.8%	40.6	38.4% (2013)



= best measure among the comparable groups


Sources: Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Selected Tables, Michigan BRFs, 2013  
Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2013



# Comparison of BRFs Measures Between Ottawa County, Michigan, and the United States (Cont'd.)

## Clinical Preventive Practices

	Ottawa County	Michigan	U.S.
No Routine Checkup in Past Year	19.9%	30.1%	31.8% (2013)
Ever Had Mammogram (Females, 40+ only)	93.1%	94.5% (2012)	--
Had Mammogram in Past Year (Females, 40+ only)	66.8%	59.2% (2012)	--
Had Mammogram in Past 2 Years (Females, 40+ only)	80.6%	76.6% (2012)	75.6% (2010)
Ever Had Pap Test	87.7%	92.1% (2012)	--
Had Appropriately Timed Pap Test	71.2%	79.4% (2012)	--
Ever Had PSA Test (Males, 50+ only)	65.8%	72.2% (2012)	--
Ever Had Sigmoidoscopy or Colonoscopy (50+ only)	74.4%	74.0%	--
Had Sigmoidoscopy /Colonoscopy in Past 5 Years (50+)	61.9%	56.4%	52.8% (2010)
No Dental Visit in Past Year	21.3%	32.0% (2012)	30.0% (2008)
No Teeth Cleaning in Past Year	24.3%	29.2% (2010)	28.7% (2008)
Had Flu Vaccine in Past Year (65+ only)	72.1%	56.8%	62.6% (2013)
Ever Had Pneumonia Vaccine (65+ only)	66.9%	68.6%	69.4% (2013)

 = best measure among the comparable groups

Sources: Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Selected Tables, Michigan BRFs, 2013  
Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2013

# Comparison of BRFs Measures Between Ottawa County, Michigan, and the United States (Cont'd.)

## Chronic Conditions

	Ottawa County	Michigan	U.S.
Lifetime Asthma Prevalence	11.9%	15.2%	14.1% (2013)
Current Asthma Prevalence	6.5%	10.9%	9.0% (2013)
Ever Told Had Arthritis	18.3%	31.3%	25.1% (2013)
Ever Told Had Heart Attack	2.1%	5.2%	4.4% (2013)
Ever Told Had Angina/Coronary Heart Disease	2.9%	5.2%	4.1% (2013)
Ever Told Had Stroke	2.1%	3.6%	2.8% (2013)
Ever Told Had Diabetes	7.8%	10.4%	9.8% (2013)
COPD	3.0%	8.8%	6.3% (2013)
Skin Cancer	4.7%	5.4%	6.0 (2013)
Other Cancer	5.4%	7.7%	6.7 (2013)










= best measure among the comparable groups



Sources: Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Selected Tables, Michigan BRFs, 2013  
Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2013

# Comparison of Ottawa County BRFs Measures from 2011 and 2014

## Health Status Indicators







	Ottawa County 2014	Ottawa County 2011
General Health Fair/Poor	10.5%	9.9%
Poor Physical Health (14+ days)	6.1% 	8.1%
Poor Mental Health (14+ days)	8.6%	8.6%
Activity Limitation (14+ days)	5.7%	5.1%
Dissatisfied/Very Dissatisfied with Life	3.2% 	4.5%
Rarely/Never Receive Social and Emotional Support	5.5%	4.4%
Obese	23.9% 	25.8%
Overweight	35.3% 	36.7%
Healthy Weight	37.7% 	36.3%
No Health Care Coverage (18-64)	9.3% 	12.6%
No Personal Health Care Provider	11.4% 	12.0%
No Health Care Access Due to Cost	9.8%	--

  = better/improved measure from 2011



  = significantly (95% confidence level) better/improved measure from 2011

# Comparison of Ottawa County BRFs Measures from 2011 and 2014

## Risk Behavior Indicators

	Ottawa County 2014	Ottawa County 2011
No Leisure Time Physical Activity	20.5%	12.7%
Inadequate Fruit and Vegetable Consumption*	70.5% 	83.0%
Current Cigarette Smoking	18.6%	17.2%
Former Cigarette Smoking	22.6% 	24.5%
Binge Drinking	19.3% 	20.3%
Heavy Drinking	6.5% 	7.5%
Ever Told High Blood Pressure	26.4% 	31.4%
Cholesterol Ever Checked	77.4%	82.0%
Ever Told High Cholesterol	26.8% 	37.2%




  = better/improved measure from 2011

  = significantly (95% confidence level) better/improved measure from 2011



\*Two questions assessed fruit and vegetable consumption in 2014 versus five questions in 2011, so use caution in comparing this measure across the two surveys.

# Comparison of BRFs Measures Between Ottawa County, Michigan, and the United States (Cont'd.)

## Clinical Preventive Practices






	Ottawa County 2014	Ottawa County 2011
No Routine Checkup in Past Year	19.9% 	26.2%
Ever Had Mammogram (Females, 40+ only)	93.1%	94.1%
Had Mammogram in Past Year (Females, 40+ only)	66.8%	70.1%
Had Mammogram in Past 2 Years (Females, 40+ only)	80.6%	83.0%
Ever Had Pap Test	87.7%	92.5%
Had Appropriately Timed Pap Test	71.2%	78.8%
Ever Had PSA Test (Males, 50+ only)	65.8%	77.3%
Ever Had Sigmoidoscopy or Colonoscopy (50+ only)	74.4%	75.5%
Had Sigmoidoscopy /Colonoscopy in Past 5 Years (50+)	61.9%	62.6%
No Dental Visit in Past Year	21.3% 	21.6%
No Teeth Cleaning in Past Year	24.3%	22.2%
Had Flu Vaccine in Past Year (65+ only)	72.1% 	67.9%
Ever Had Pneumonia Vaccine (65+ only)	66.9%	70.9%

  = better/improved measure from 2011



  = significantly (95% confidence level) better/improved measure from 2011

# Comparison of BRFs Measures Between Ottawa County, Michigan, and the United States (Cont'd.)

## Chronic Conditions

	Ottawa County 2014	Ottawa County 2011
Lifetime Asthma Prevalence	11.9% 	13.5%
Current Asthma Prevalence	6.5% 	8.4%
Ever Told Had Arthritis	18.3% 	23.2%
Ever Told Had Heart Attack	2.1%	2.1%
Ever Told Had Angina/Coronary Heart Disease	2.9% 	3.0%
Ever Told Had Stroke	2.1%	1.2%
Ever Told Had Diabetes	7.8%	7.3%
COPD	3.0%	--
Skin Cancer	4.7% 	7.3%
Other Cancer	5.4%	5.3%

  = better/improved measure from 2011

  = significantly (95% confidence level) better/improved measure from 2011

# ***DETAILED FINDINGS***

---

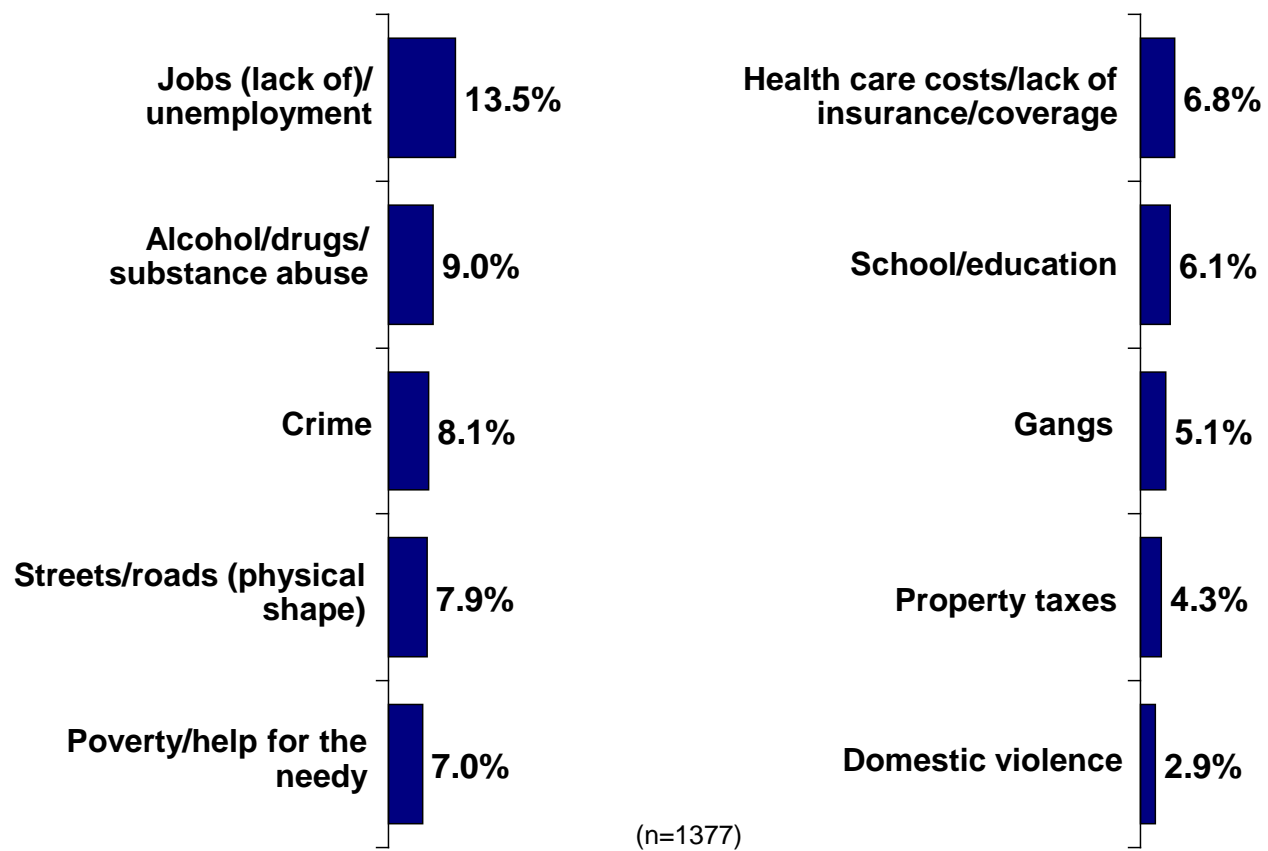
# ***Perception of Community Problems***

---



When asked to give their top of mind response in addressing the community's most important problems, Ottawa County adults cite a myriad of issues, beginning with *unemployment or the lack of jobs*. Other problems cited include *substance abuse, crime, the physical conditions of the roads/streets, poverty, and health care costs*, including the lack of coverage which makes health care even more of a barrier for some.

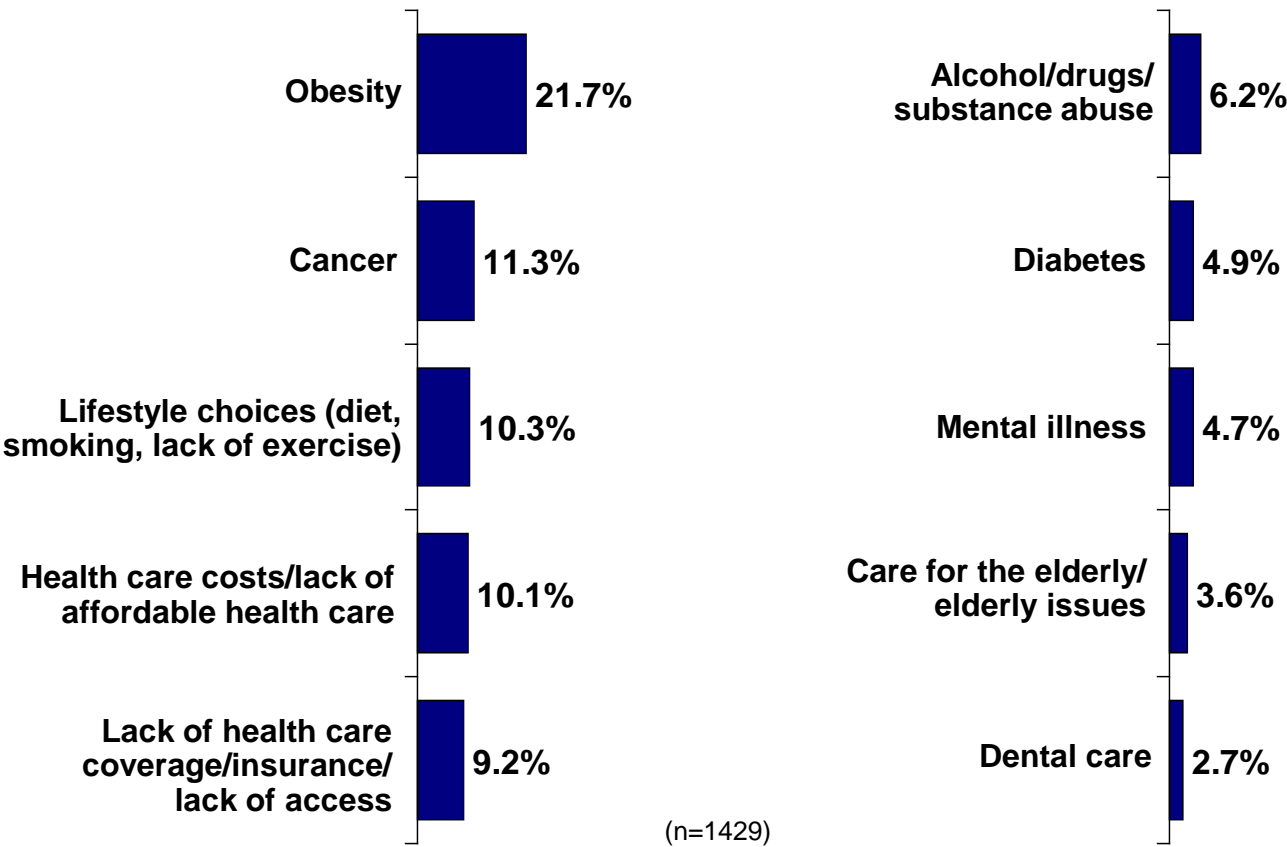
Top 10 Most Important Problems in the Community Today



Q1.1: What do you feel is the most important problem in your community today?

Adults perceive the top health problem in Ottawa County to be *obesity*, followed by *cancer*, *lifestyle choices* that lead to health problems, and *issues involving health care*, including costs, lack of affordable coverage, and issues of access that arise from cost and lack of coverage.

Top 10 Most Important *Health* Problems in the Community Today



Q1.2: What do you feel is the most important health problem in your community today?

# ***Health Status Indicators***

---

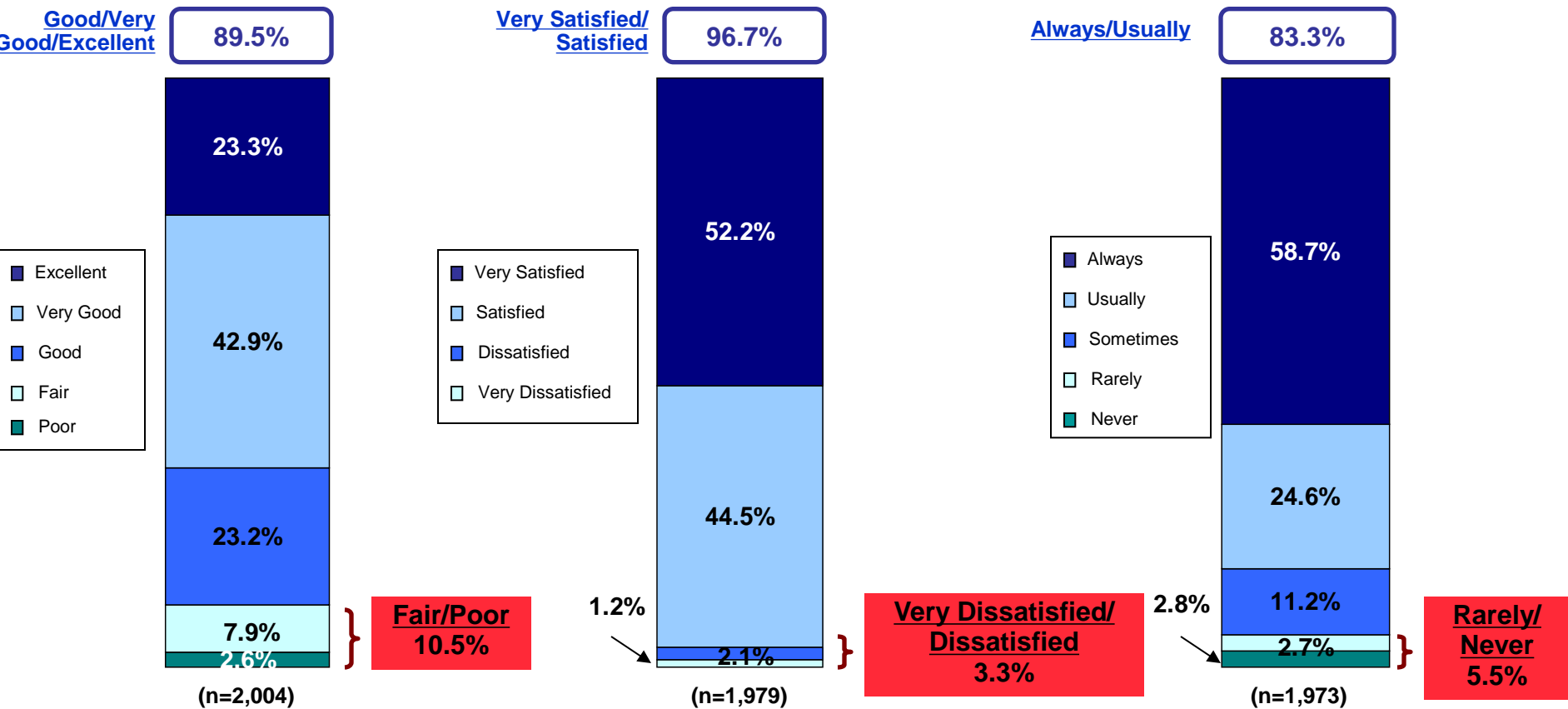
Nine in ten (89.5%) Ottawa County adults cite good or better general health and 96.7% say they are satisfied with their lives. Slightly more than eight in ten say they usually or always receive the emotional support they need. One in ten report fair or poor health, roughly 3% report dissatisfaction with life, and 5.5% rarely or never receive the emotional support they need.

Perception of General Health, Life Satisfaction, and Social Support

Perception of General Health

Overall Satisfaction with Life

Frequency of Emotional Support

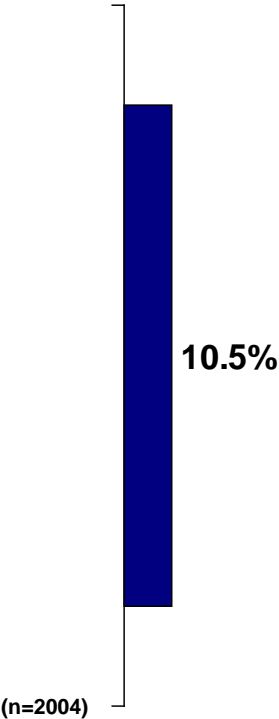


Q1.3: Would you say that in general your health is...  
Q21.2: In general, how satisfied are you with your life?  
Q21.1: How often do you get the social and emotional support you need?

The proportion of adults who perceive their health as fair or poor is inversely related to level of education and household income. People living below the poverty line are more likely to report fair or poor health than people living above the poverty line. Significantly more Hispanics report fair or poor health than other racial/ethnic groups. Adults who live in central and northeast Ottawa County are less likely to report fair or poor health than residents in other sections.

General Health Status

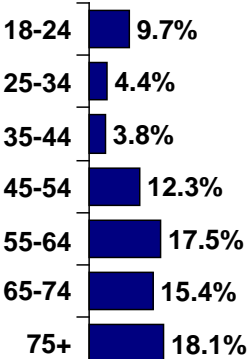
General Health Fair or Poor\*  
(Total Sample)



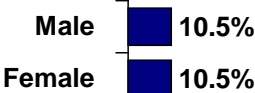
\*Among all adults, the proportion who reported that their health, in general, was either fair or poor.

Health Fair or Poor by Demographics

Age



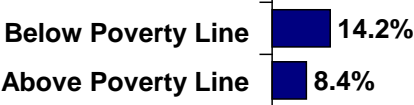
Gender



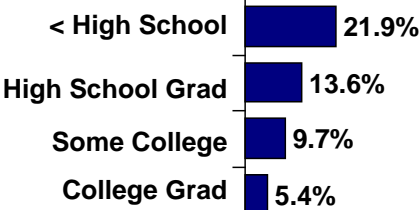
Race/Ethnicity



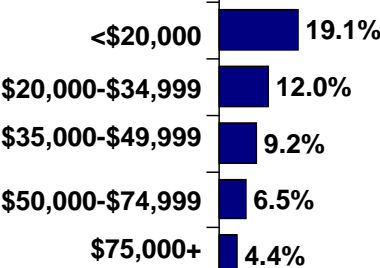
Poverty Level



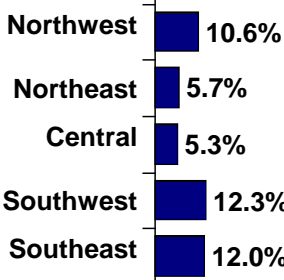
Education



HH Income



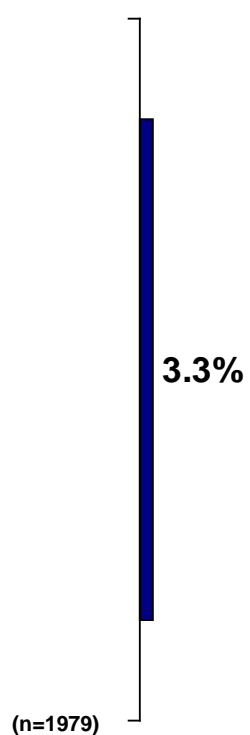
Section



Ottawa County adults in households with incomes below \$20,000 are least likely to be satisfied with their lives. College graduates are more likely to be satisfied than those with less education, especially those who have less than a high school education.

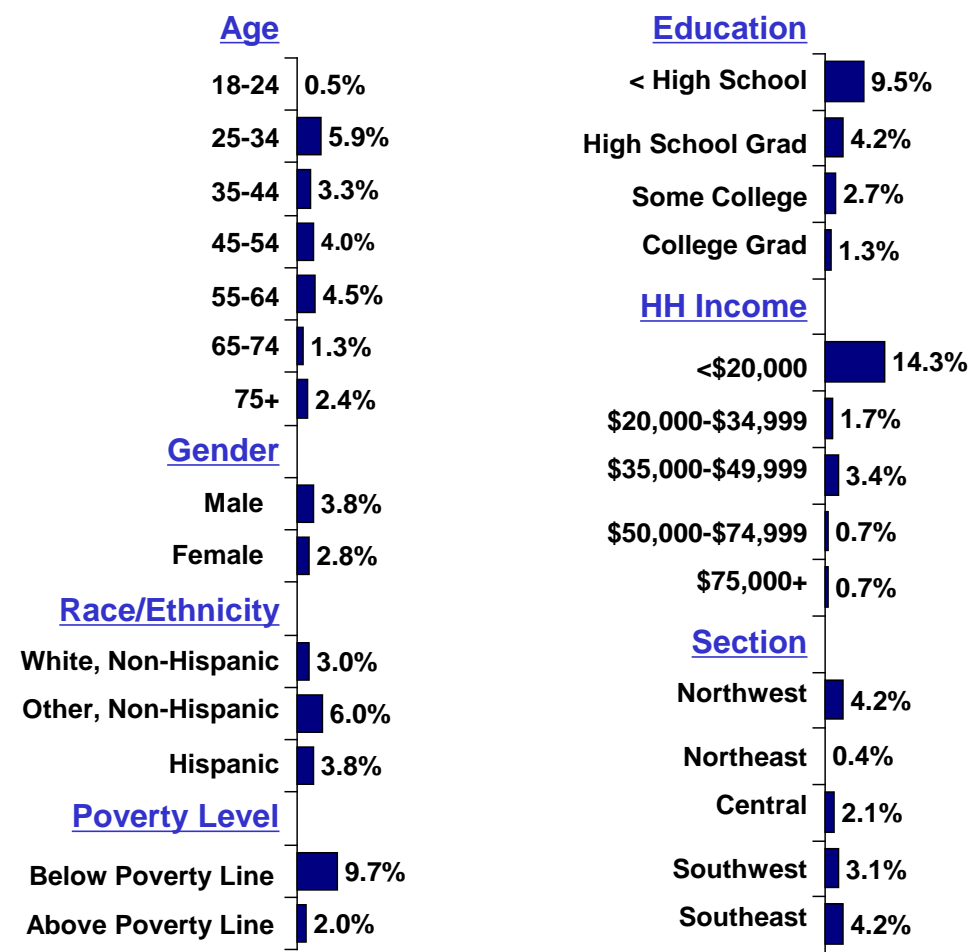
Life Satisfaction

Dissatisfied or Very Dissatisfied With Life\*  
(Total Sample)



\*Among all adults, the proportion who reported either “dissatisfied” or “very dissatisfied” to the following question: “In general, how satisfied are you with your life?”

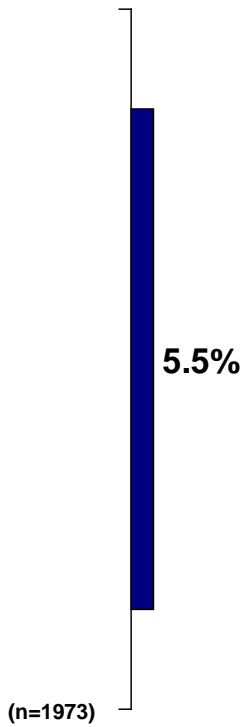
Dissatisfied/Very Dissatisfied by Demographics



Adults who more often lack the social and emotional support they need come from groups that have less than a high school education, less than \$20,000 in annual income, and are Hispanic.

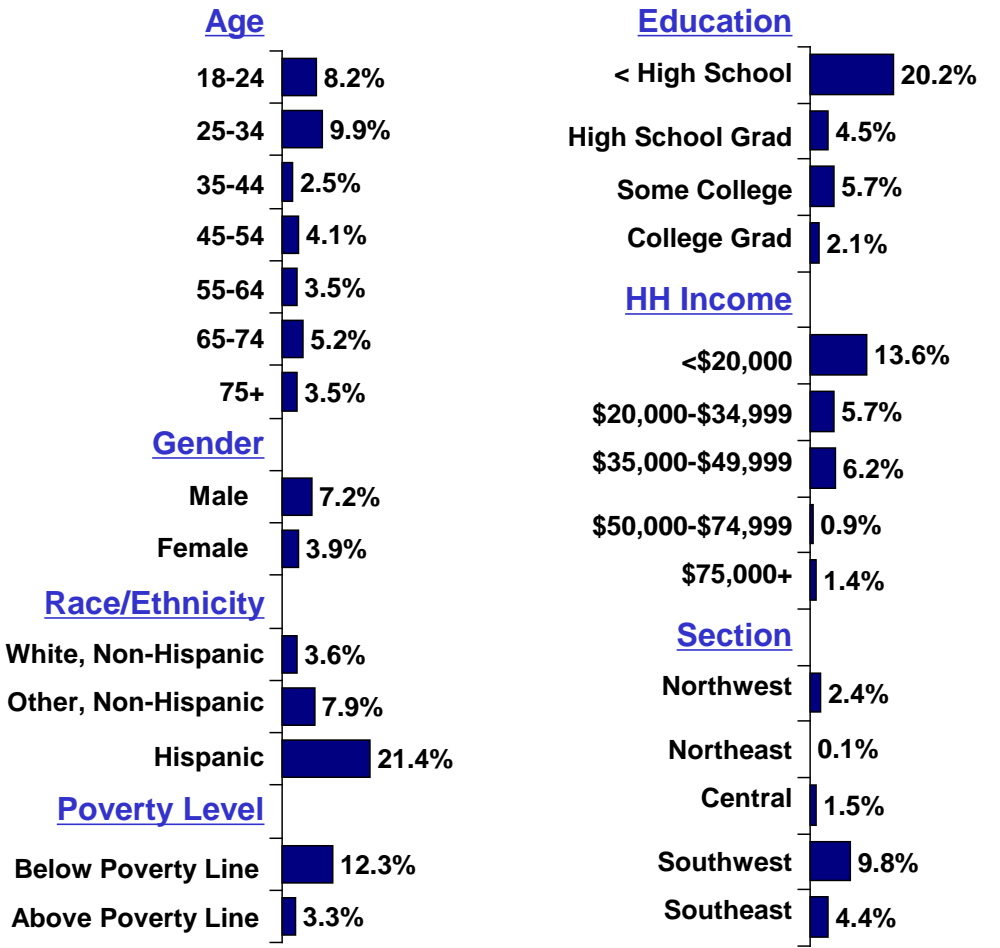
Social and Emotional Support

Rarely or Never Receive the Social and Emotional Support That is Needed\*  
(Total Sample)



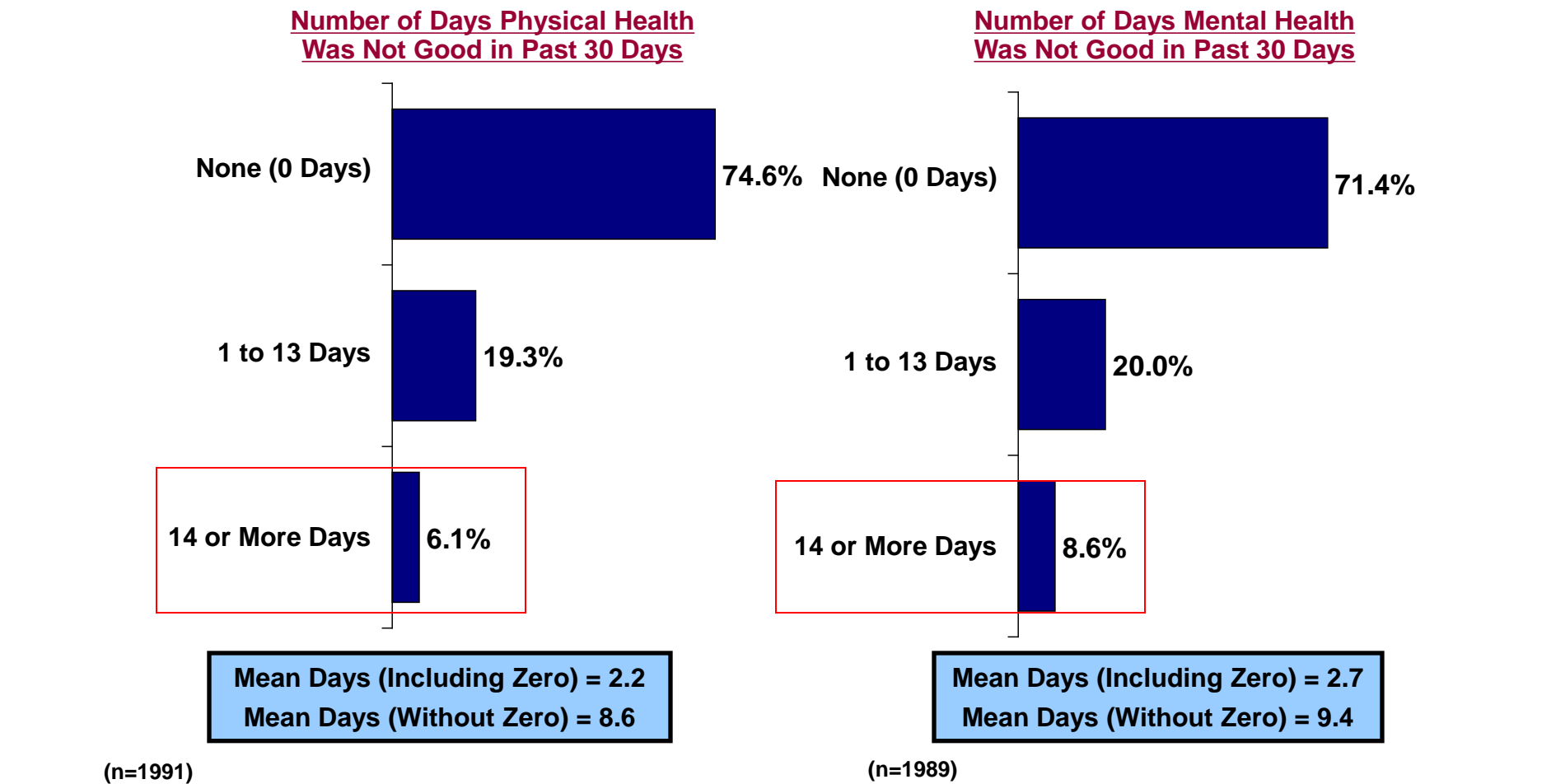
\*Among all adults, the proportion who reported either “rarely” or “never” to the following question: “How often do you get the social and emotional support you need?”

Rarely/Never Receive Support by Demographics



More than one-fourth of Ottawa County adults have experienced at least one day in the past month where their physical or mental health was not good. Further, 6.1% and 8.6% are classified as having poor physical and mental health, respectively. Among all adults, they average 2.2 and 2.7 days where their physical or mental health is not good, respectively.

**Physical and Mental Health During Past 30 Days**



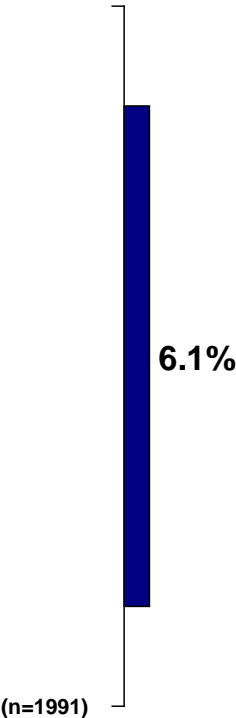
Q2.1: Now thinking about your physical health, which includes physical illness and injury. For how many days during the past 30 days was your physical health not good?  
Q2.2: Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?



Prevalence of poor physical health is directly related to age. It is also highest among residents with the lowest household income (13.1%) and living below the poverty line (8.7%). Prevalence is lowest among college graduates (4.5%) and the highest income groups (2.9%, 4.3%).

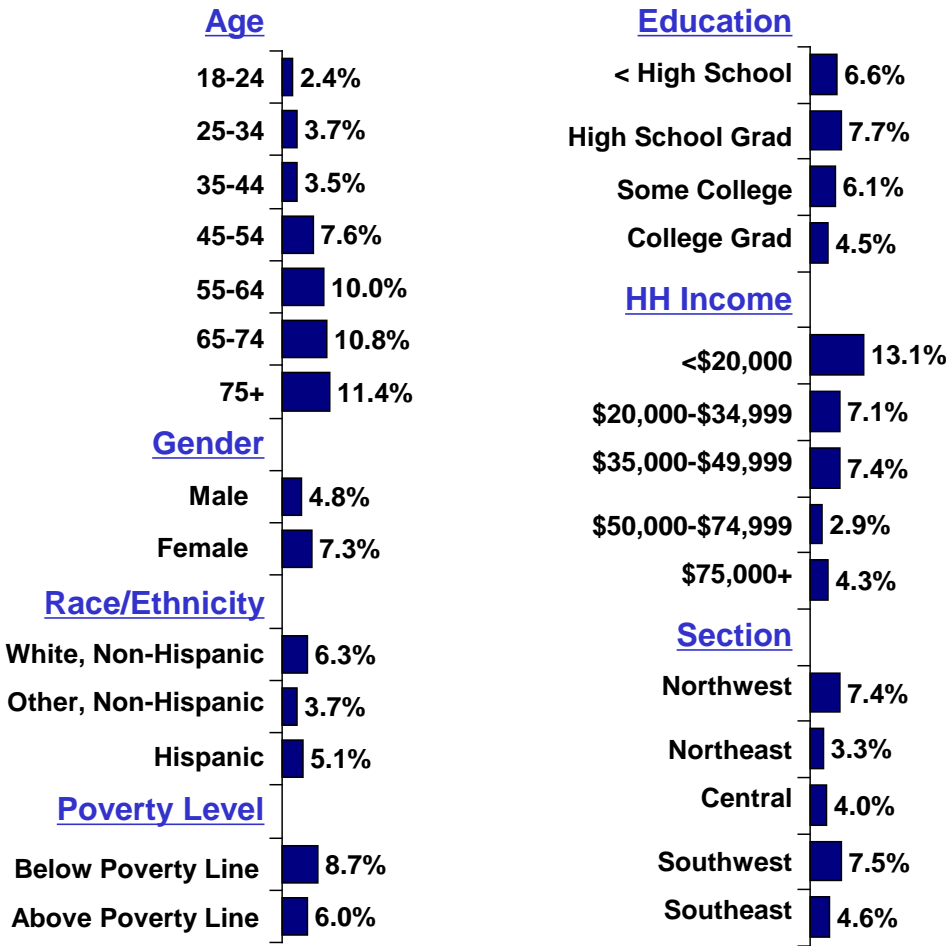
Physical Health Status

Poor Physical Health\*  
(Total Sample)



\*Among all adults, the proportion who reported 14 or more days of poor physical health, which includes physical illness and injury, during the past 30 days.

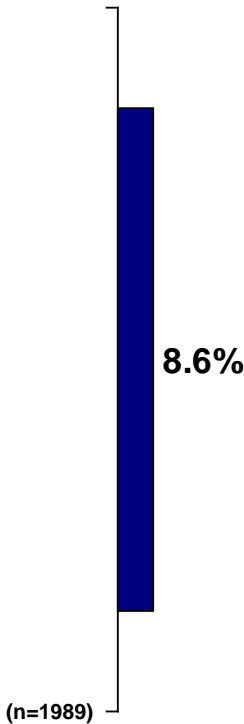
Poor Physical Health by Demographics



The prevalence of poor mental health is inversely related to age and highest among those age 18-24. The largest proportions of those with poor mental health are found among adults from households with low incomes and those with less than a high school degree. Poor mental health is more than twice as prevalent in the Hispanic subpopulation compared to other racial/ethnic groups.

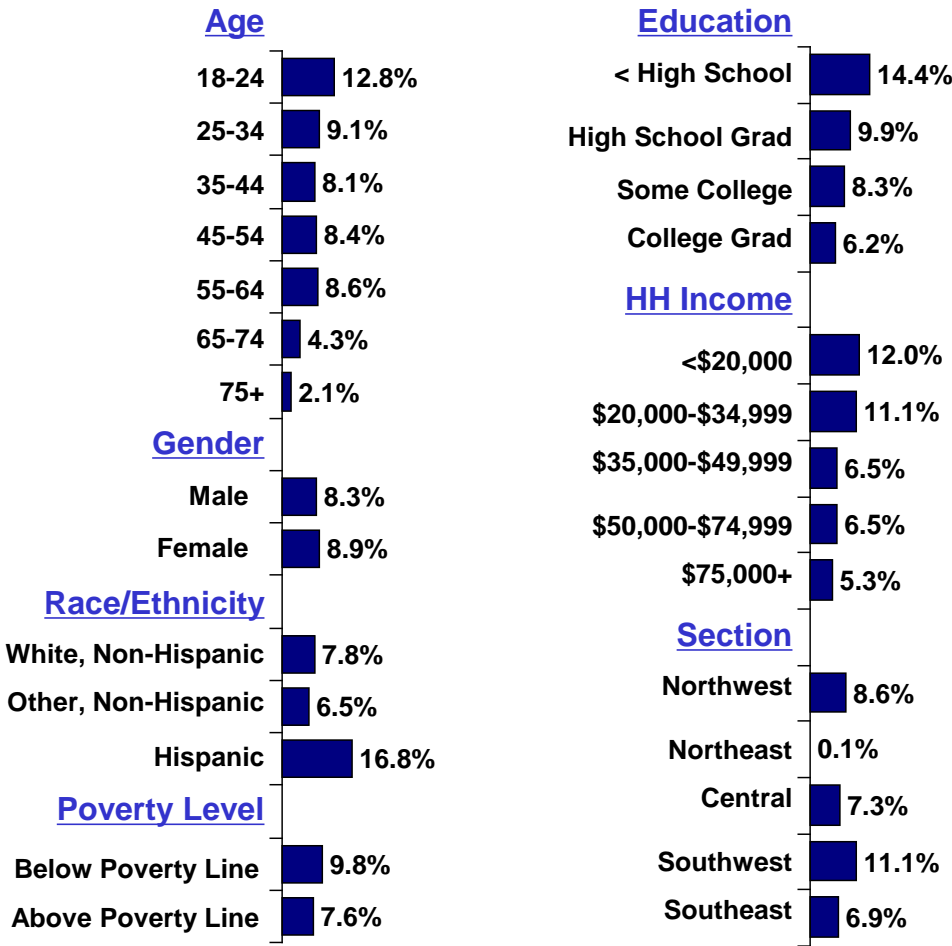
Mental Health Status

Poor Mental Health\*  
(Total Sample)

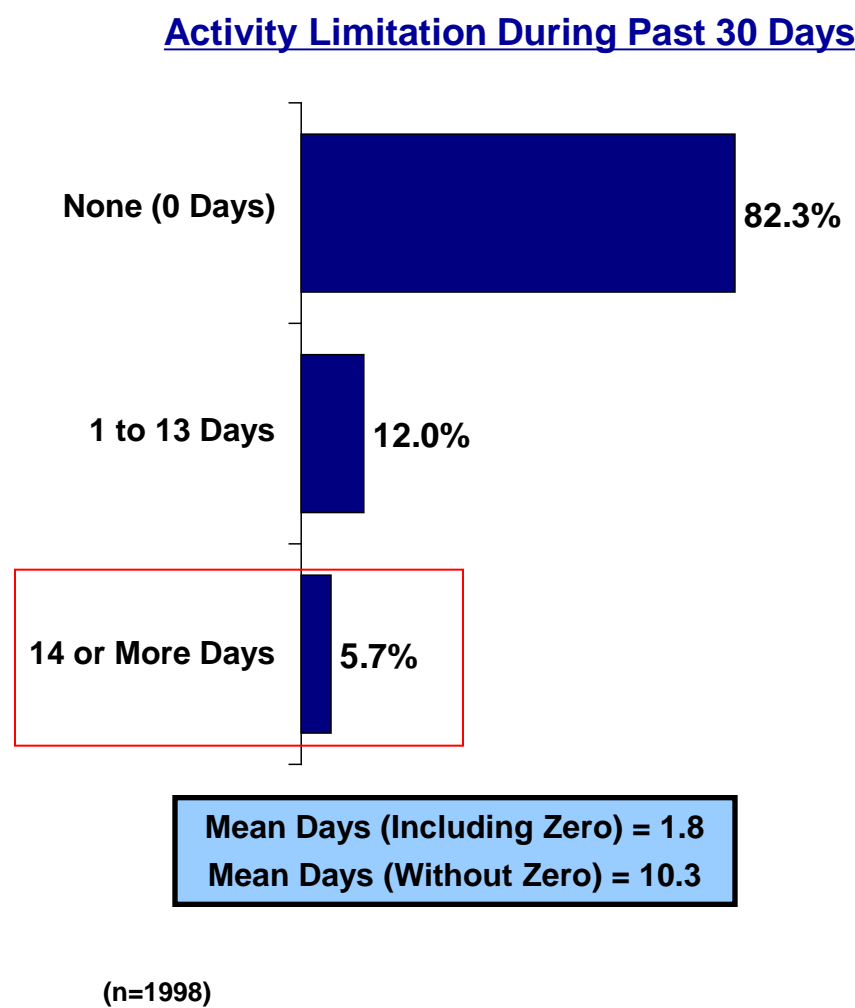


\*Among all adults, the proportion who reported 14 or more days of poor mental health, which includes stress, depression, and problems with emotions, during the past 30 days.

Poor Mental Health by Demographics



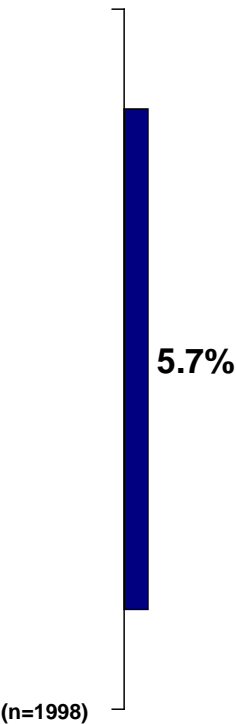
One in twenty (5.7%) Ottawa County adults experience limited activity due to poor physical or mental health. Those who experience at least one day of this limitation average ten days per month where they are prevented from doing their usual activities.



The largest proportions of adults who experience activity limitation are found among the poorest adults; those with the lowest incomes, for example, less than \$20K (12.6%), and those living below the poverty line (11.3%).

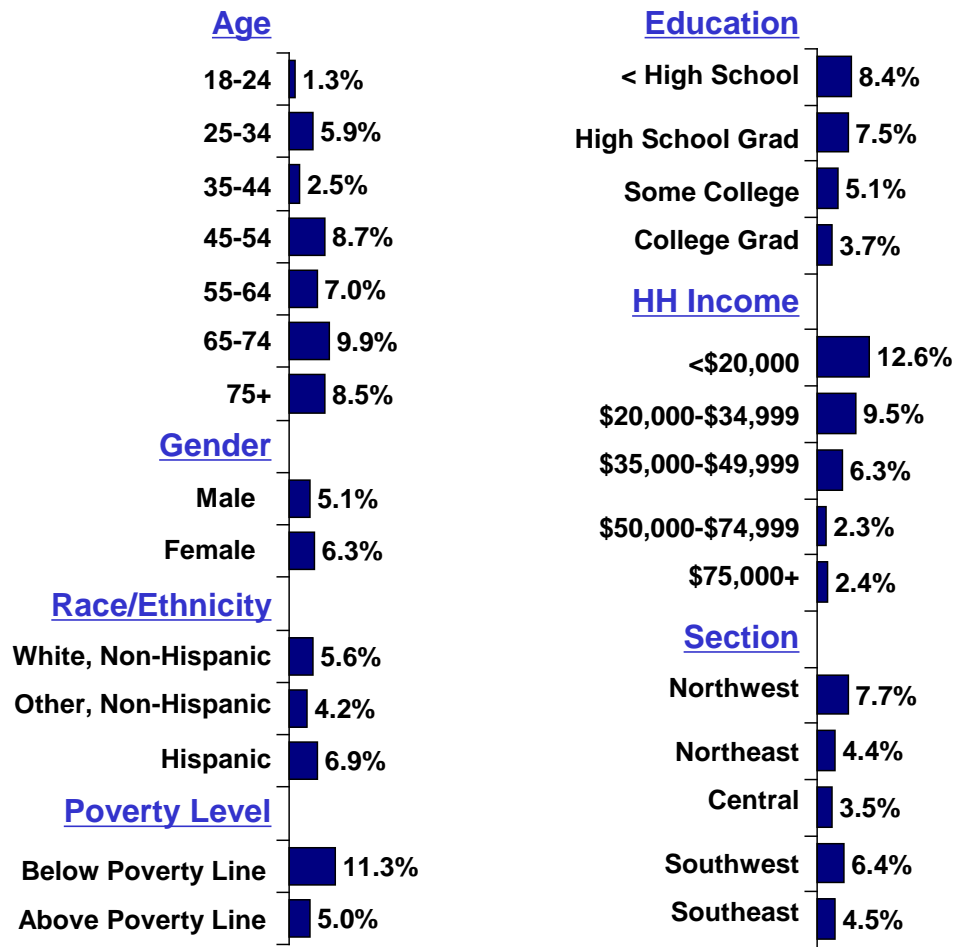
Activity Limitation

Activity Limitation\*  
(Total Sample)



\*Among all adults, the proportion who reported 14 or more days in the past 30 days in which either poor physical health or poor mental health kept respondents from doing their usual activities, such as self-care, work, and recreation.

Activity Limitation by Demographics



More than eight in ten (83.6%) Ottawa County adults are considered to be mentally healthy according to the Kessler 6 Psychological Distress Questionnaire. Conversely, 13.7% experience mild to moderate psychological distress while 2.7% are severely distressed.

Psychological Distress

	During the Past 30 Says, About How Often Did You....					
Frequency of Feeling	Feel Nervous (n=1980)	Feel Hopeless (n=1977)	Feel Restless of Fidgety (n=1974)	Feel So Depressed That Nothing Could Cheer You Up (n=1974)	Feel That Everything Is An Effort (n=1967)	Feel Worthless (n=1969)
None of the time	42.5%	82.8%	52.7%	84.6%	65.0%	90.3%
A Little	32.1%	10.9%	26.1%	9.4%	19.3%	5.8%
Some of the time	20.4%	3.8%	14.2%	4.3%	9.6%	1.8%
Most of the time	3.3%	1.8%	3.5%	1.0%	3.3%	1.6%
All of the time	1.7%	0.7%	3.5%	0.7%	2.9%	0.5%

**Mentally Healthy (Well) = 83.6%**

**Mild to Moderate Psychological Distress = 13.7%**

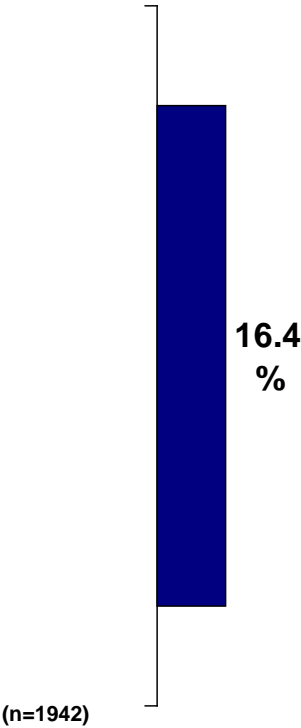
**Severe Psychological Distress = 2.7%**

\*Calculated from responses to Q. 22.1- 22.6, where none of the time =1, a little = 2, some of the time =3, most of the time =4, and all of the time =5. Responses were summed across all six questions with total scores representing the above categories: mentally well (6-11), mild to moderate psychological distress (12-19), and severe psychological distress (20+).

Among Ottawa County adults, the groups most likely to be diagnosed with mild to severe psychological distress include those who: are younger (< age 35), are non-White, have less than a high school education, and have household incomes less than \$35K. To this last point, one glaring difference is between those who live below the poverty line (31.9%) and those who live above it (14.8%)

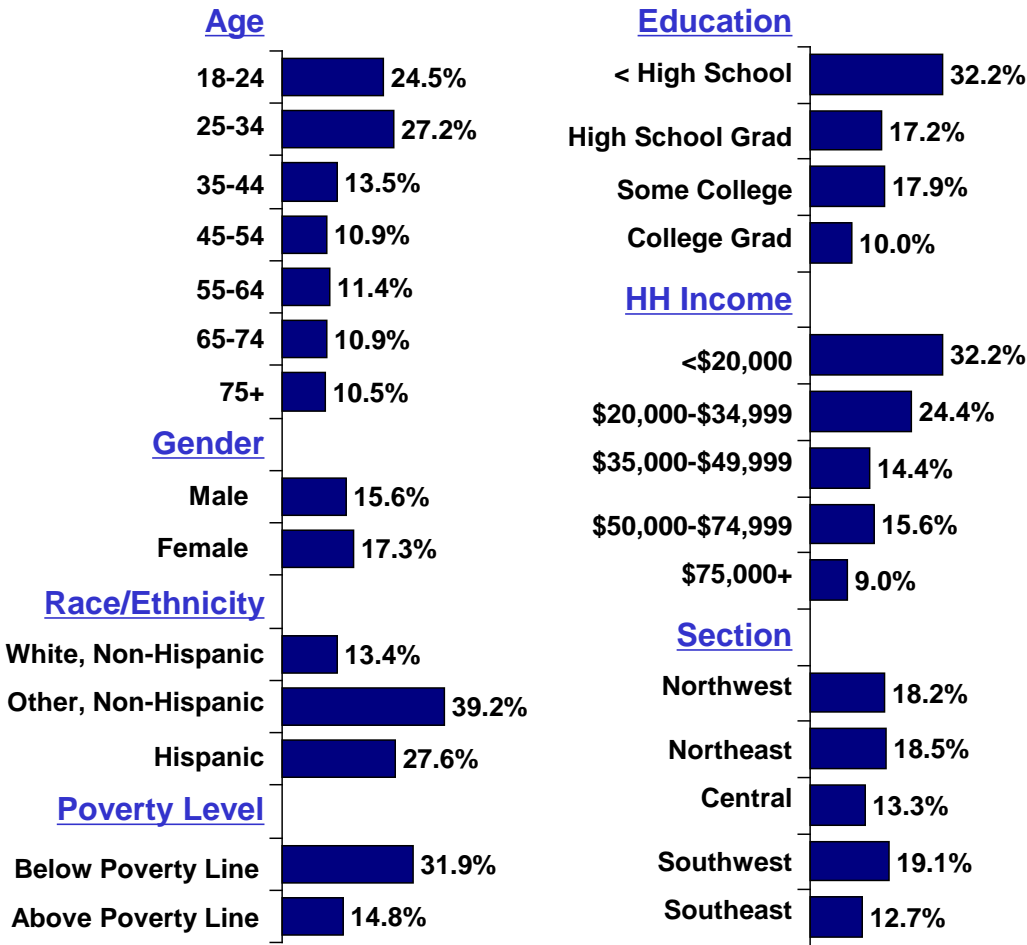
Psychological Distress

Mild to Severe Psychological Distress\*  
(Total Sample)



\*Calculated from responses to Q. 22.1- 22.6 where respondents scored 12 or more across the six items on the Kessler 6 scale.

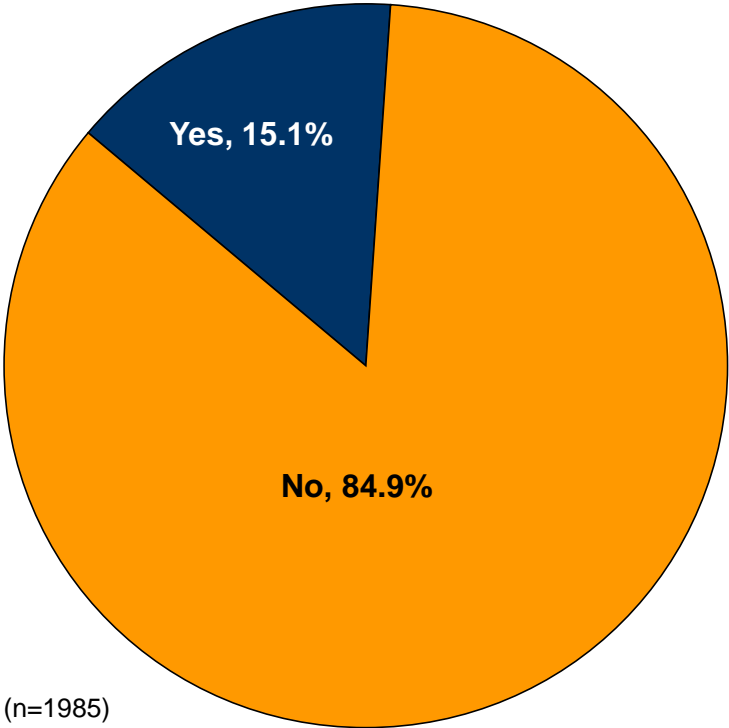
Mild to Severe Psychological Distress by Demographics



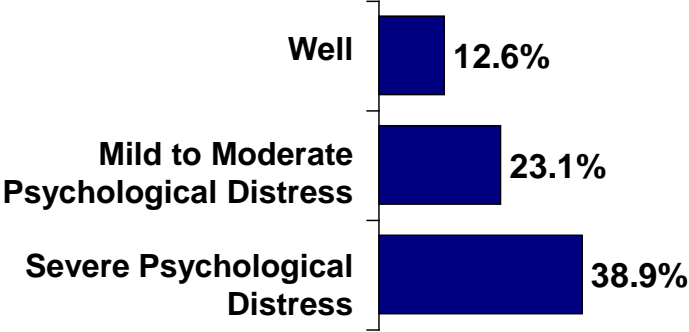
Of all Ottawa County adults, 15.1% currently take medication or receive treatment for a mental health condition or emotional problem. However, those who could benefit the most from medication/treatment are not getting it: less than four in ten (38.9%) of those classified as having “severe psychological distress” and 30.1% of those classified as having “poor mental health” currently take medication and/or receive treatment for their mental health issues.

**Medication and Treatment for Psychological Distress**

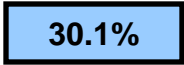
**Taking Medication or Receiving Treatment for Mental Health Condition or Emotional Problem**



**Percent Taking Medication/Receiving Treatment by Psychological Distress Category**



**Percent Taking Medication/Receiving Treatment by “Poor Mental Health” Classification**

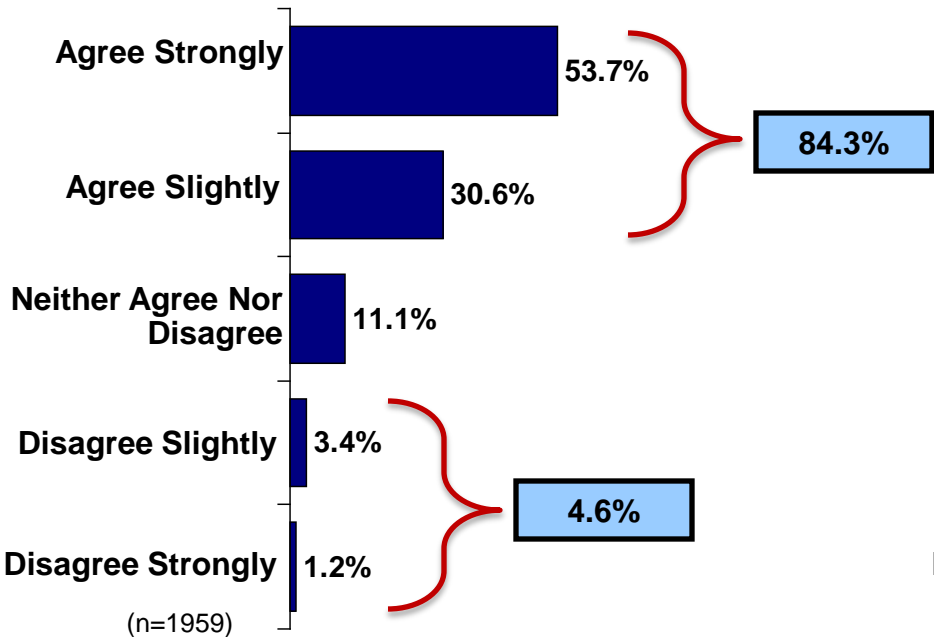


Q22.7: Are you now taking medicine or receiving treatment from a doctor or other health care professional for any type of mental health condition or emotional problem.

The vast majority (84.3%) of Ottawa County adults believe treatment can help people with mental illness lead normal lives. On the other hand, just half (50.8%) think people are generally caring and sympathetic to people with mental illness and this drops to 11.7% among those with severe psychological distress. This stigma could be a reason that although the vast majority of people with mild to severe psychological distress believe treatment works far fewer seek it.

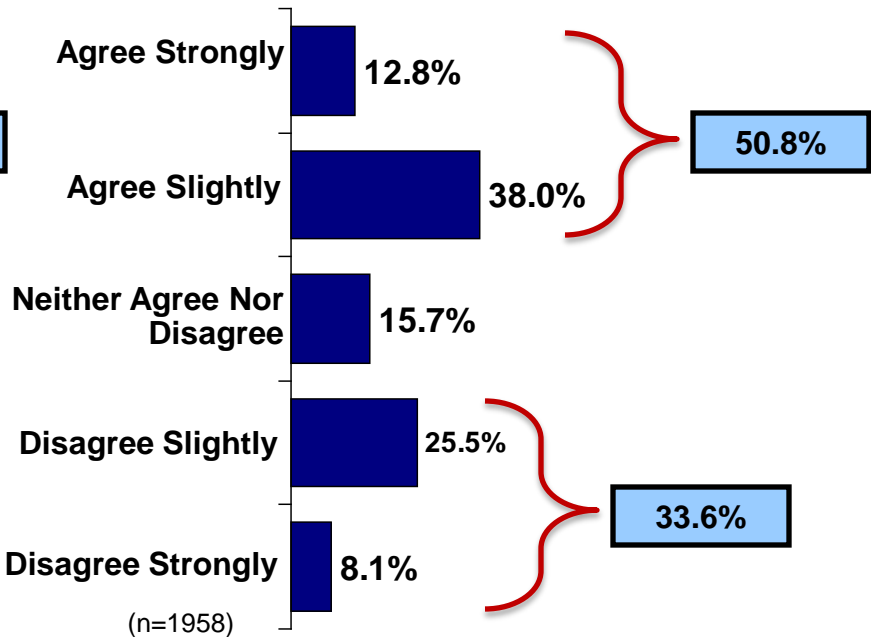
Perceptions of Mental Health Treatment and Mental Illness

“Treatment Can Help People With Mental Illness Lead Normal Lives”



Agree by Psychological Distress  
Well (85.1%)  
Mild to Moderate (82.4%)  
Severe (83.5%)

“People Are Generally Caring and Sympathetic to People With Mental Illness”

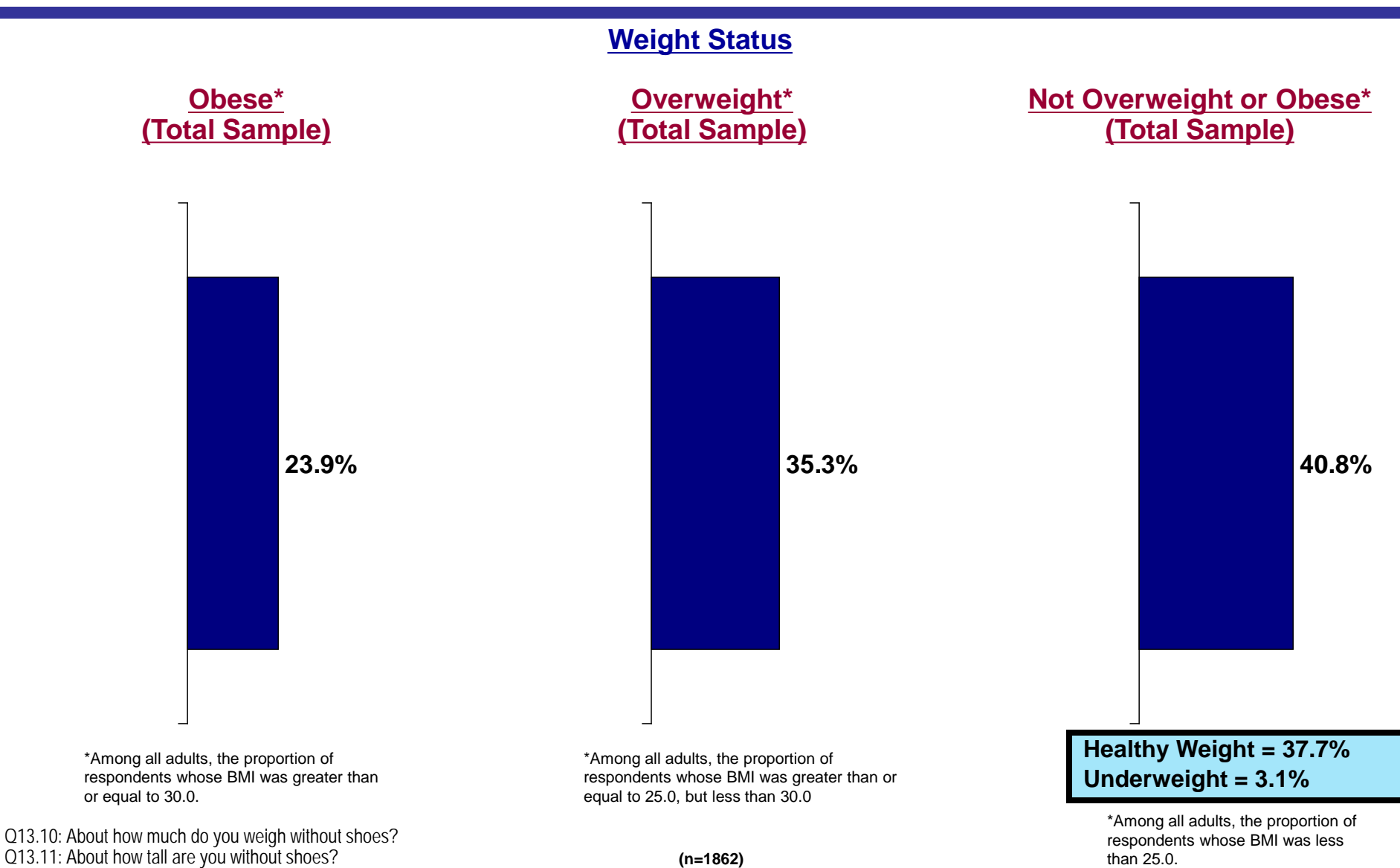


Agree by Psychological Distress  
Well (50.9%)  
Mild to Moderate (57.2%)  
Severe (11.7%)

22.8 What is your level of agreement with the following statement? “Treatment can help people with mental illness lead normal lives.” Do you – agree slightly or strongly, or disagree slightly or strongly?  
22.9 What is your level of agreement with the following statement? “People are generally caring and sympathetic to people with mental illness.” Do you – agree slightly or strongly, or disagree slightly or strongly?

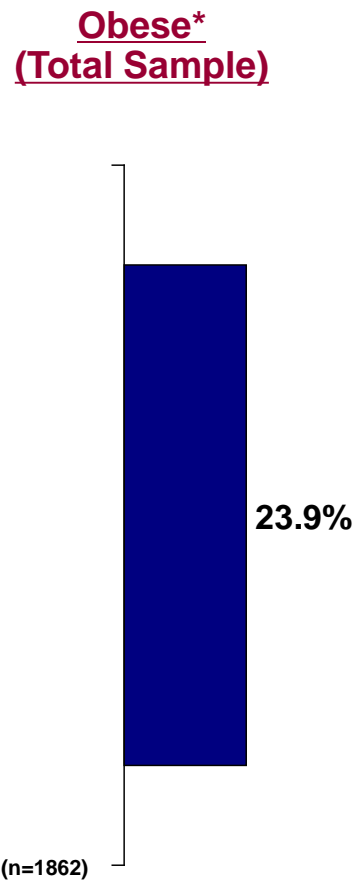


Almost six in ten (59.2%) Ottawa County adults are considered to be either overweight or obese per their BMI. More than one-third (37.7%) are at a healthy weight.



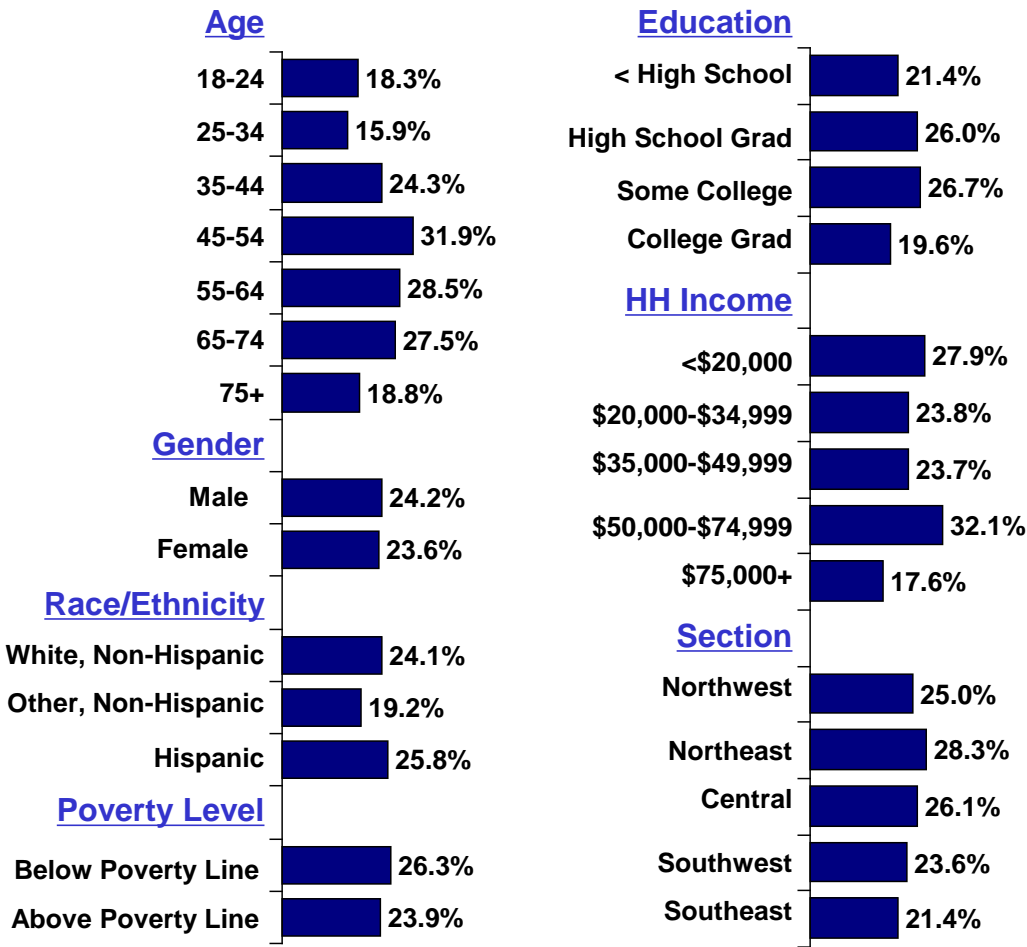
Obesity is a condition that affects adults regardless of socioeconomic or socio-demographic characteristics. That said, college graduates and those with annual incomes of \$75,000 or more are less likely to be obese than other groups. Obesity tends to be a health problem for adults between the ages of 45-74.

Weight Status



\*Among all adults, the proportion of respondents whose BMI was greater than or equal to 30.0.

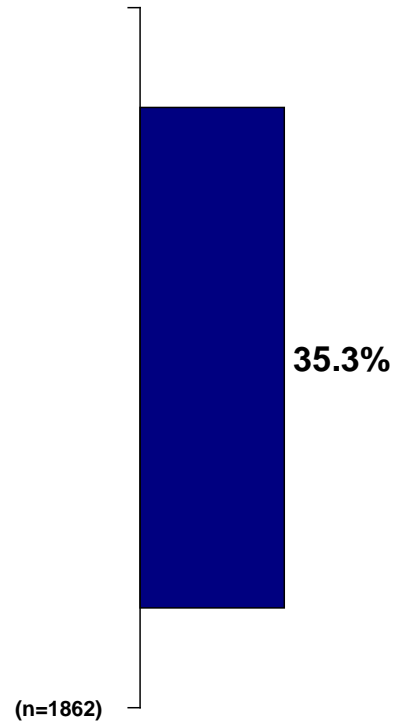
**Obese by Demographics**



Men and Hispanics are far more likely to be considered overweight (but not obese) than women and non-Hispanics, respectively. Residents living in northeast Ottawa County are least likely to be overweight compared to residents living elsewhere. Residents with the lowest incomes and/or below the poverty line are less likely to be overweight than others who are better off financially.

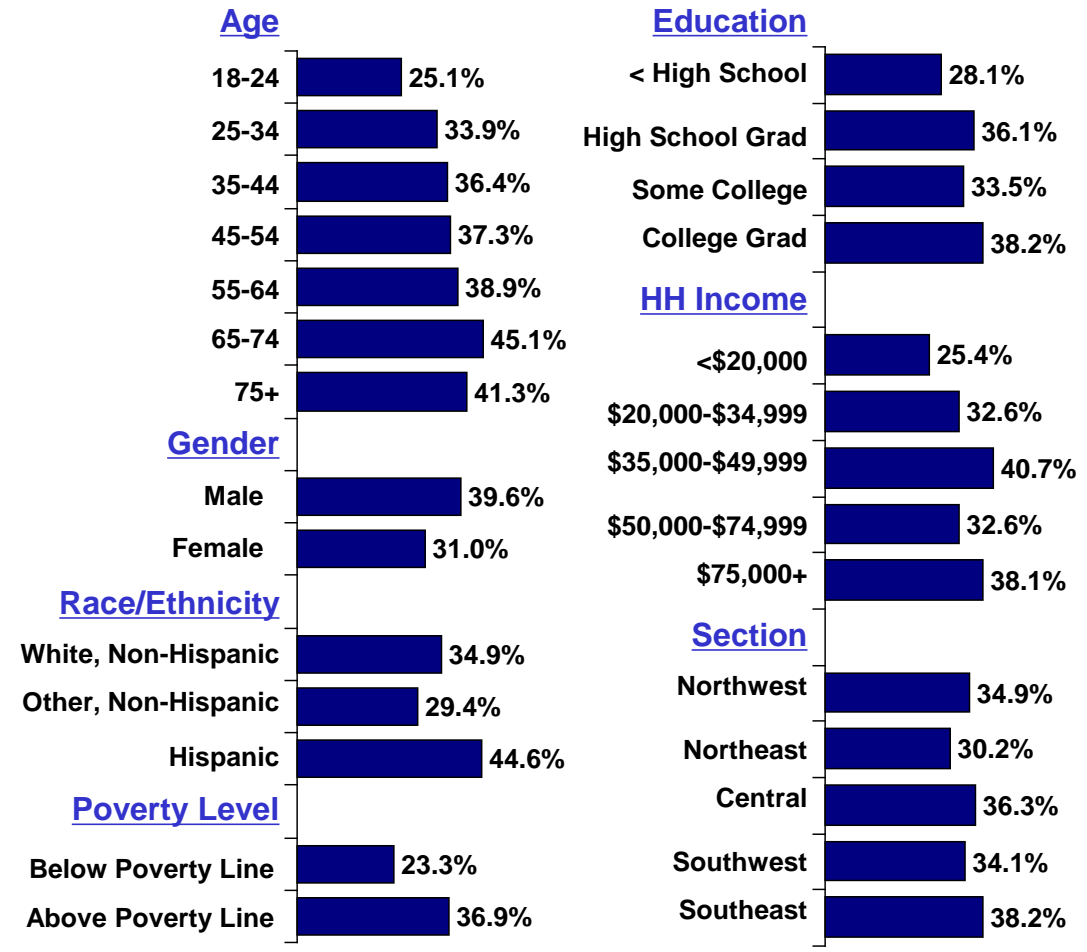
Weight Status (Cont'd.)

Overweight\*  
(Total Sample)



\*Among all adults, the proportion of respondents whose BMI was greater than or equal to 25.0, but less than 30.0.

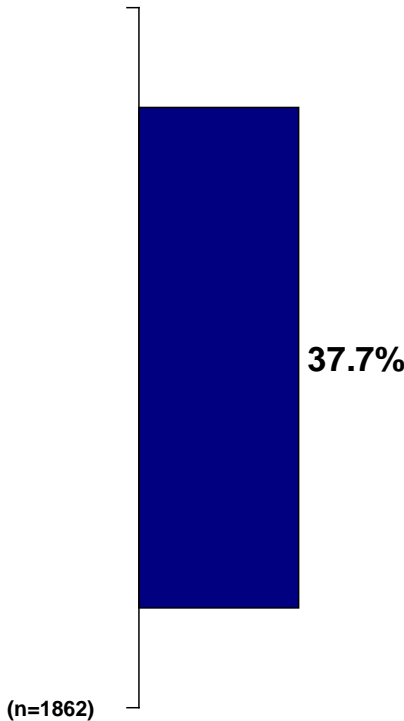
Overweight by Demographics



Women are more likely than men to be at a healthy weight, as are people under age 35 compared to those older. Again, residents with the lowest incomes and/or below the poverty line are more likely to be at a healthy weight than others who are better off financially.

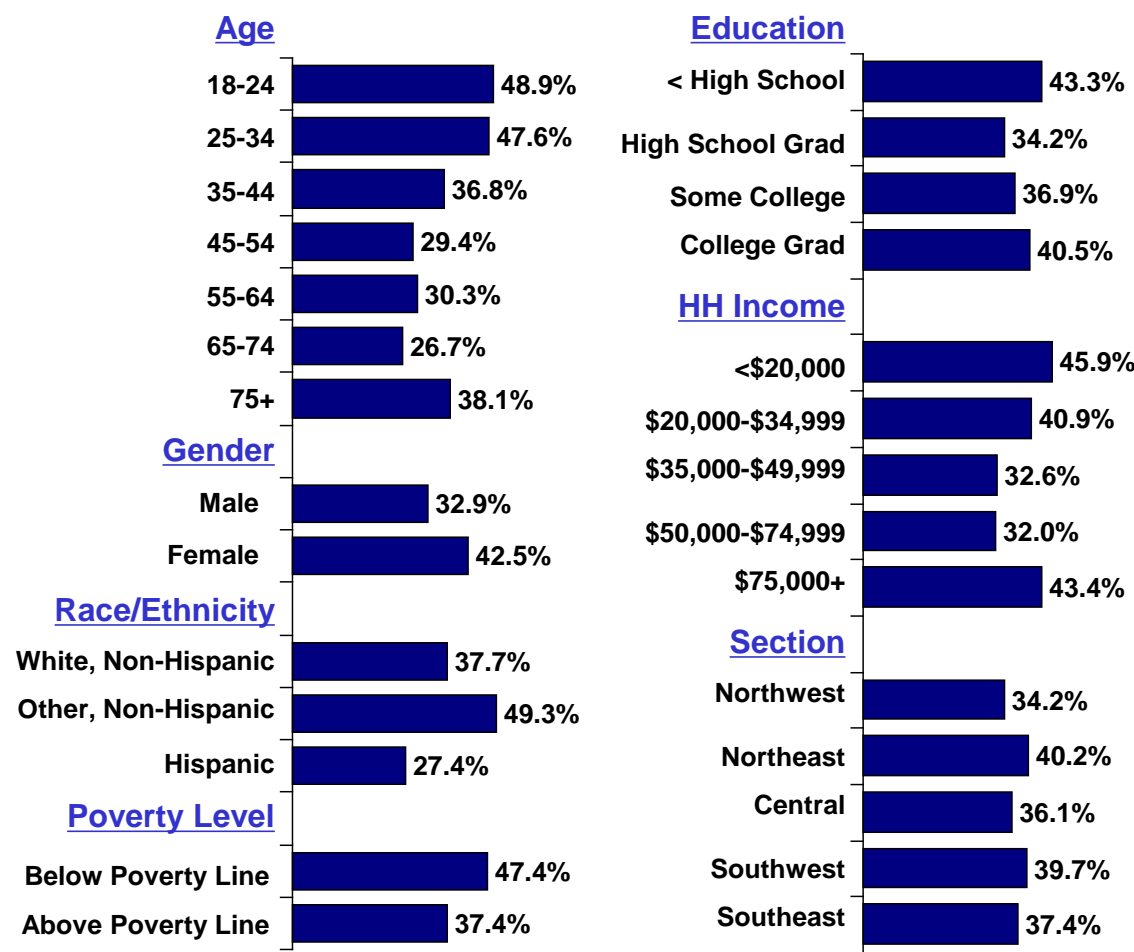
Weight Status (Cont'd.)

Healthy Weight\*  
(Total Sample)



\*Among all adults, the proportion of respondents whose BMI was greater than 18.5 but less than 25.0.

Healthy Weight by Demographics



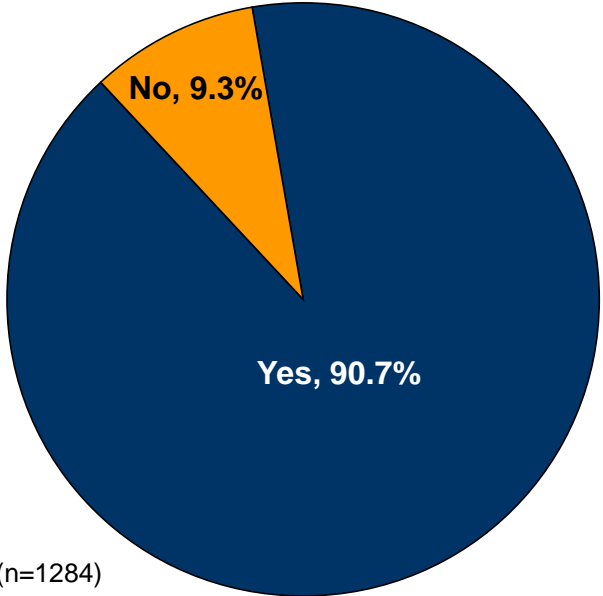
# ***Health Care Access***

---

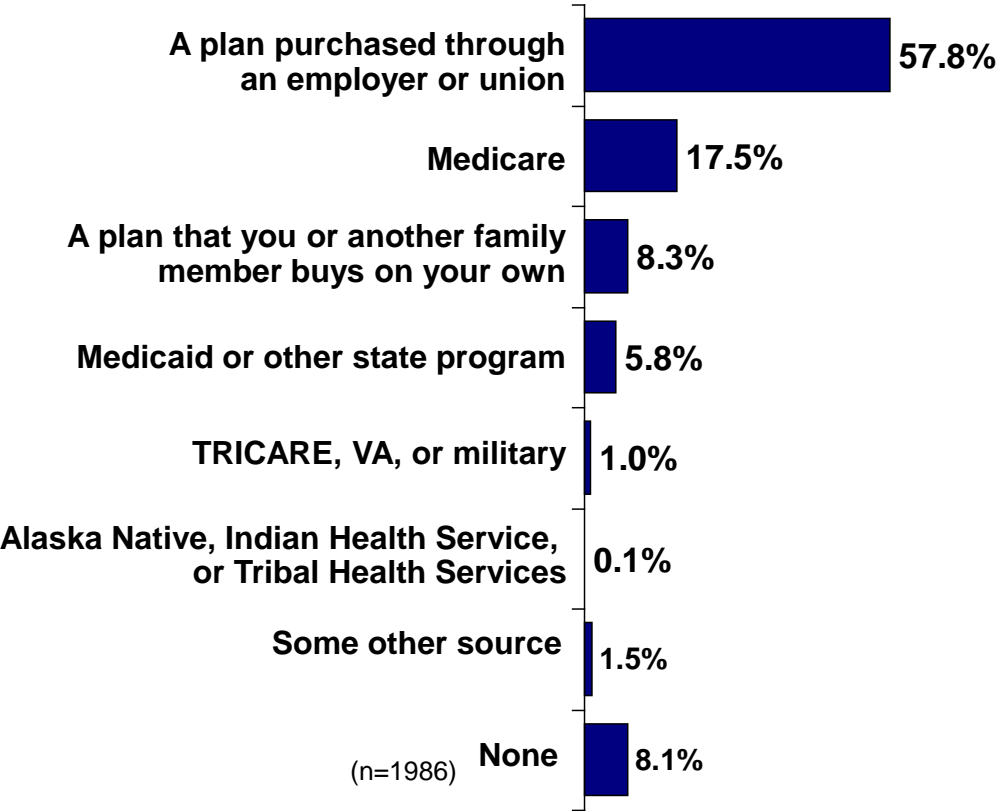
More than nine in ten (90.7%) adults under age 65 have health care coverage. The primary source of health coverage for all adults, by far, is a plan purchased through an employer or union. Fewer than one in ten (8.3%) purchase health coverage on their own.

Health Care Coverage

Currently Have Health Coverage  
(Among Adults 18-64)



Primary Source of Health Coverage  
(Total Sample)

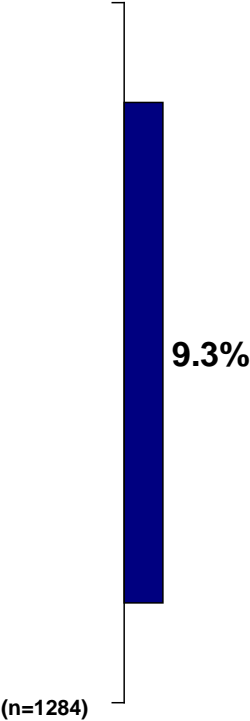


Q3.1: Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare or Indian Health Services?  
Q3.2: What is the primary source of your health coverage? Is it....?

Having health care coverage is directly related to education and income. Additionally, younger residents (aged 18-34) are more likely to lack coverage than older residents, and non-Whites report lacking coverage more than Whites.

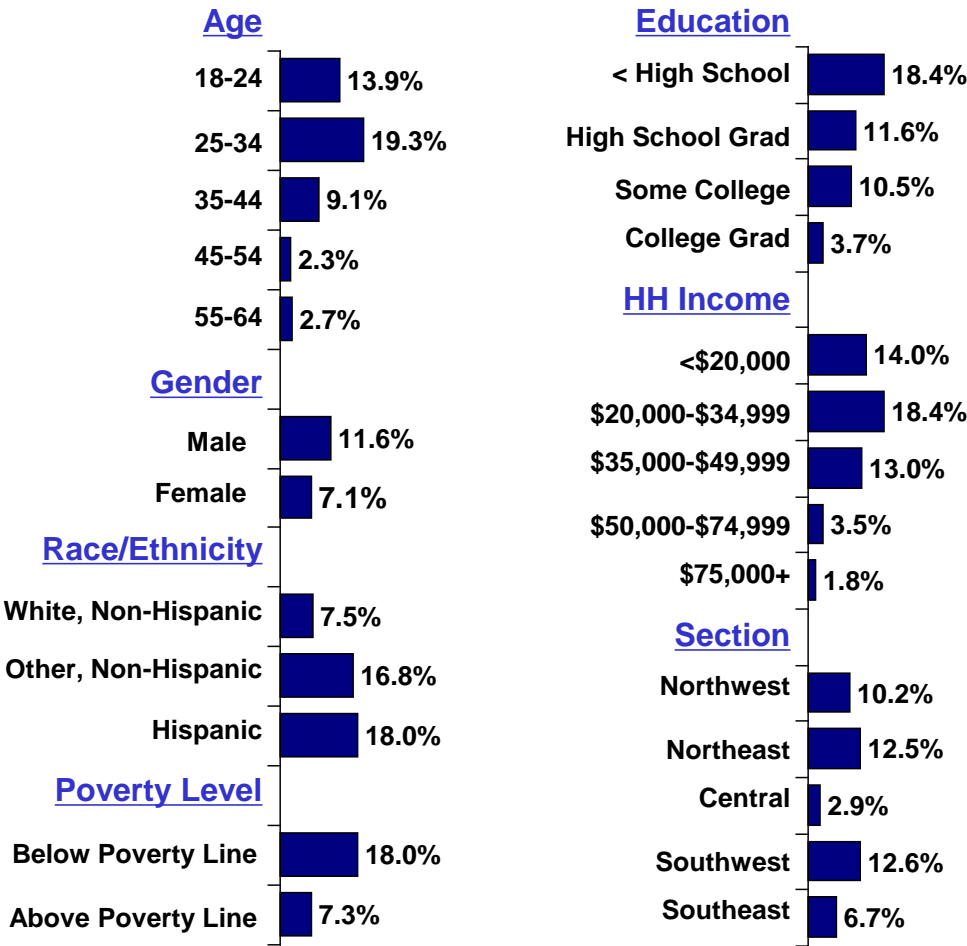
Health Care Coverage Among Adults Aged 18-64 Years

No Health Care Coverage\*  
(Among Adults 18-64)



\*Among adults aged 18-64, the proportion who reported having no health care coverage, including health insurance, prepaid plans such as HMOs, or government plans, such as Medicare.

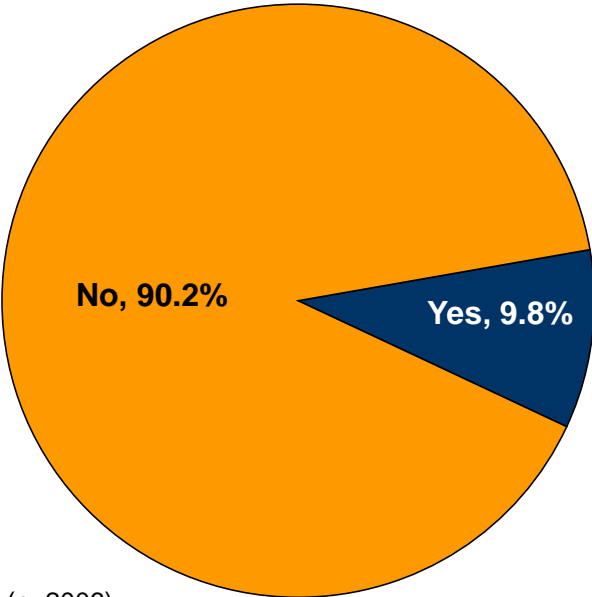
No Coverage by Demographics



Less than one in ten (9.8%) Ottawa County adults have foregone health care in the past 12 months because of cost. For those who delayed needed medical care this past year, there are myriad reasons cited, however **cost**, either in general terms or for co-pays and deductibles, is the greatest factor. Further, 5.0% could not take prescribed medication due to cost.

Problems Receiving Healthcare

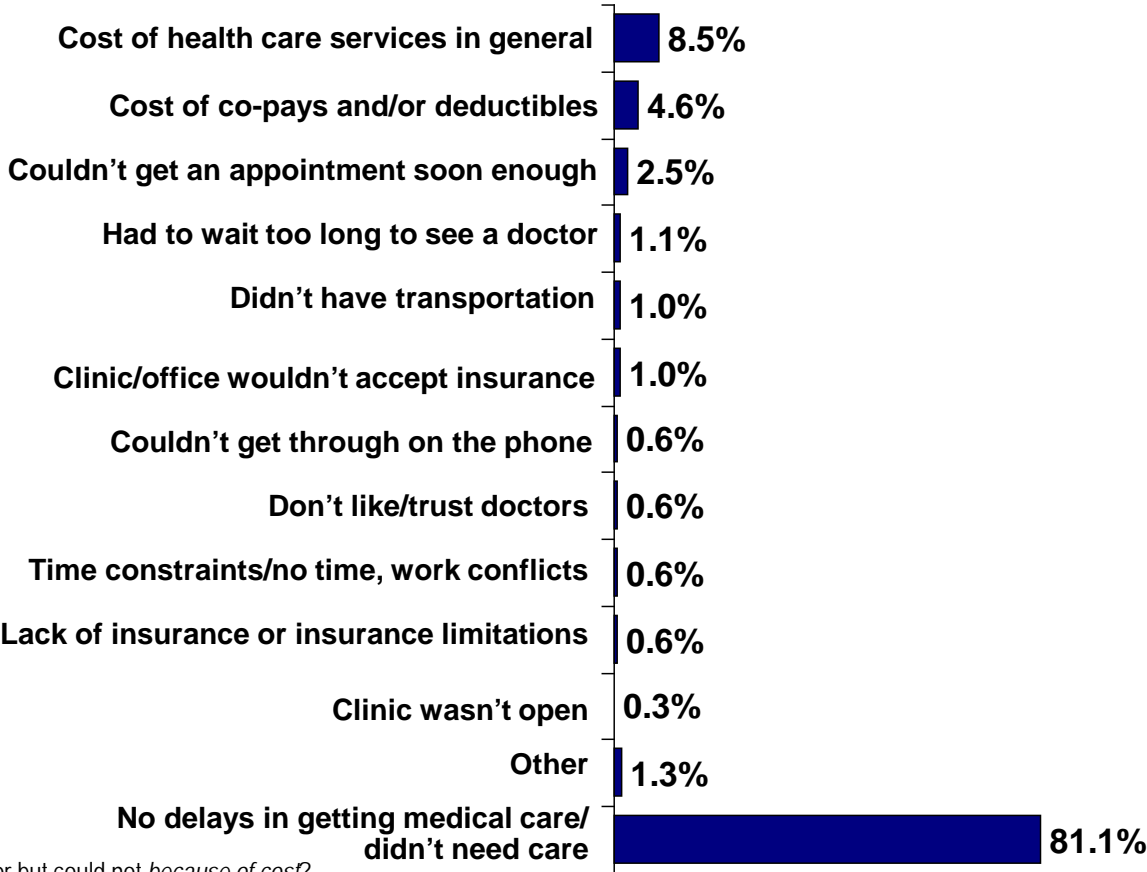
Could Not Receive Needed Medical Care in Past 12 Months Due to Cost



**Could Not Take Medication Due to Cost = 5.0%**

(n=1872)

Reasons for Delays in Getting Needed Medical Care



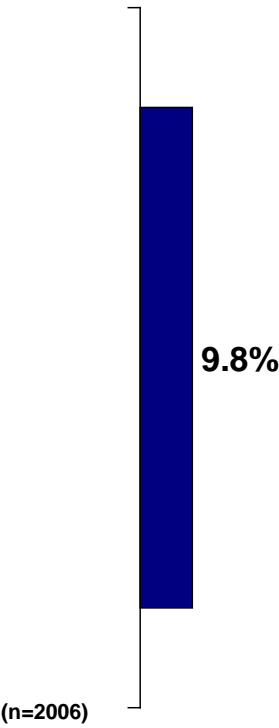
Q3.4: Was there a time in the past 12 months that you needed to see a doctor but could not *because of cost*?  
Q3.5: There are many reasons people delay getting needed medical care. Have you delayed getting needed medical care for any of the following reasons in the past 12 months?  
Q3.9: Was there a time in the past 12 months when you did not take your medication as prescribed because of cost? Do not include over the counter (OTC) medication.



The barrier of health care costs prevents certain subpopulations from seeking needed medical care more than others. For example, costs are more likely to be a barrier for: younger adults, non-Whites, and those with low incomes or below the poverty line.

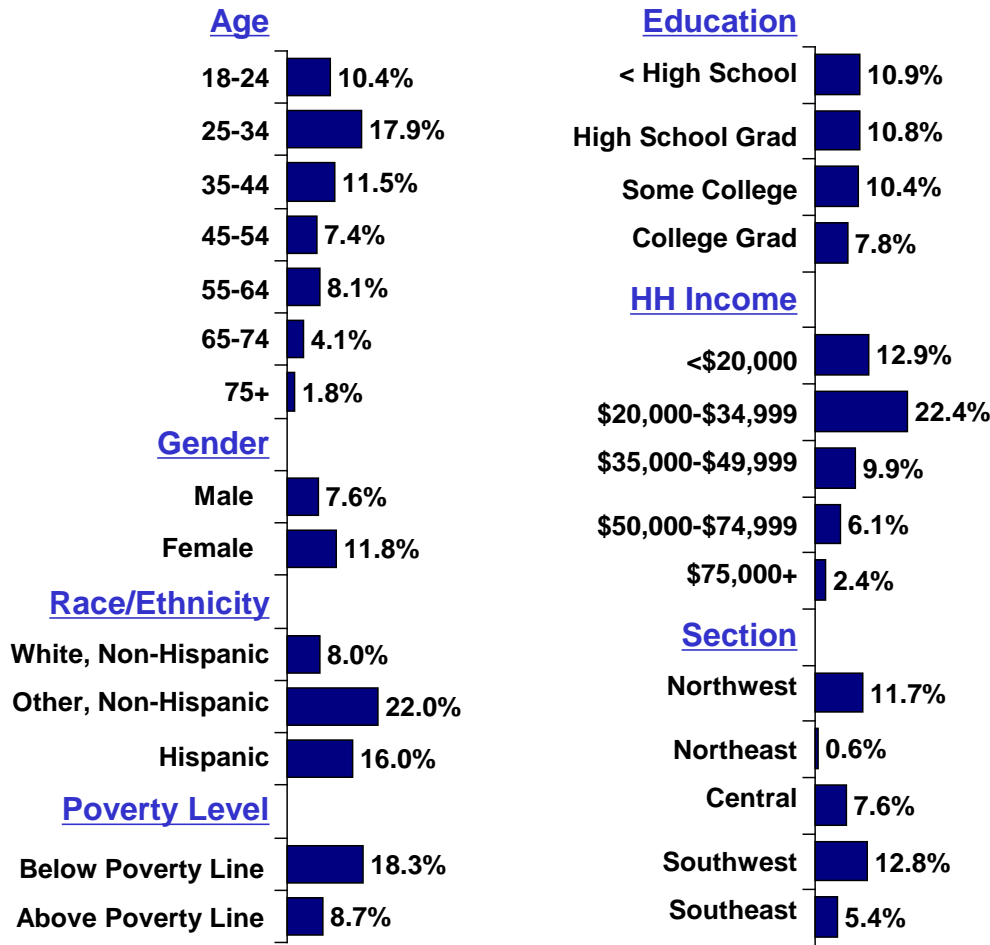
Problems Receiving Health Care Due to Cost

No Health Care Access During Past 12 Months Due to Cost\*  
(Total Sample)



\*Among all adults, the proportion who reported that in the past 12 months, they could not see a doctor when they needed to due to the cost.

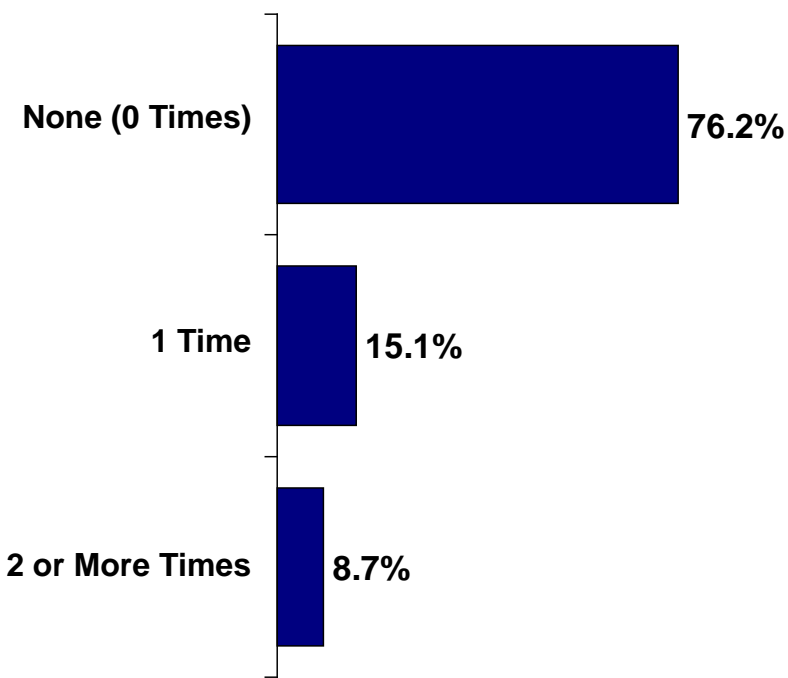
No Health Care Access Due to Cost by Demographics



Among Ottawa County adults, 23.8% and 17.5% have visited an Urgent Care Center and the Emergency Room, respectively, in the past 12 months. Those who used these facilities averaged roughly two visits during the year.

Use of Urgent Care and Emergency Rooms

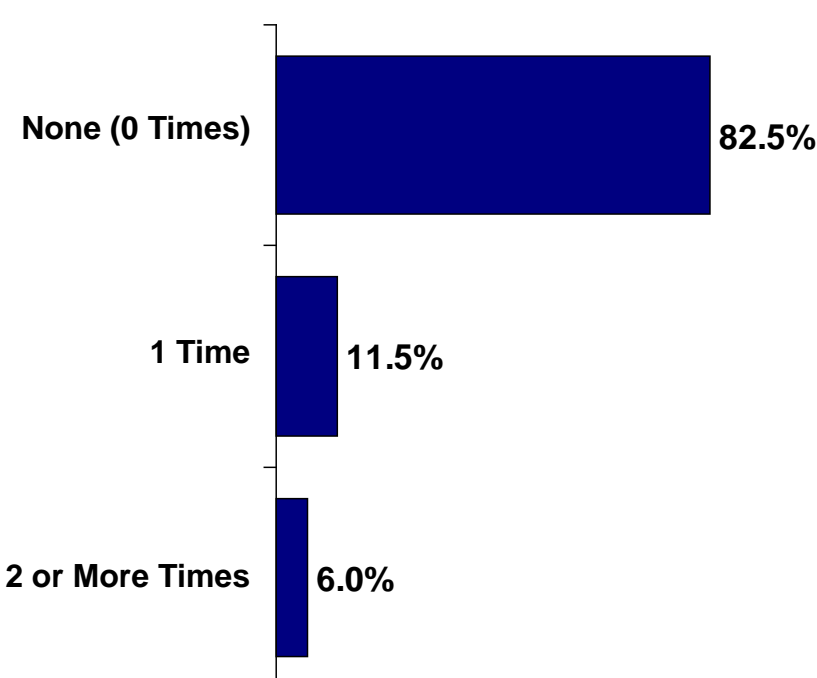
Number of Times Visited Urgent Care Center in Past 12 Months



Mean Days (Including Zero) = 0.5  
Mean Days (Without Zero) = 2.0

(n=2007)

Number of Times Visited ED/ER in Past 12 Months



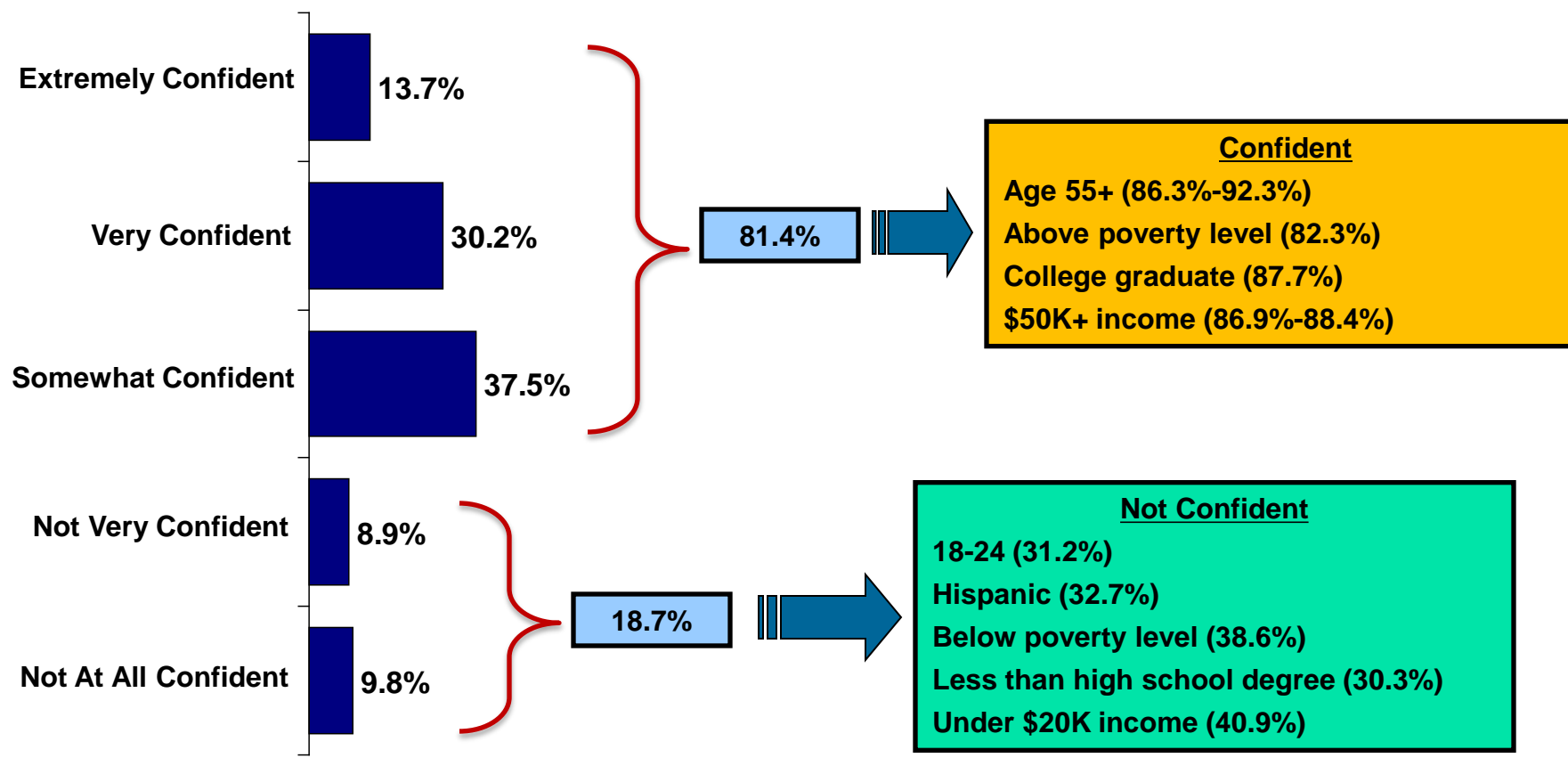
Mean Days (Including Zero) = 0.3  
Mean Days (Without Zero) = 1.7

(n=2003)

Q3.7: How many time have you been to an Urgent Care Center in the past 12 months?  
Q3.8: How many time have you been to an Emergency Department/Room in the past 12 months?

A large majority (81.4%) of adults are at least somewhat confident they can successfully navigate the health care system, however, 18.7% are not very or not at all confident. The most confident groups are those at least 55 years old, have incomes of \$50K or more, and are college graduates. Conversely, those least confident groups are young adults under age 25, Hispanic, those without a high school diploma, and those living below the poverty line.

Confidence in Navigating the Health Care System



(n=1966)

Q3.10: How confident are you that you can successfully navigate the health care system? Would you say....?

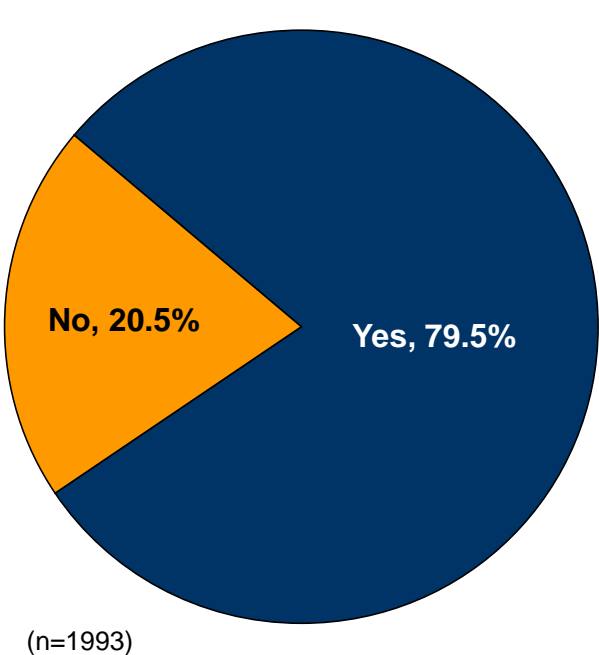
# ***Risk Behavior Indicators***

---

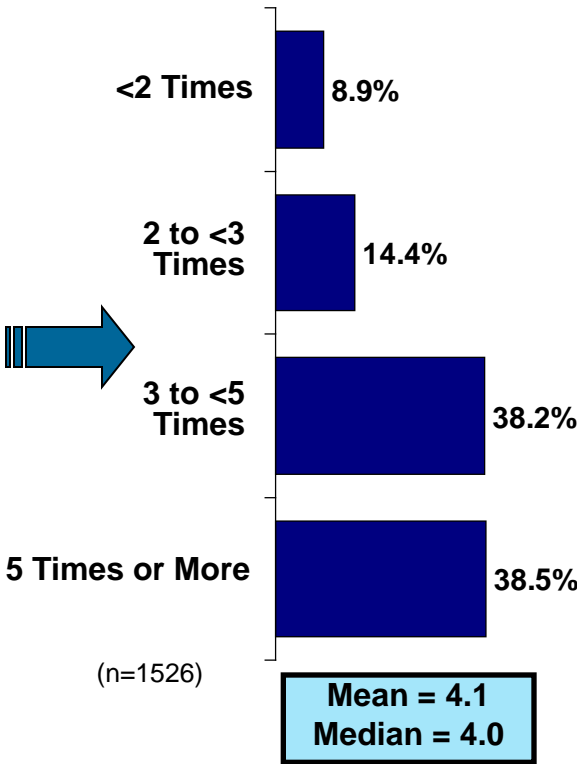
Almost eight in ten (79.5%) adults participate in leisure time physical activity such as running, walking, or golf. Of those who do, more than three in four (76.7%) participate at least three times per week. More than six in ten (60.8%) participate for less than four hours per week, while 25.1% participate for six hours or more.

Participation in Physical Activity

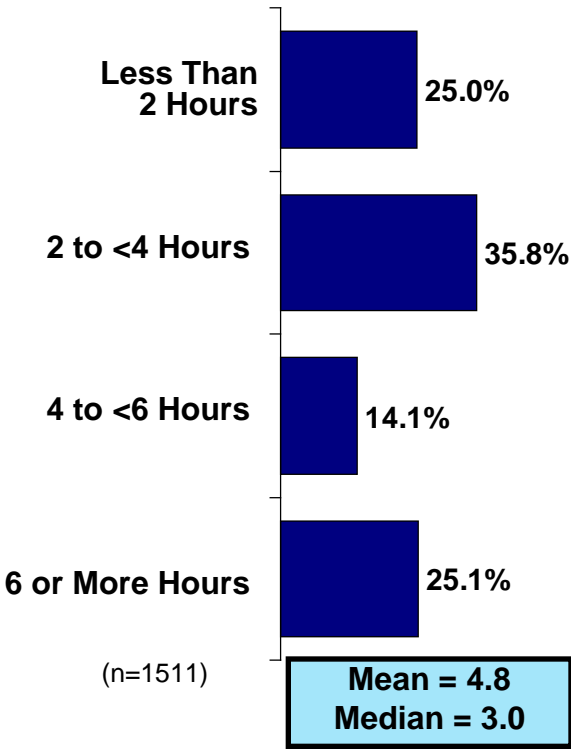
Participation in Leisure Time Physical Activity/Exercise



Number of Times Performed Physical Activity Per Week (Among Those Who Participate)



Number of Hours Performed Physical Activity Per Week (Among Those Who Participate)

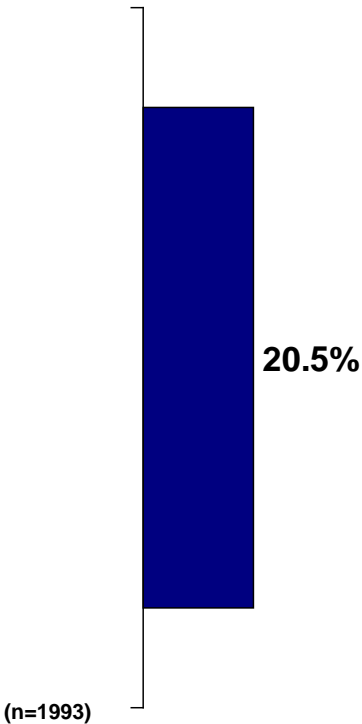


Q18.1: During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?  
Q18.2: (If yes) How many times per week or per month did you take part in physical activity during the past month?  
Q18.3: And when you took part in physical activity, for how many minutes or hours did you usually keep at it?

In fact, roughly four in ten adults with less than a high school diploma (41.4%) or living in households with incomes below \$20K (39.6%) do not participate in any leisure time physical activity.

Leisure Time Physical Activity

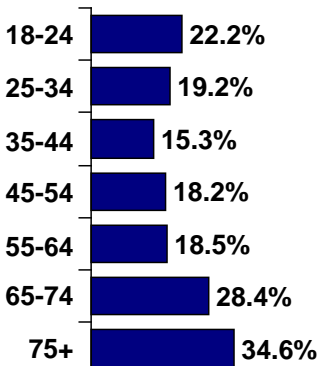
No Leisure Time Physical Activity\*  
(Total Sample)



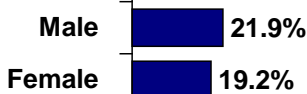
\*Among all adults, the proportion who reported not participating in any leisure-time physical activities or exercises, such as running, calisthenics, golf, gardening, or walking, during the past month.

No Leisure Time Activity by Demographics

Age



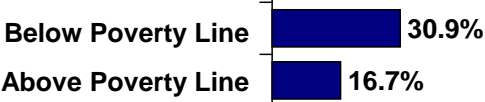
Gender



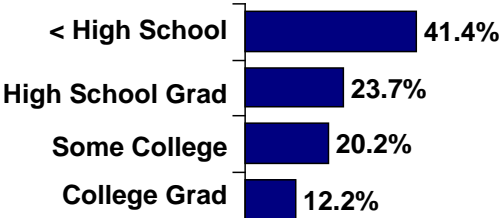
Race/Ethnicity



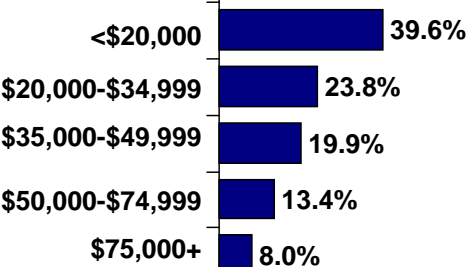
Poverty Level



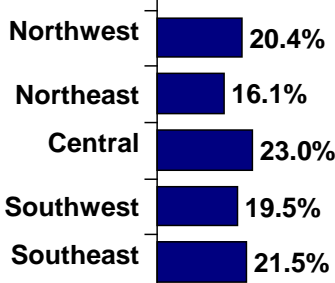
Education



HH Income



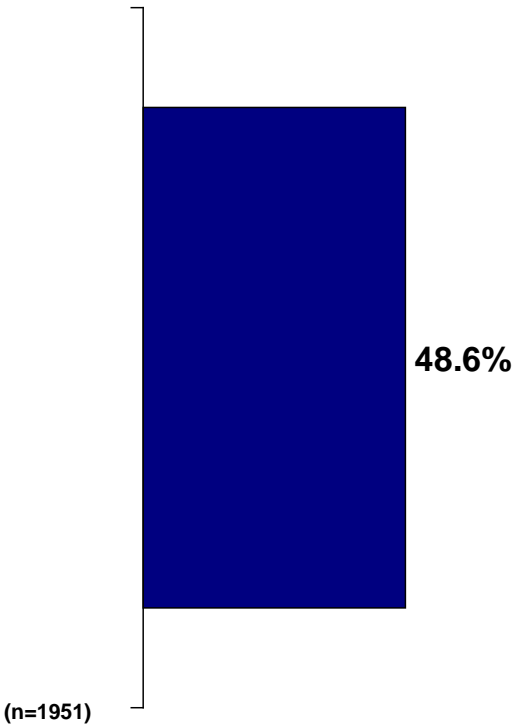
Section



Adults most likely to participate in adequate amounts of aerobic physical activity have a college degree and are financially stable (above the poverty line, household incomes \$35K+). Non-Hispanic minorities engaged in aerobic activities more than other racial/ethnic groups.

Leisure Time Physical Activity (Cont'd.)

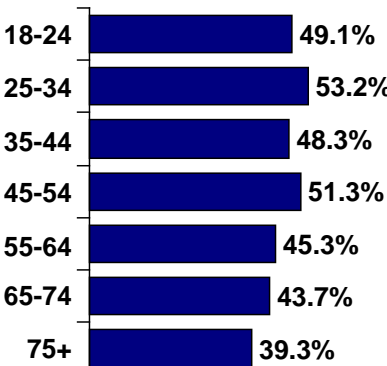
Adequate Aerobic Physical Activity\*  
(Total Sample)



\*Among all adults, the proportion who reported that they do either moderate physical activities for at least 150 minutes per week, vigorous physical activities for at least 75 minutes per week, or an equivalent combination of moderate and vigorous physical activities.

Adequate Aerobic Physical Activity by Demographics

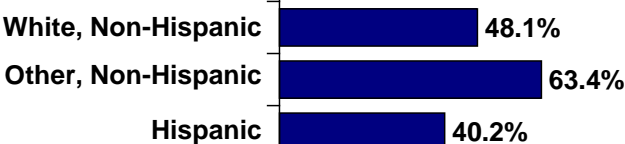
Age



Gender



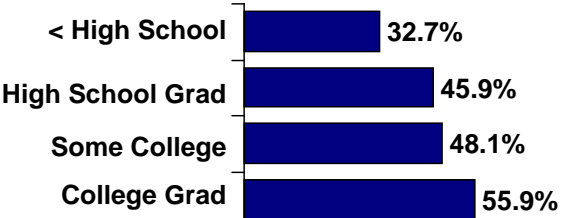
Race/Ethnicity



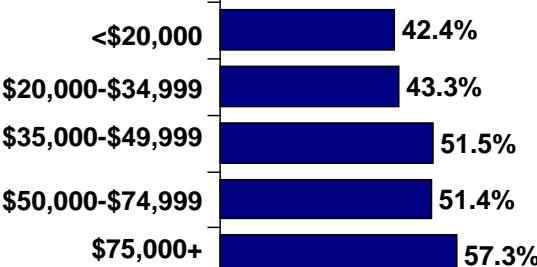
Poverty Level



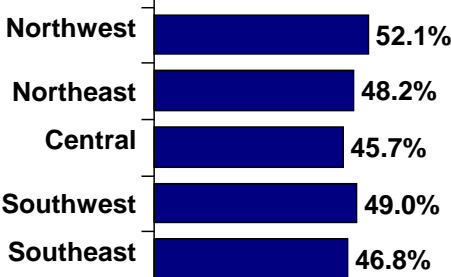
Education



HH Income

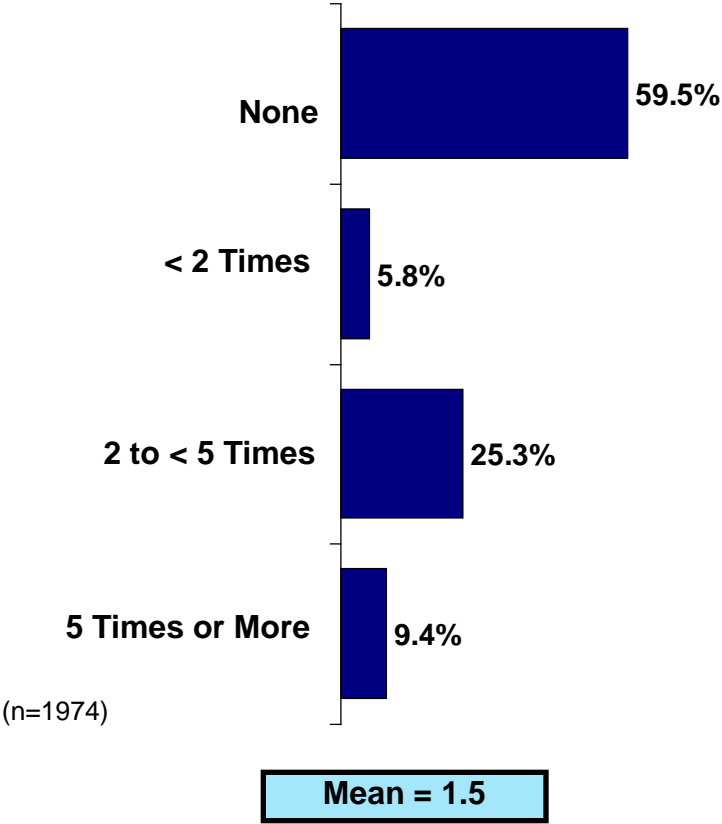


Section



Among Ottawa County adults, six in ten (59.5%) engage in no muscle strengthening activities. On the other hand, more than one-third (34.7%) perform muscle-strengthening activities at least twice a week.

**Number of Times Performed Physical Activities to Strengthen Muscles Per Week in Past Month**



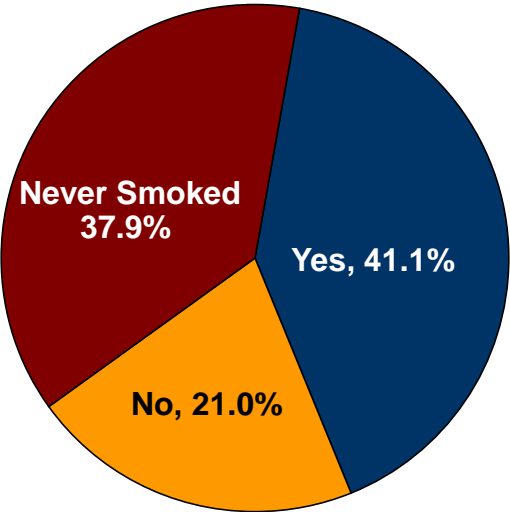
Q18.4: During the past month, how many times per week, or per month, did you do physical activities or exercises to STRENGTHEN your muscles? DO NOT count aerobic activities like walking, running, or bicycling. Count activities using your body weight like yoga, sit-ups or push-ups and those using weight machines, free weights, or elastic bands.



Four in ten (41.1%) Ottawa County adults have smoked at least 100 cigarettes in their lifetime. Of these, 32.4% currently smoke every day and 12.7% smoke some days; these people are classified as smokers. Less than one in five (18.6%) Ottawa County adults are smokers and 22.6% are considered former smokers (smoked at least 100 cigarettes in their life but currently do not smoke at all).

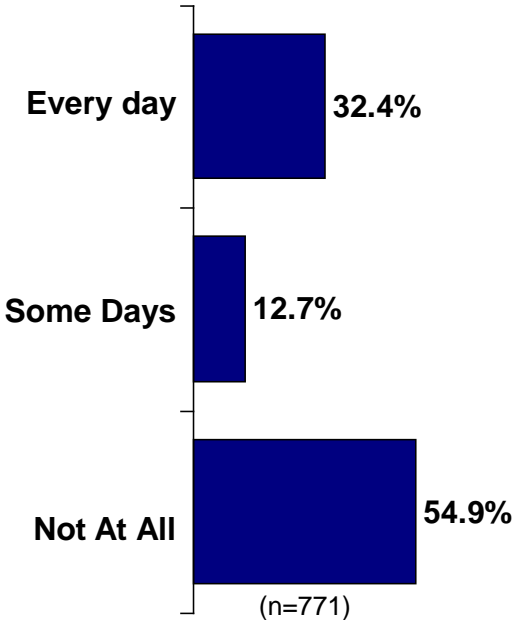
Cigarette Smoking

Smoked 100 Cigarettes in Lifetime



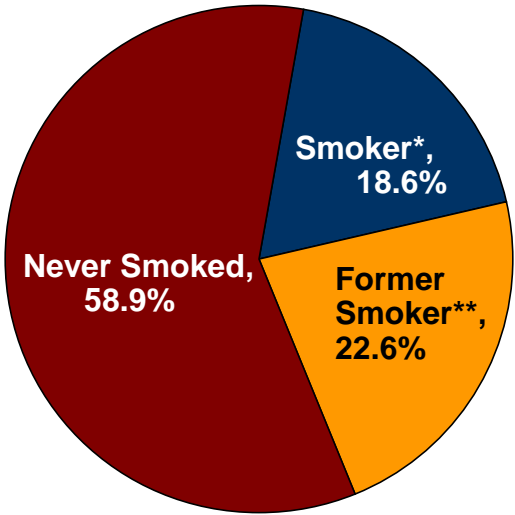
(n=2006)

Frequency of Current Use  
(Among Those Who Smoked at  
Least 100 Cigarettes in Their  
Lifetime)



(n=771)

Smoking Status



(n=2006)

Q12.1: Have you smoked at least 100 cigarettes in your entire life?  
Q12.2: Do you now smoke cigarettes everyday, some days, or not at all?

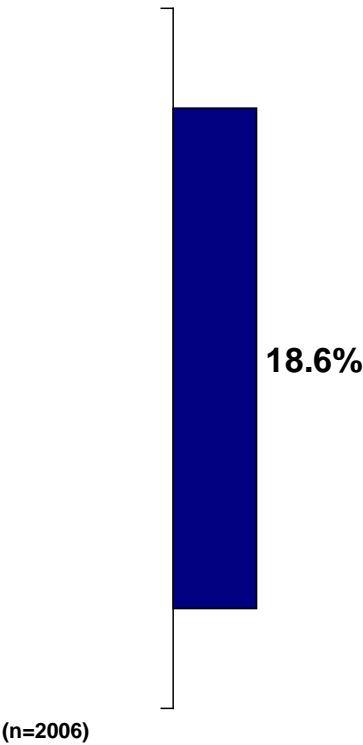
\*Among all adults, the proportion who reported that they had ever smoked at least 100 cigarettes (5 packs) in their life and that they smoke cigarettes now, either every day or on some days.

\*\*Among all adults, the proportion who reported that they had ever smoked at least 100 cigarettes (5 packs) in their life but they do not smoke now.

Cigarette smoking is inversely related to age and income; 32.7% of adults between the ages of 18-24 and 27.4% of those with incomes less than \$20K currently smoke cigarettes. Additionally, there is a strong linear relationship between smoking and education, whereas, for example, 20.7%-24.6% of adults with no college education smoke, compared to 7.1% of college graduates. Smoking is also more common among men than women, and more common among non-Hispanic minorities than other racial/ethnic groups.

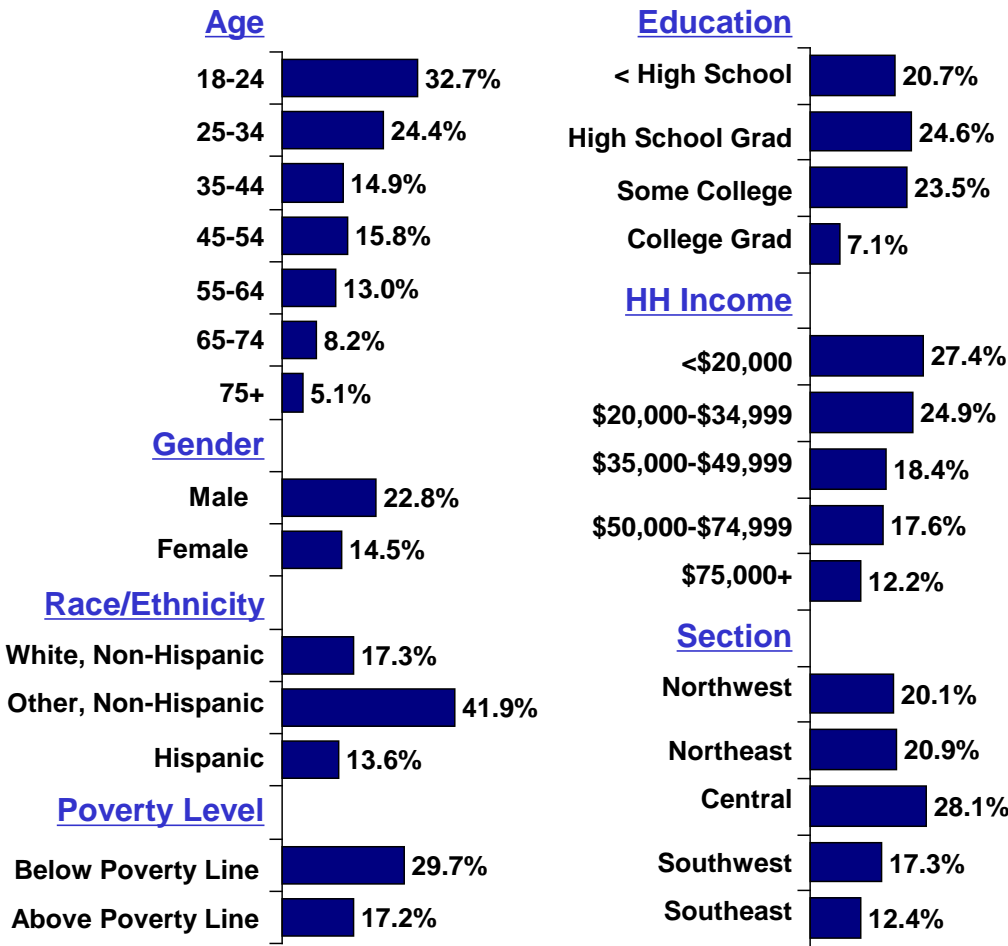
Cigarette Smoking

Current Cigarette Smoking\*  
(Total Sample)



\*Among all adults, the proportion who reported that they had ever smoked at least 100 cigarettes (5 packs) in their life and that they smoke cigarettes now, either every day or on some days.

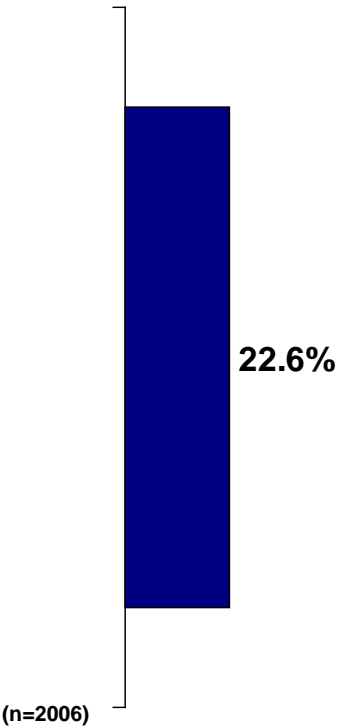
Current Cigarette Smoking by Demographics



Males are more likely than females to be former smokers. Also, adults age 55+ are likely to be former smokers compared to younger adults.

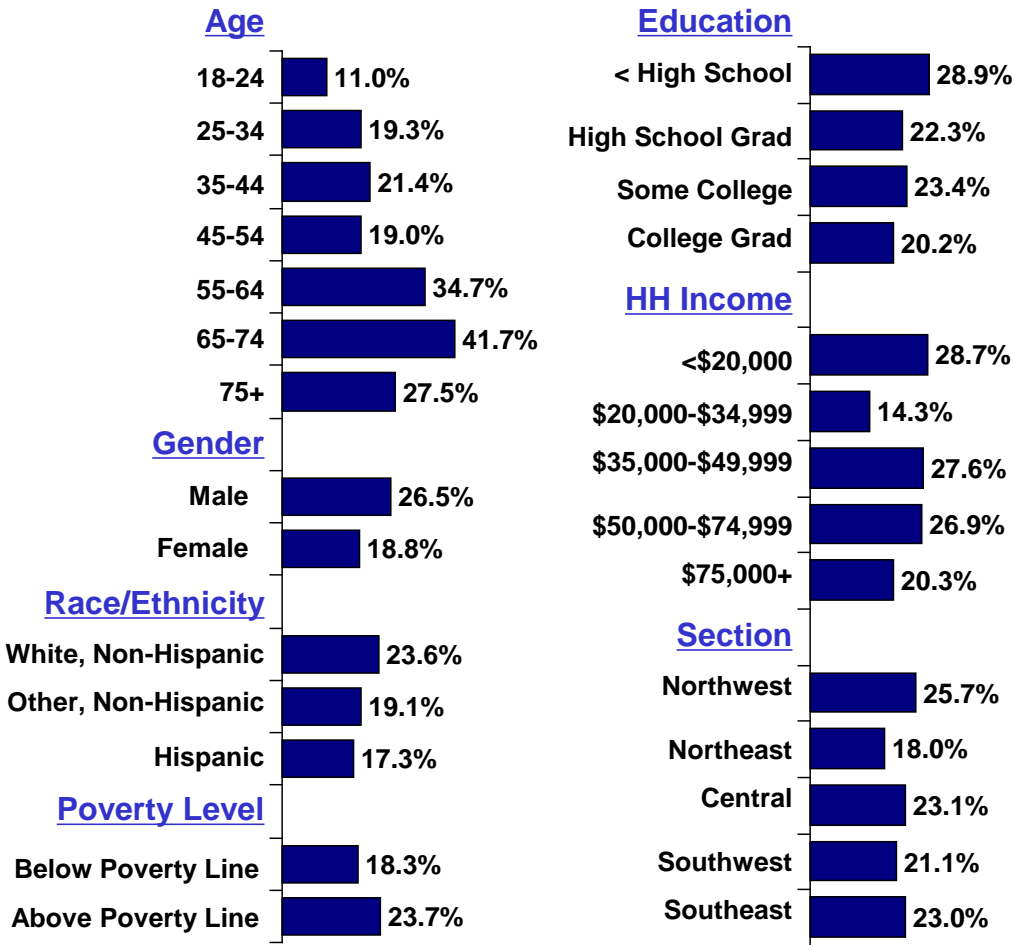
Cigarette Smoking (Cont'd.)

Former Cigarette Smoking\*  
(Total Sample)



\*Among all adults, the proportion who reported that they had ever smoked at least 100 cigarettes (5 packs) in their life but they do not smoke now.

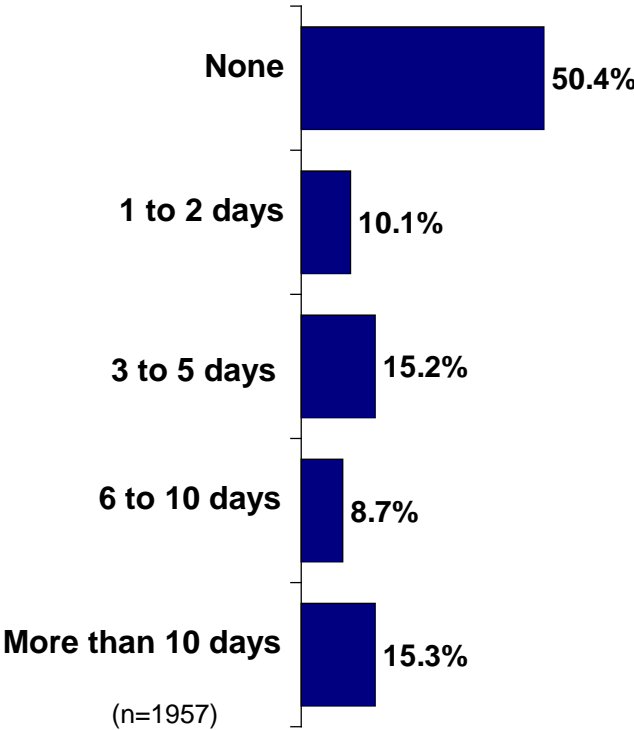
Former Cigarette Smoking by Demographics



With regard to alcohol consumption, half of Ottawa County adults are non-drinkers and slightly more than four in ten (42.8%) are considered to be light to moderate drinkers. Heavy drinkers comprise 6.5% of Ottawa County adults, meaning they consume an average of more than eight (if female) or fourteen drinks (if male) per week.

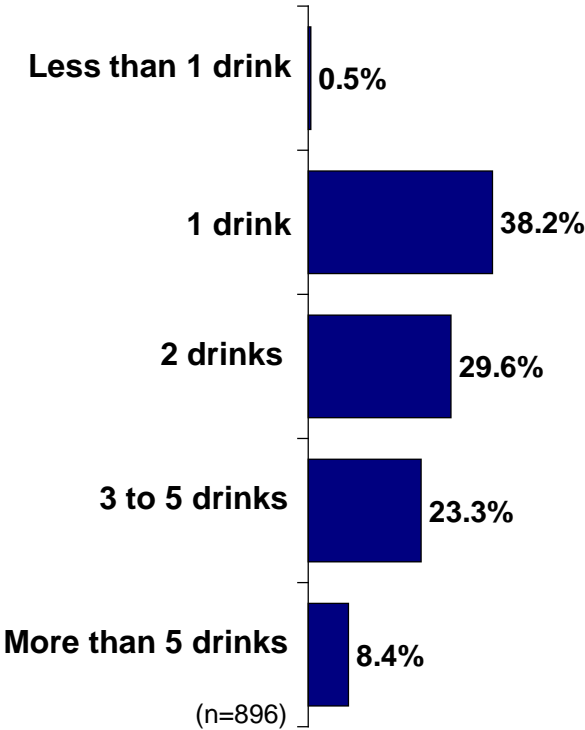
Alcohol Consumption in Past 30 Days

Number of Days Drank Alcohol in Past 30 Days



Mean (All) = 4.5  
Mean (Drinkers) = 9.1

Average Number of Drinks When Drinking



Mean = 3.1

Drinking Status

Non Drinker	50.7%
Light/Moderate Drinker	42.8%
Heavy Drinker	6.5%

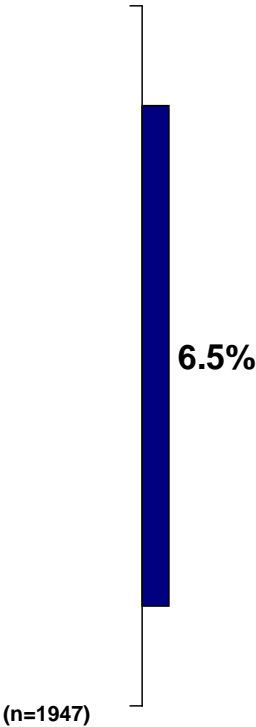
(n=1947)

Q20.1: During the past 30 days, how many days per week, or per month did you have at least one drink of any alcoholic beverage such as beer, wine, a malt beverage, or liquor?  
Q20.2: One drink is equivalent to a 12-ounce beer, a 5-ounce glass of wine, or a drink with one shot of liquor. During the past 30 days, on the days when you drank, about how many drinks did you drink on the average?

Younger Ottawa County adults (<35 years of age) are more likely to engage in heavy drinking than older adults. The largest proportions of heavy drinkers are found among non-Hispanic minorities and from people residing in the northeast section of Ottawa County.

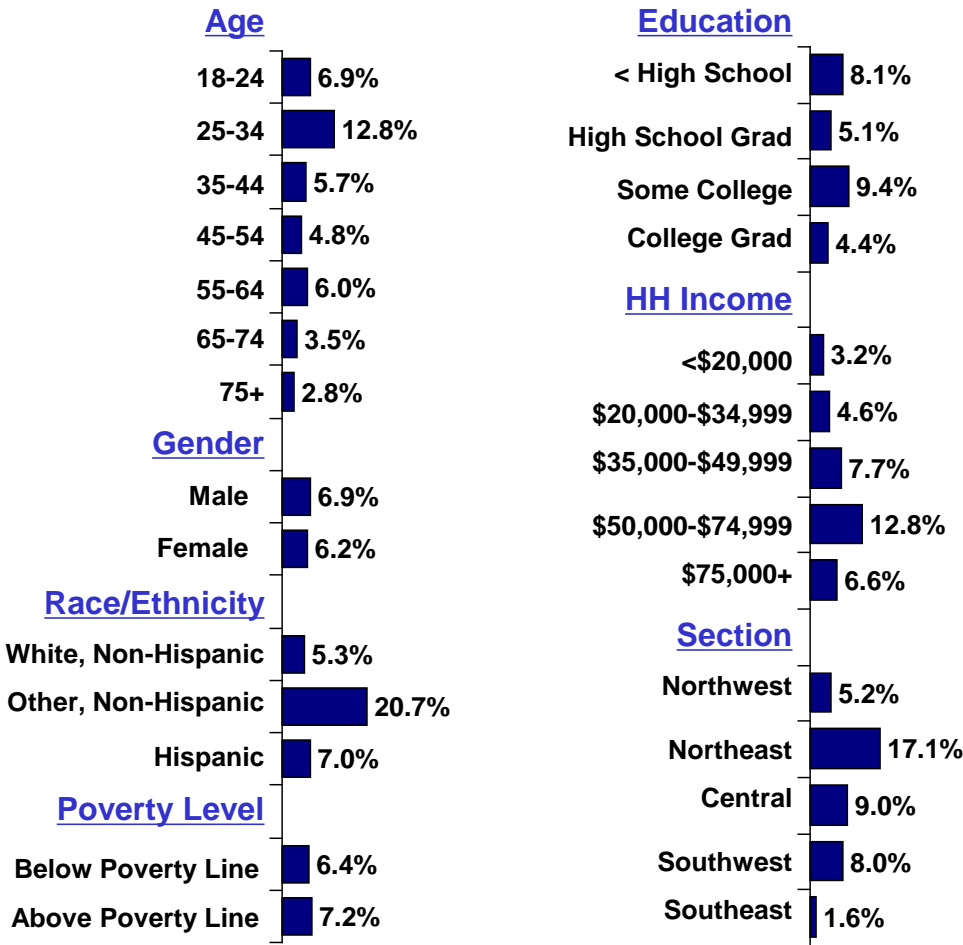
Alcohol Consumption (Cont'd.)

Heavy Drinking\*  
(Total Sample)



\*Among all adults, the proportion who reported consuming an average of more than two alcoholic drinks per day for men and one per day for women in the previous month.

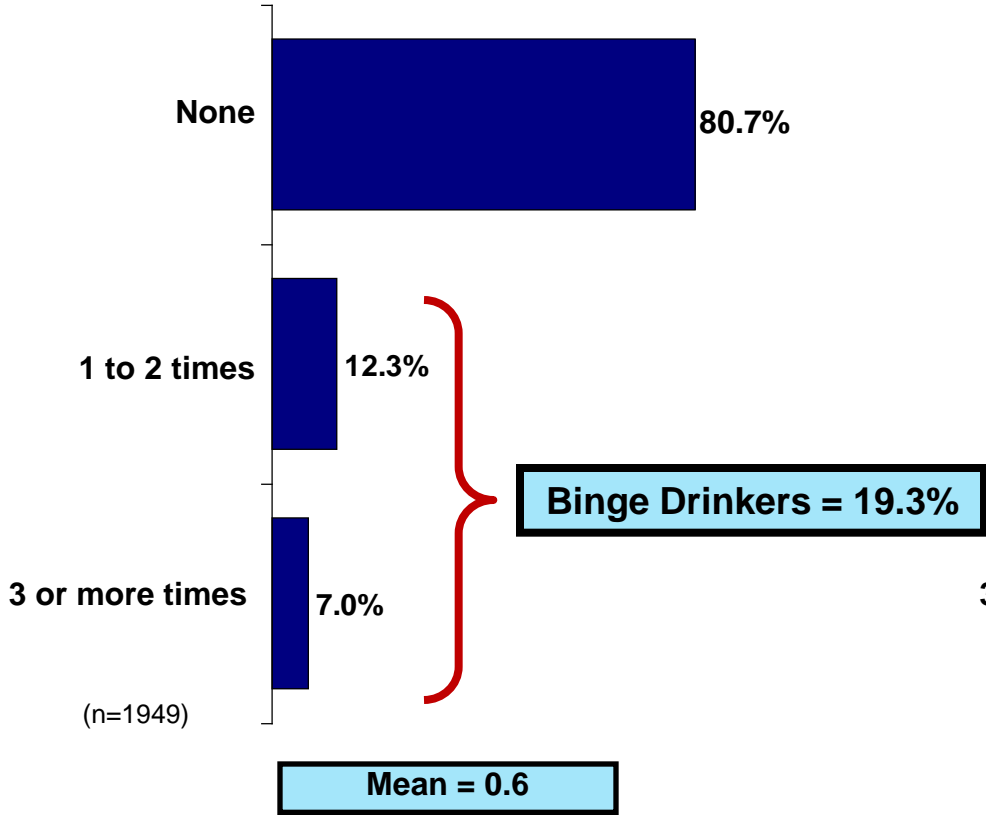
Heavy Drinking by Demographics



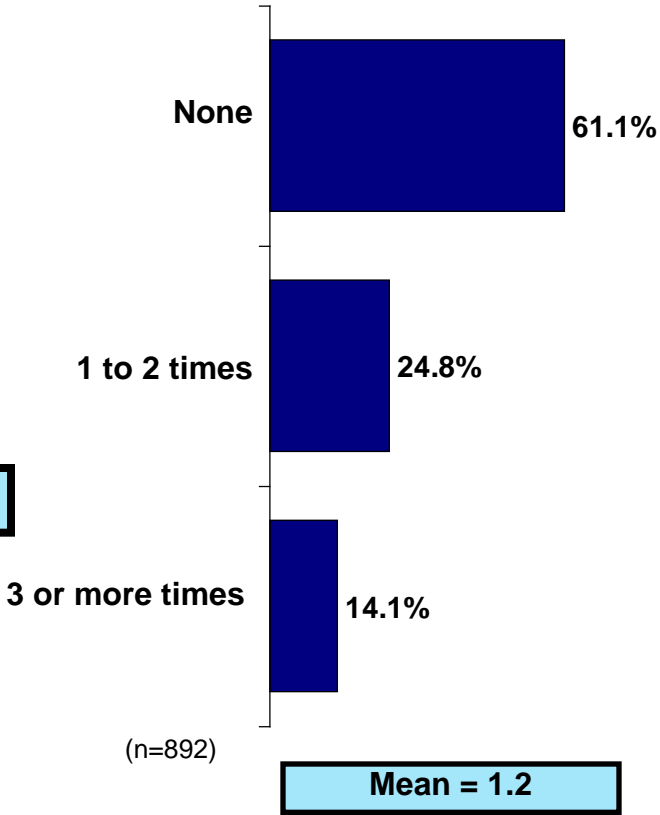
Among all adults, almost one if five (19.3%) have engaged in binge drinking in the past 30 days. Among those who drink, this proportion rises to 38.9%.

Binge Drinking

Number of Times Consumed 5 or More (Men)/4 or More (Women) Drinks on an Occasion in Past 30 Days (All Adults)



Number of Times Consumed 5 or More (Men)/4 or More (Women) Drinks on an Occasion in Past 30 Days (Drinkers)

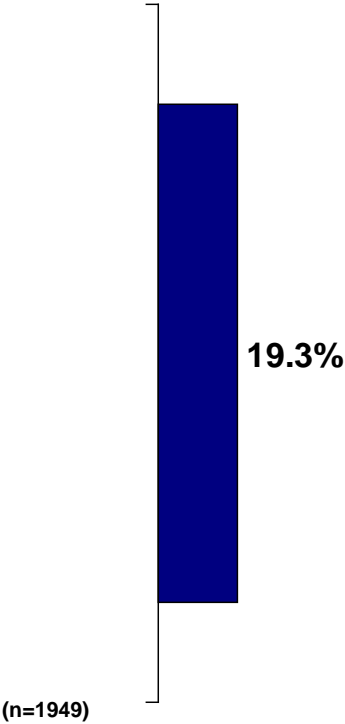


Q20.3: Considering all types of alcoholic beverages, how many times during the past 30 days did you have X (x=5 for men, x=4 for women) or more drinks on an occasion?

The prevalence of binge drinking is higher among men than women and higher among adults younger than 35 years of age vs. older adults. Binge drinking is far more prevalent among non-Whites compared to Whites, especially among Hispanics.

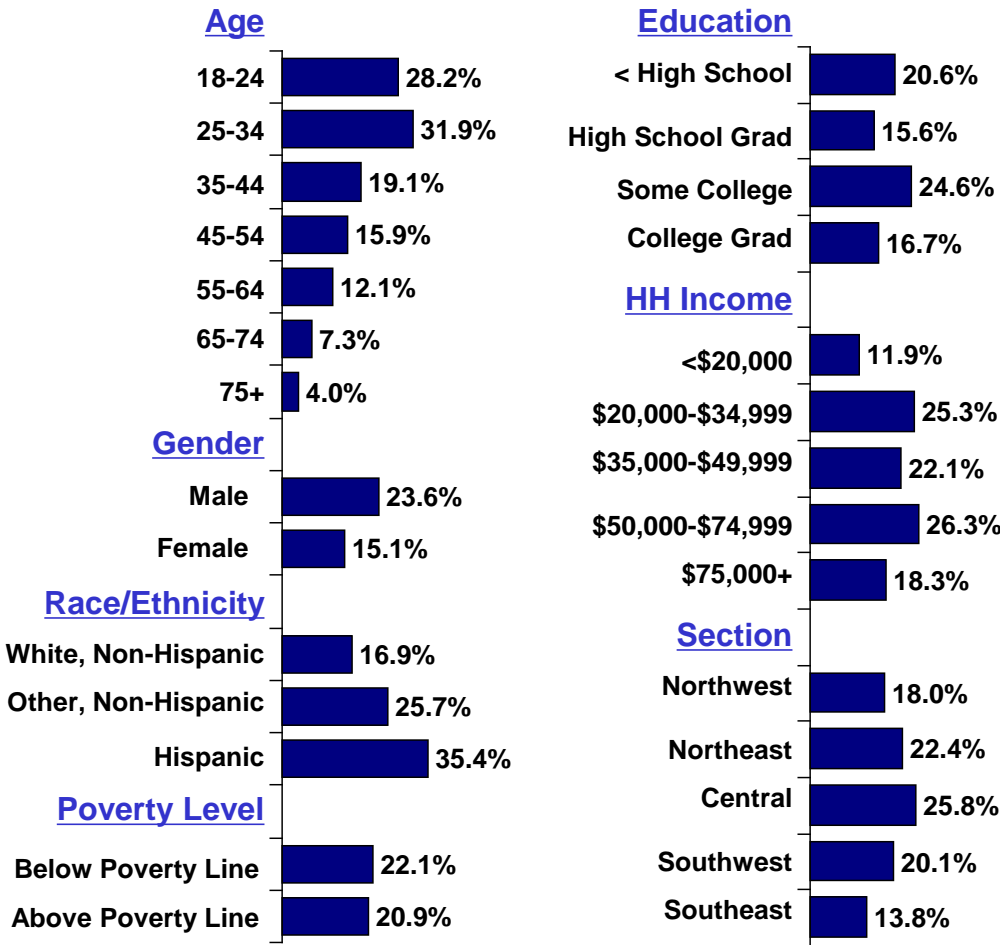
Alcohol Consumption

Binge Drinking\*  
(Total Sample)



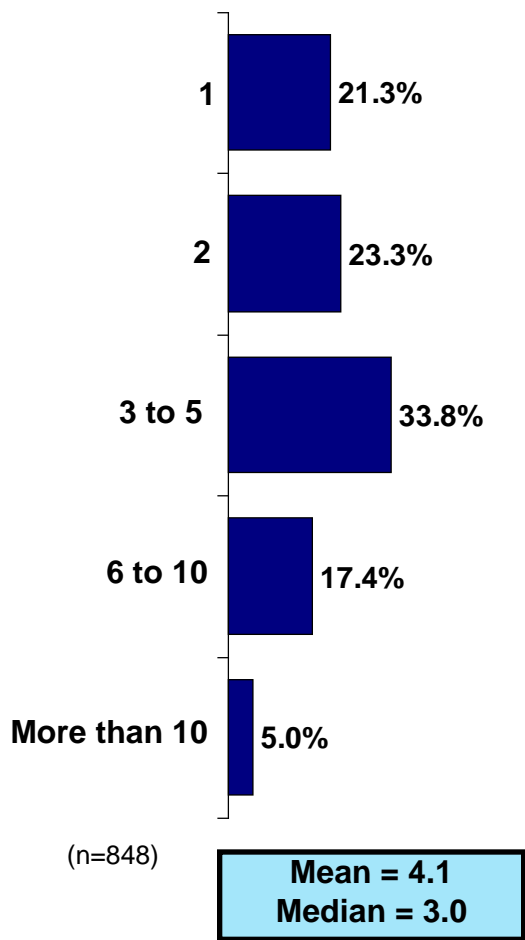
\*Among all adults, the proportion who reported consuming five or more drinks per occasion (for men) or four or more drinks per occasion (for women) at least once in the previous month.

Binge Drinking by Demographics



Among Ottawa County adults who drink alcohol, four in ten (44.6%) have at most consumed one to two drinks on any occasion in the past 30 days, while 22.4% have consumed six or more drinks.

Largest Number of Drinks Consumed on One Occasion in Past 30 Days  
(Among Drinkers)

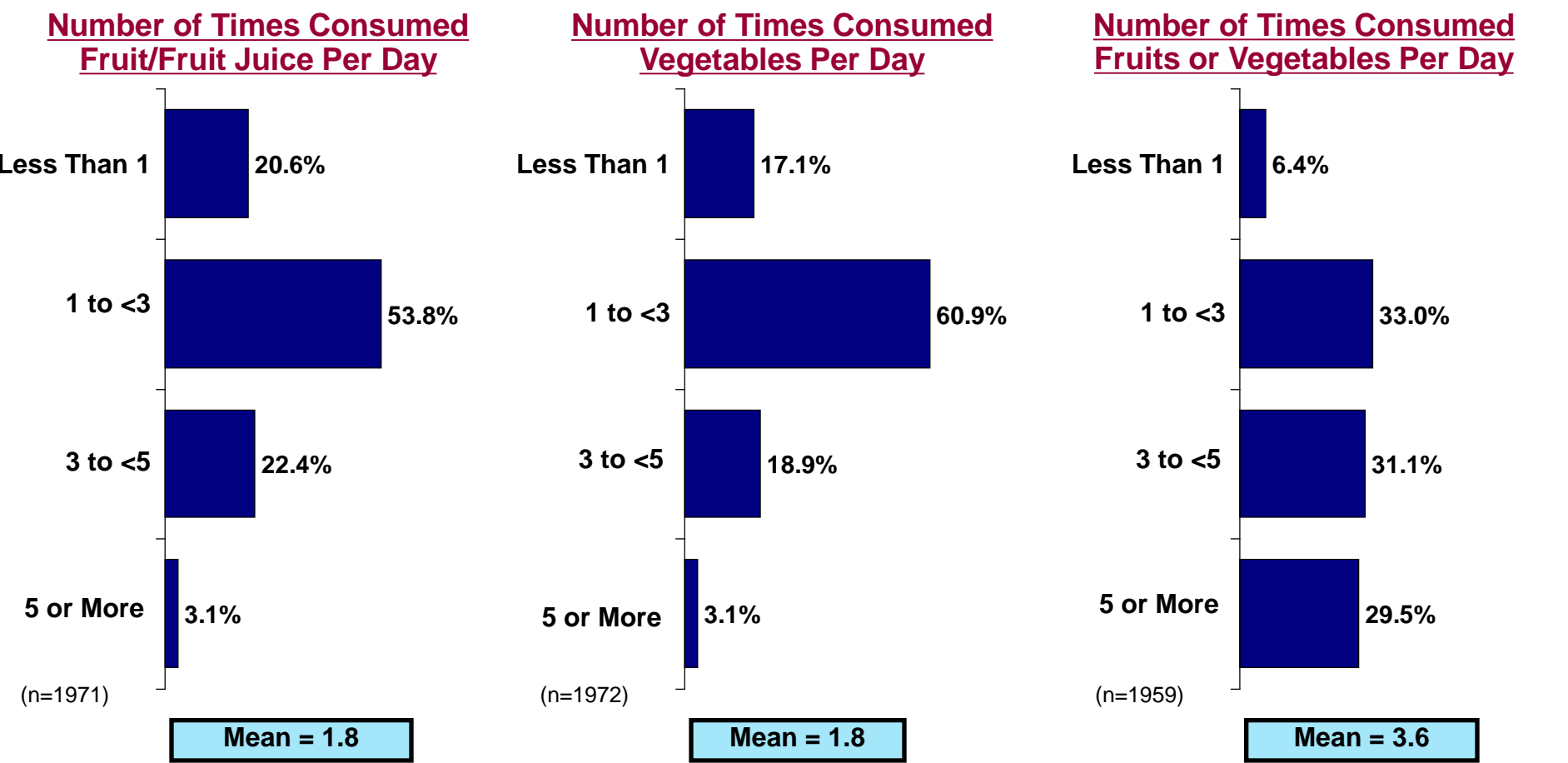


Q20.4: During the past 30 days, what is the largest number of drinks you had on any occasion?



Ottawa County adults consume minor quantities of fruit (including 100% fruit juice) and vegetables per day, averaging less than two times (1.8) a day for each. Taken together, fruits and vegetables are consumed between three and four times per day. Still, only 29.5% of adults consume adequate amounts (five times) of fruits and vegetables per day.

Consumption of Fruit and Vegetables



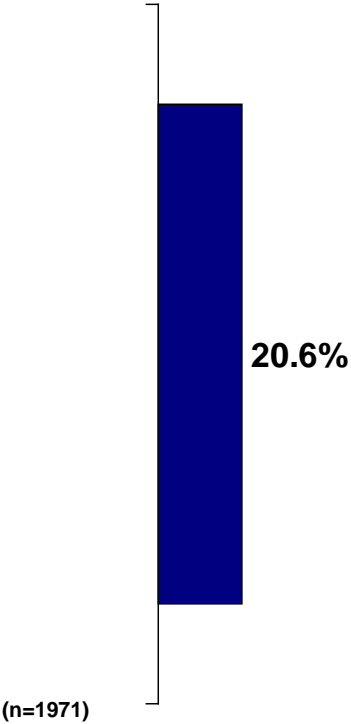
Q15.1: During the past month, how many times per day, week, or month did you eat fruit or drink 100% PURE fruit juices? Do not include fruit flavored drinks with added sugar or fruit juice you made at home and added sugar to. Only include 100% juice.

Q15.2: During the past month, how many times per day, week, or month did you eat vegetables, for example broccoli, sweet potatoes, carrots, tomatoes, V-8 juice, corn, cooked or fresh leafy greens including romaine,, chard, collard greens, or spinach?

Adults most likely to consume fruits less than one time per day come from groups that are the youngest (18-24), Hispanic, below the poverty level, and have less than a high school degree.

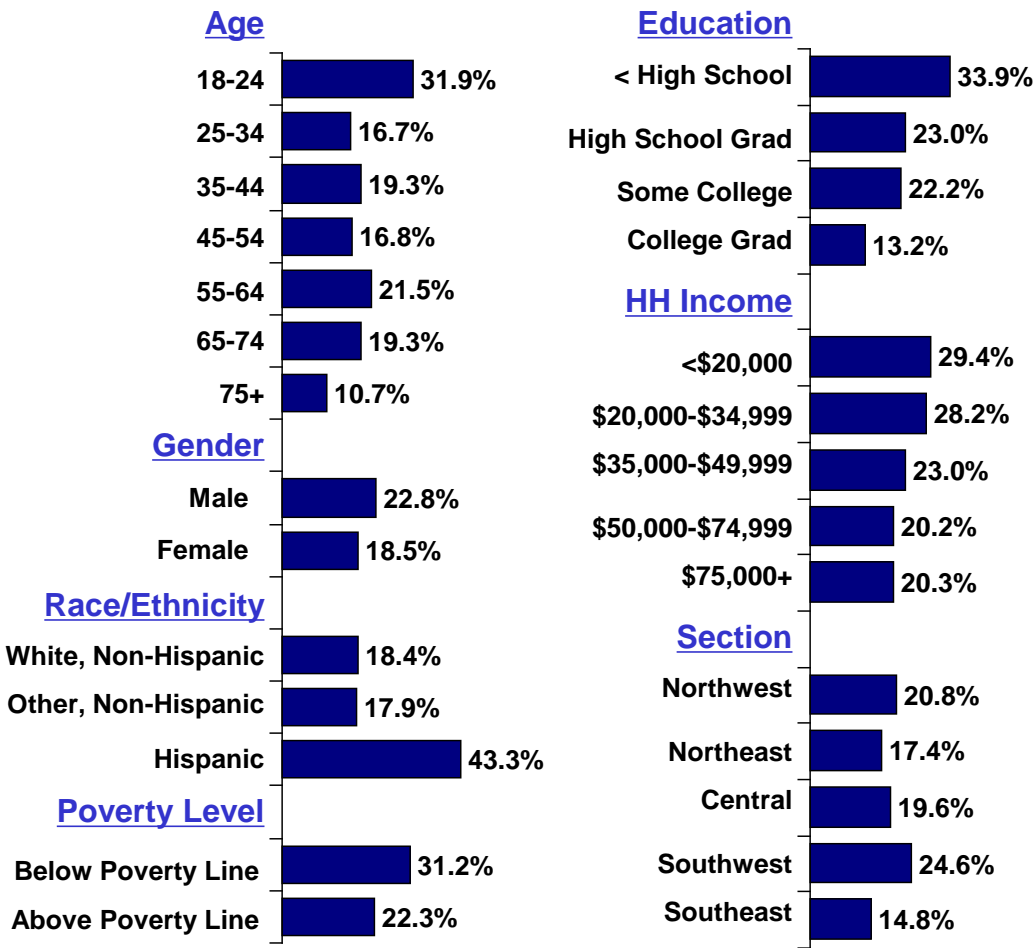
Fruit Consumption

Consumed Fruits <1 Time Per Day\*  
(Total Sample)



\*Among all adults, the proportion whose total reported consumption of fruits (including juice) was less than one time per day.

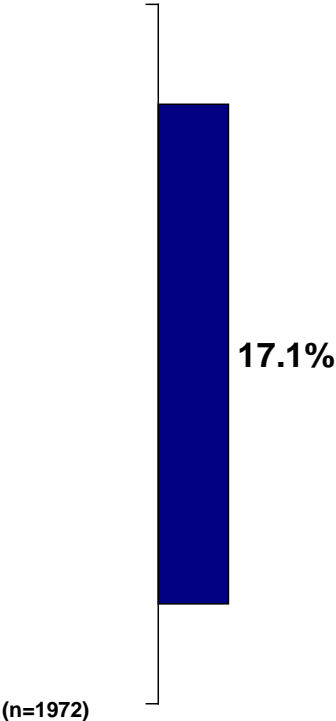
Consumed Fruits <1 Time Per Day  
by Demographics



Similarly, those most likely to consume vegetables less than one time per day come from groups that are the youngest (18-24), Hispanic, and have households incomes less than \$20K.

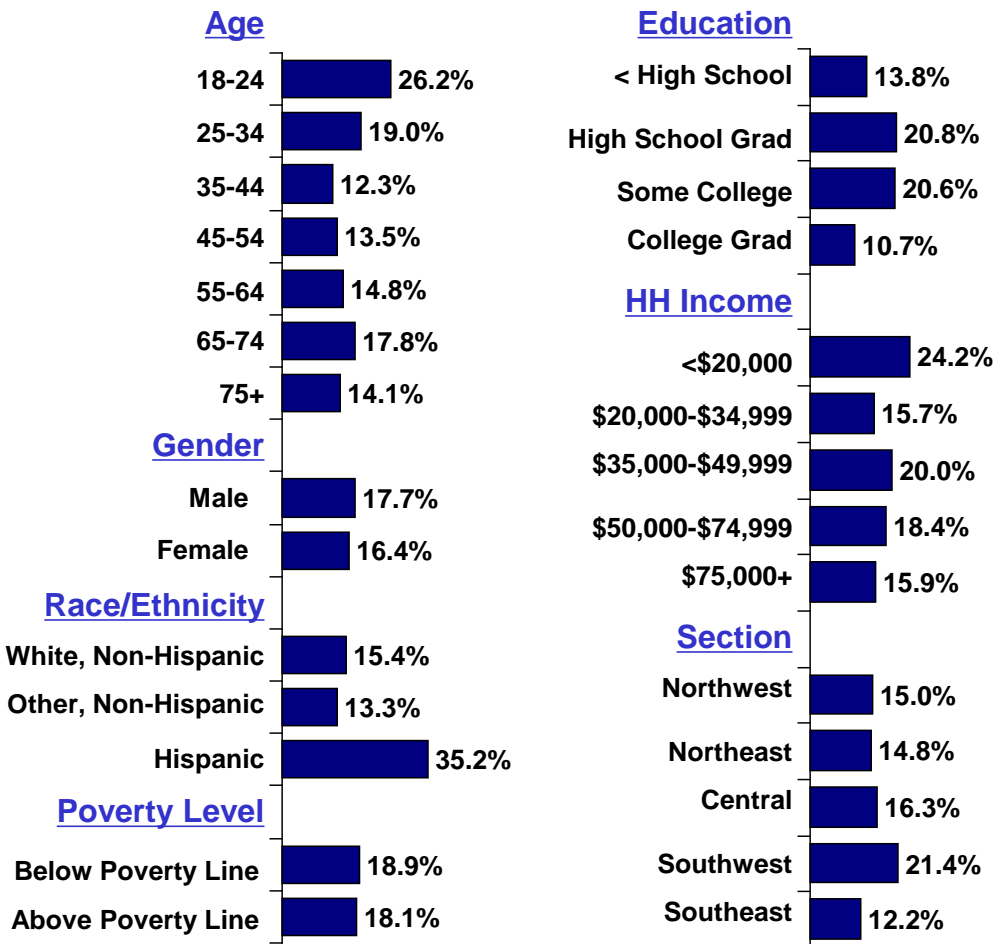
Vegetable Consumption

Consumed Vegetables <1 Time Per Day\*  
(Total Sample)



\*Among all adults, the proportion whose total reported consumption of fruits (including juice) was less than one time per day.

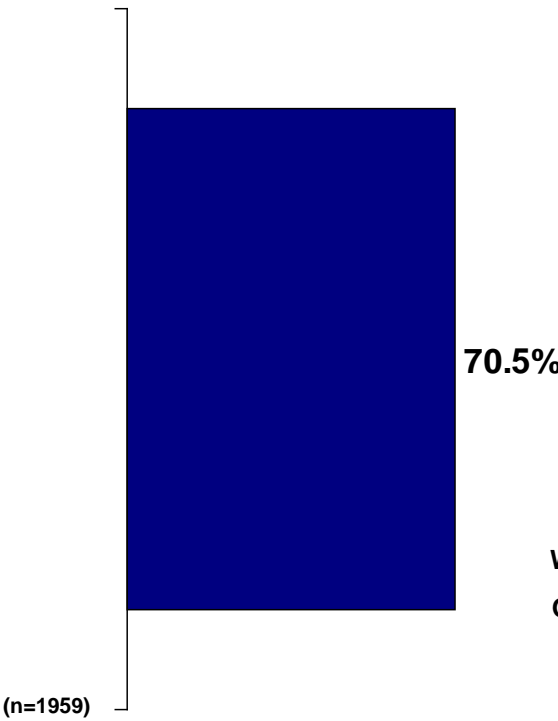
Consumed Vegetables <1 Time Per Day  
by Demographics



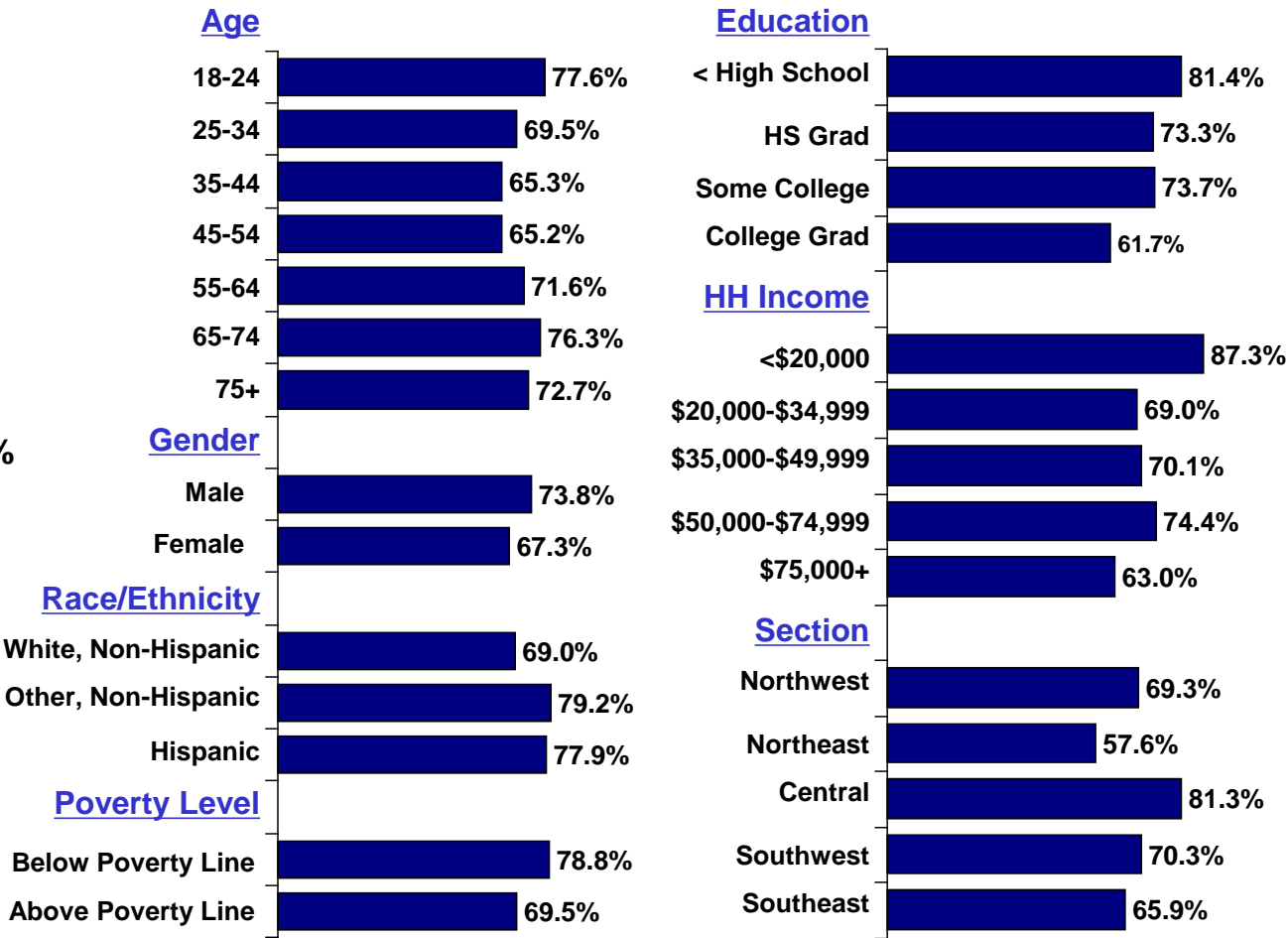
Inadequate fruit and vegetable consumption is common in Ottawa County, but much better than three years ago. Still, 70.5% of adults consume fruits or vegetables less than five times per day. Adequate fruit and vegetable consumption is directly related to education and income, although the proportions of inadequate consumption are still high for all demographic subgroups. Fewer men and non-Whites consume adequate quantities of fruits and vegetables compared to women and Whites, respectively.

Fruit and Vegetable Consumption

Inadequate Fruit and Vegetable Consumption\*  
(Total Sample)



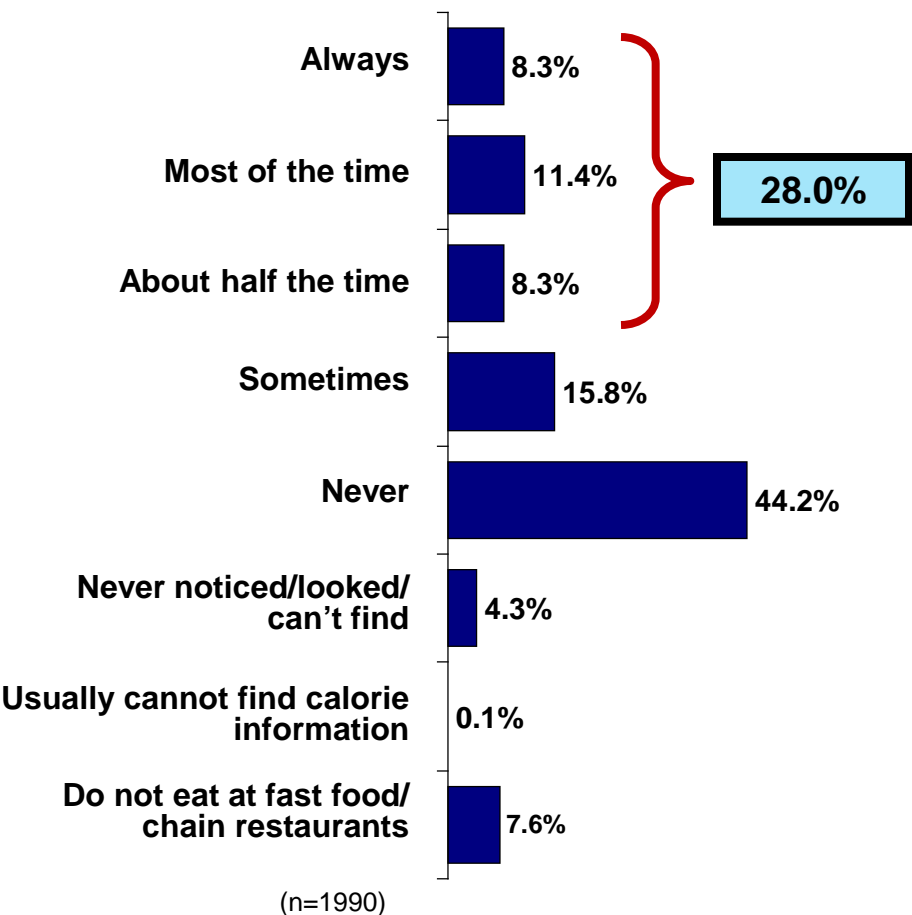
Inadequate Consumption by Demographics



\*Among all adults, the proportion whose total frequency of consumption of fruits (including juice) and vegetables was less than five times per day.

More than one-fourth (28.0%) of adults report that when eating at fast food restaurants, listed calorie information impacts their decision on what to order at least half the time. However, more than four in ten (44.2%) say calorie information never impacts their decision.

Frequency Calorie Information Helps in Deciding What to Order When Dining Out

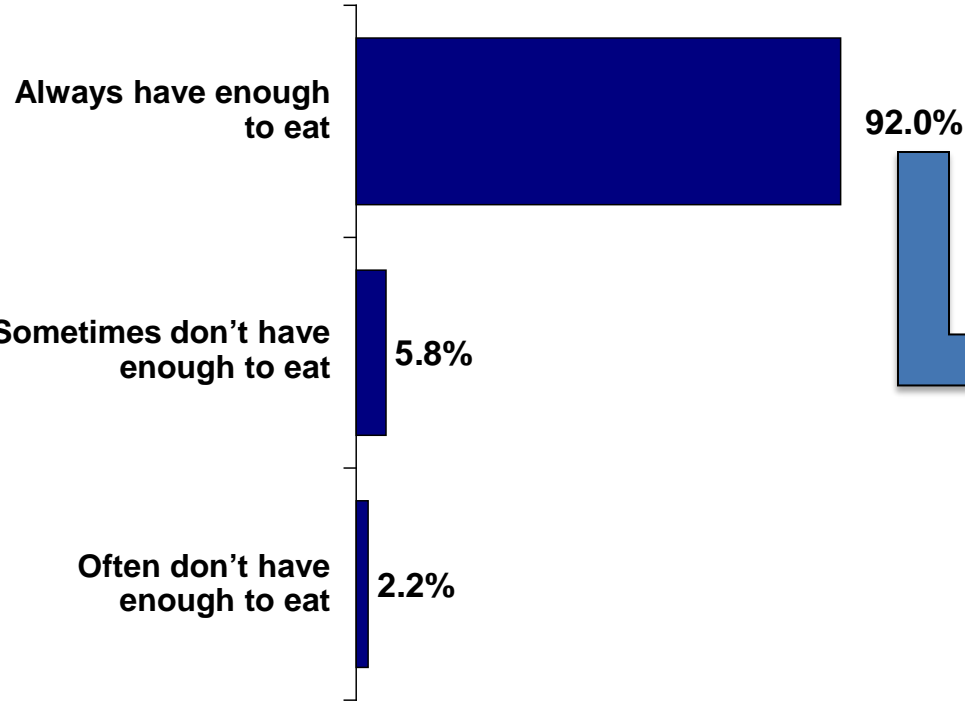


Q16.1: The next question is about eating out at fast food and chain restaurants. When calorie information is available in the restaurant, how often does this information help you decide what to order?

Nine in ten adults (92.0%) say they always have enough to eat and are able to eat the foods they want (90.0%).

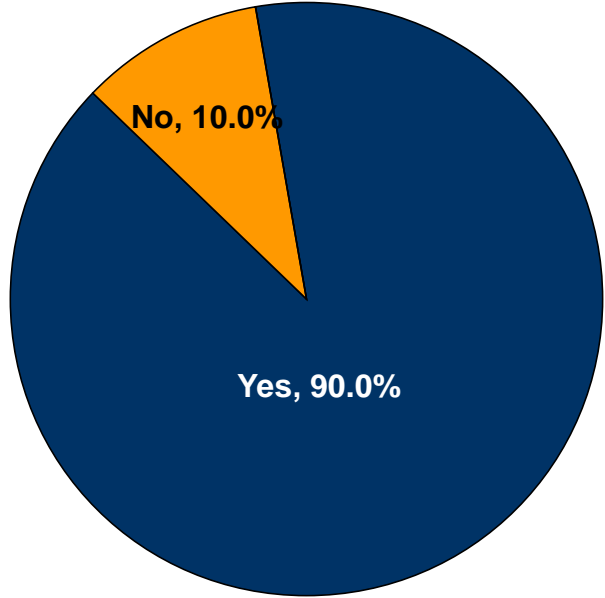
Food Access and Sufficiency

Food Sufficiency



(n=2003)

Access to Foods Wanted



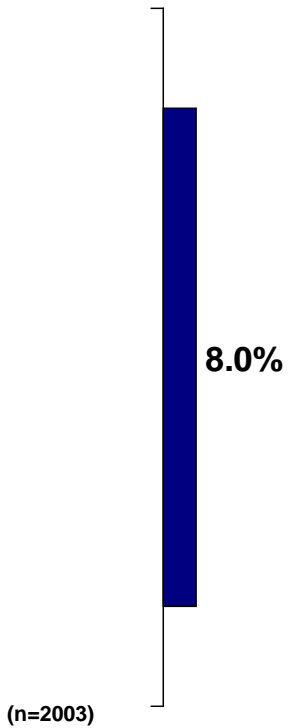
(n=1907)

Q17.1: Which of the following statements best describes the food eaten in your household within the last 12 months? Would you say that...  
Q17.2: Were these foods always the kinds of foods that you wanted to eat?

Among Ottawa County adults, the groups most likely to experience food insufficiencies are: younger (< age 35), Hispanic, those with less than a high school education, impoverished (incomes less than \$35K), and living in the central section.

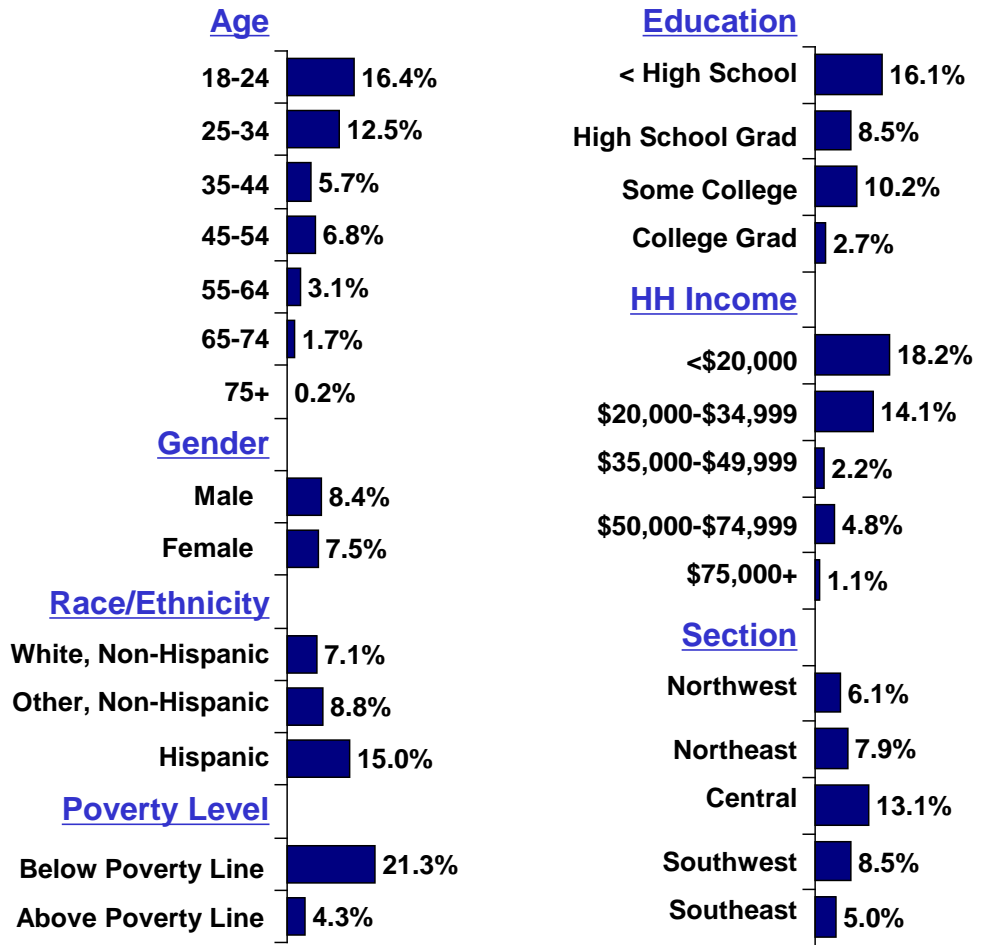
Food Sufficiency

Sometimes/Often Don't Have Enough to Eat\*  
(Total Sample)



\*Among all adults, the proportion who reported consuming five or more drinks per occasion (for men) or four or more drinks per occasion (for women) at least once in the previous month.

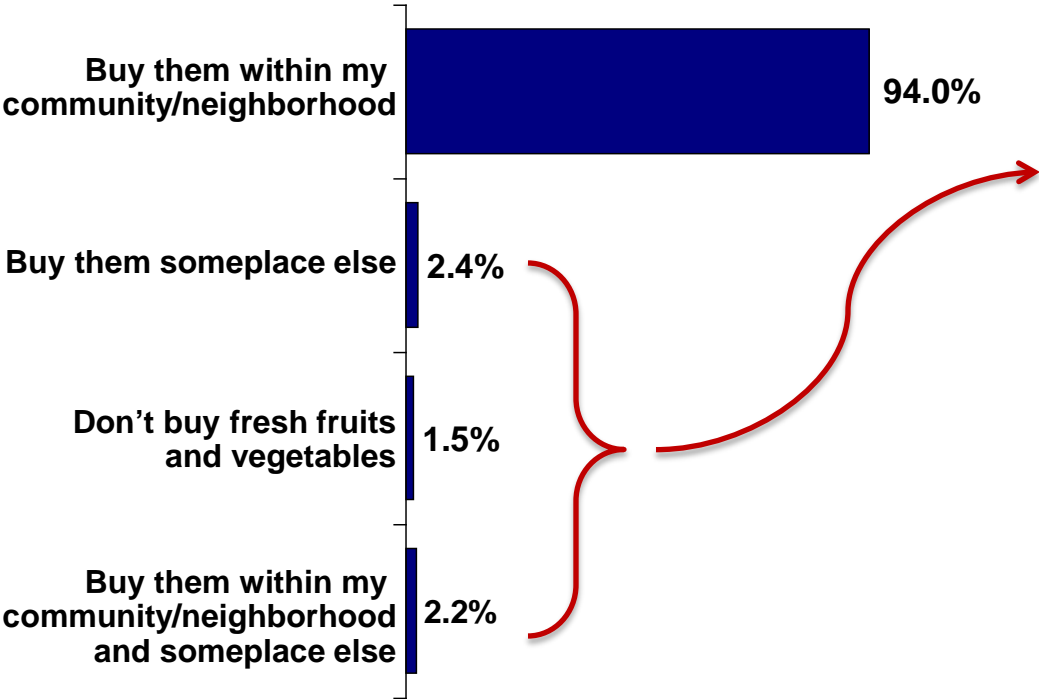
Sometimes/Often Don't Have Enough to Eat  
by Demographics



More than nine in ten adults (94.0%) say they purchase fresh fruits and vegetables within their community. Those who don't *prefer farmer's markets elsewhere*, feel *stores in their community have produce that is either too expensive or inferior quality*, or *do not have stores in their community that sell produce*.

Purchasing Fresh Fruits and Vegetables

Location of Fresh Fruits/  
Vegetables Purchased



(n=1995)

Reasons for Not Purchasing All  
Fresh Produce Locally



(n=84)

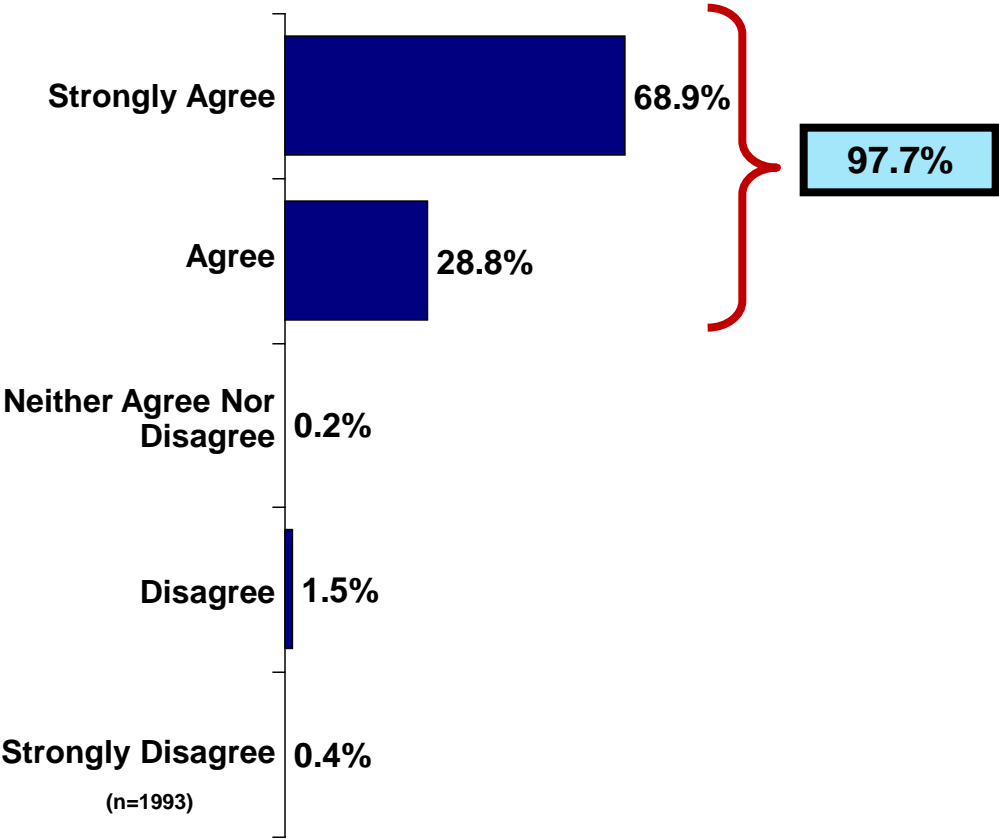
Q17.3: When you or someone in your household shops for fresh fruits and vegetables, would you say that...Which of the following statements best describes the food eaten in your household within the last 12 months? Would you say that...

Q17.4 What is the main reason you or someone in your household does not buy all your fresh fruits and vegetables within your community or neighborhood?



Nearly all (97.7%) report that fruits and vegetables are easy to find in their community or neighborhood.

Availability of Fruits and Vegetables in the Community

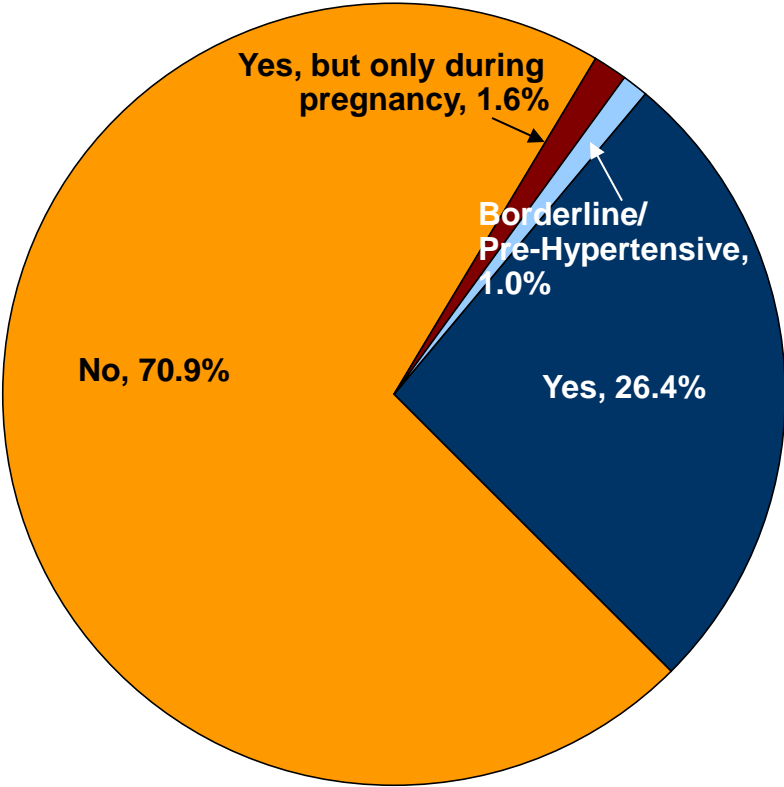


Q17.5: Please tell me how much you agree or disagree with the following statement. "It is easy to find fresh fruits and vegetables within your community or neighborhood."  
Would you say that you...

Just over a quarter (26.4%) of Ottawa County adults have been told by a health care professional they have high blood pressure (HBP). Among those who have HBP, 79.0% are currently taking medication for it.

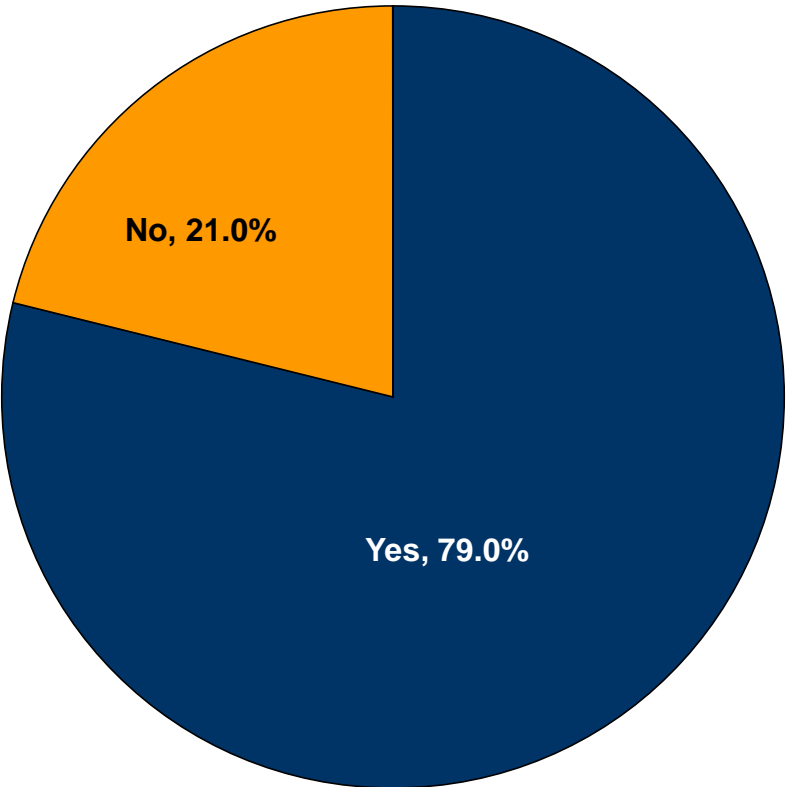
Hypertension Awareness

Ever Been Told You Have High Blood Pressure  
(Total Sample)



(n=2005)

Currently Taking Medication for HBP  
(Among Those Who Have Been Told They Have HBP)



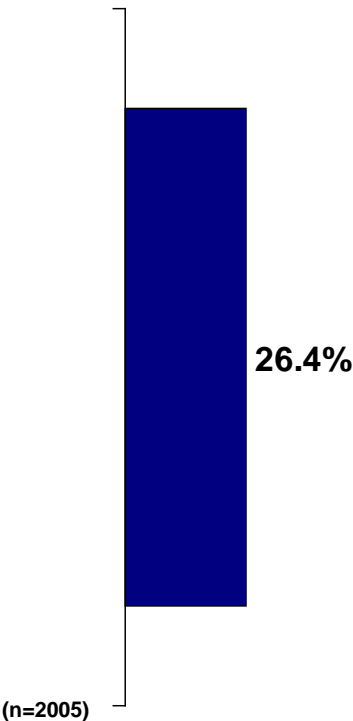
(n=741)

Q4.1: Have you EVER been told by a doctor, nurse, or other health professional that you have high blood pressure?  
Q4.2: (IF YES) Are you currently takin medicine for your high blood pressure?

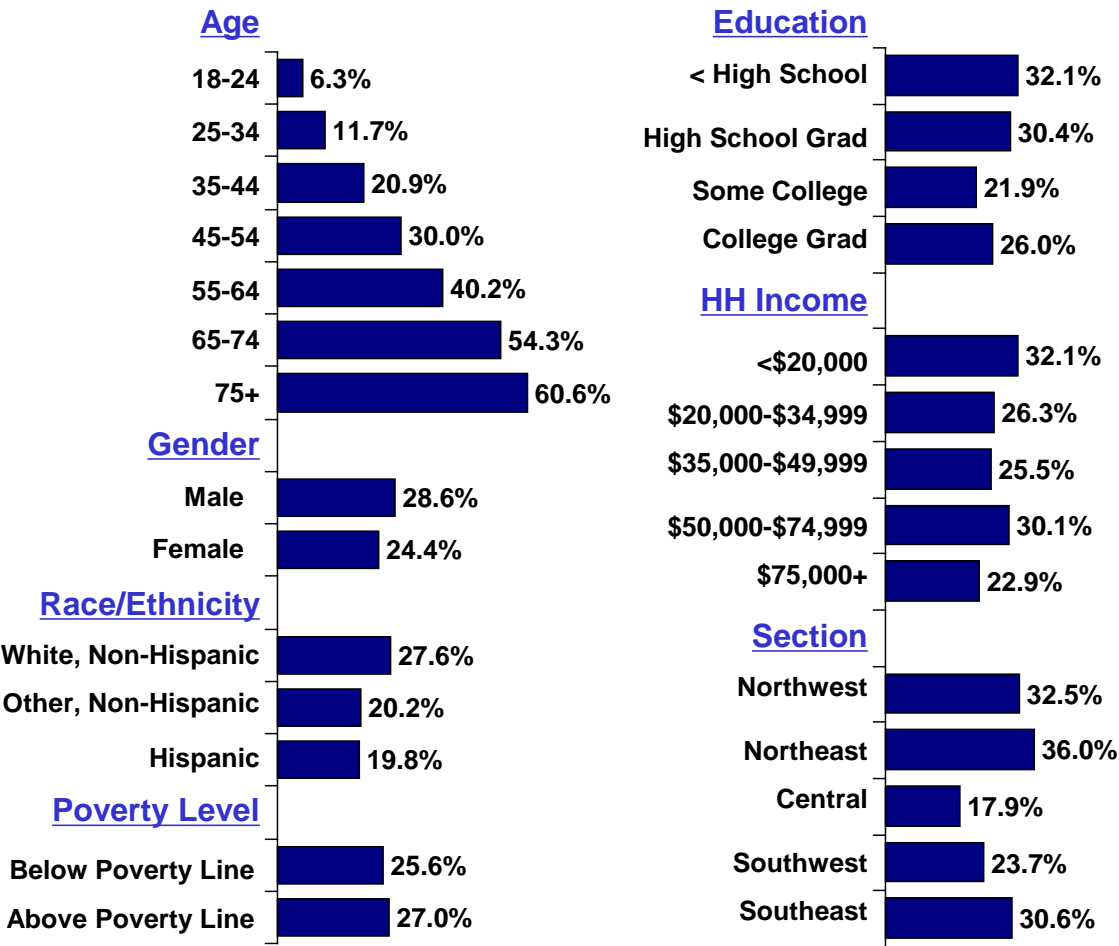
HBP is directly related to age. It is also more common in men and adults with no college education compared to women and college educated adults, respectively. Those least likely to have HBP: are Hispanic or non-White, are under age 45, have annual incomes of \$75K+, and live in central Ottawa County.

Hypertension Awareness

Ever Told Had High Blood Pressure (HBP)\*  
(Total Sample)



Ever Told HBP by Demographics



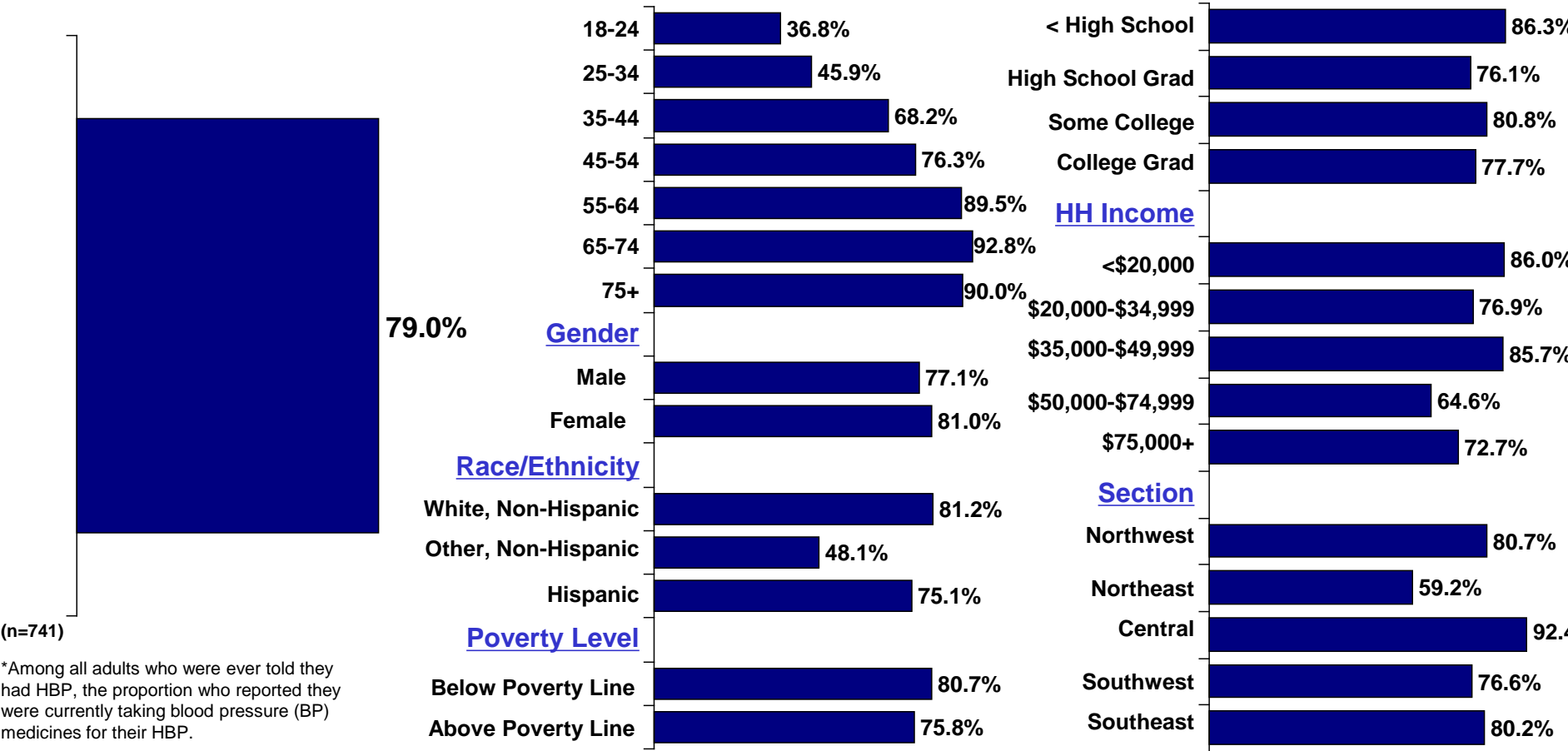
\*Among all adults, the proportion who reported that they were ever told by a health care professional that they have high blood pressure (HBP). Women who had high blood pressure only during pregnancy and adults who were borderline hypertensive were considered not to have been diagnosed.

Ottawa County adults most likely to take medication for their HBP are: 55 years or older, without a high school diploma, from households with incomes <\$20K, and living in the central section of the county.

Hypertension Awareness

Currently Take Medication for High Blood Pressure (HBP)\*  
(Total Sample)

Currently Take Medication for HBP  
by Demographics

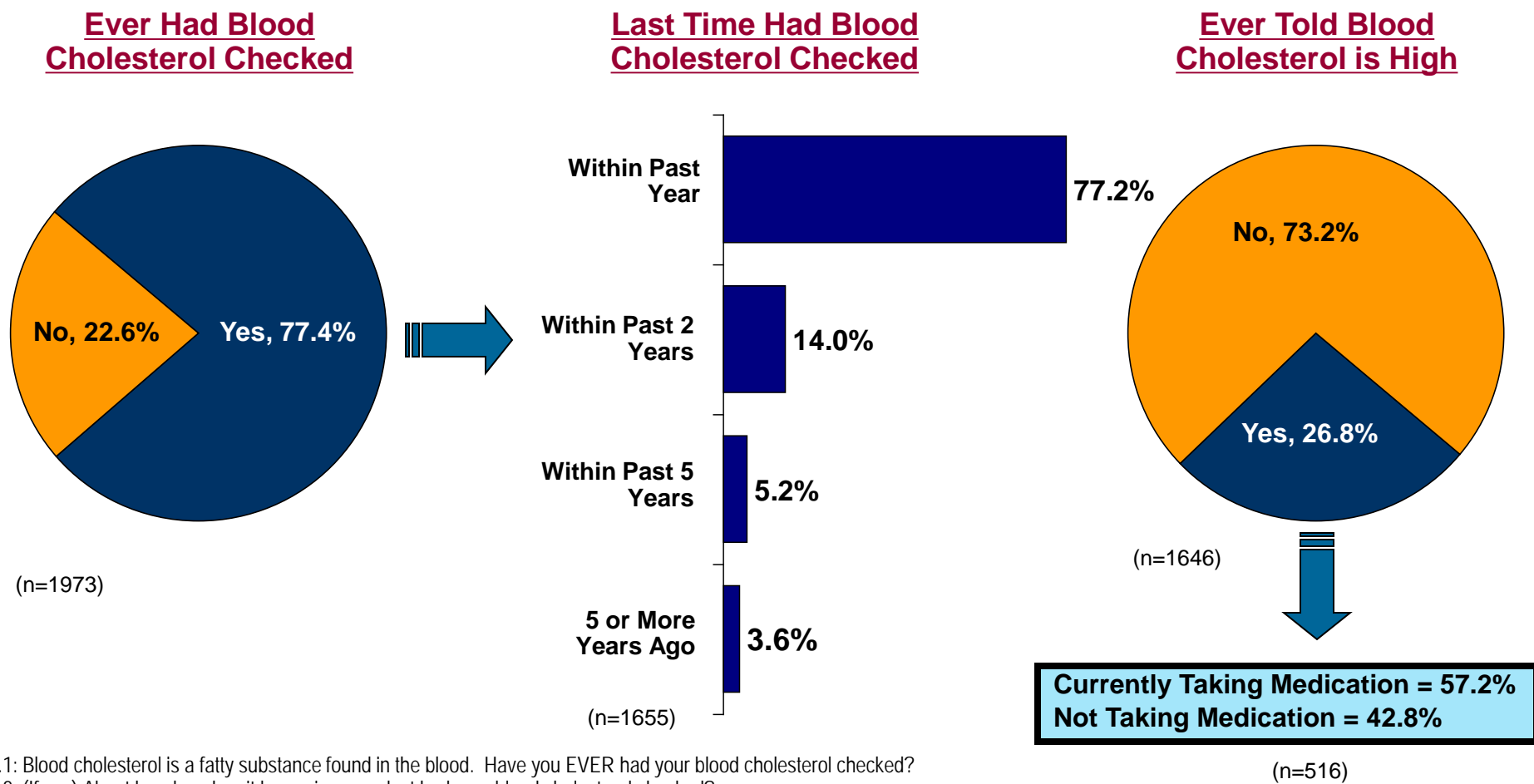


# ***Clinical Preventative Practices***

---

More than three-quarters (77.4%) of Ottawa County adults have had their cholesterol checked, and a large majority of them have had it done within the past year. Roughly one-fourth (26.8%) of them have been told by a health care professional that their cholesterol is high. Of these, slightly more than half (57.2%) are currently taking medication to lower their cholesterol.

Cholesterol Awareness

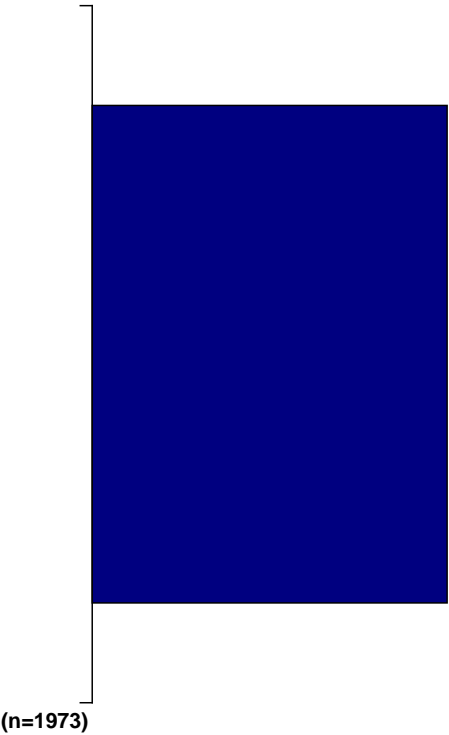


Q5.1: Blood cholesterol is a fatty substance found in the blood. Have you EVER had your blood cholesterol checked?  
Q5.2: (If yes) About how long has it been since you last had your blood cholesterol checked?  
Q5.3: (If yes) Have you EVER been told by a doctor, nurse or other health care professional that your blood cholesterol is high?  
Q5.4: (If yes) Are you currently taking medicine for your high cholesterol?

The largest proportions of Ottawa County adults most likely to have had their cholesterol checked are found among those age 35+, above the poverty line, who have annual incomes of \$50K+, and those who are college educated.

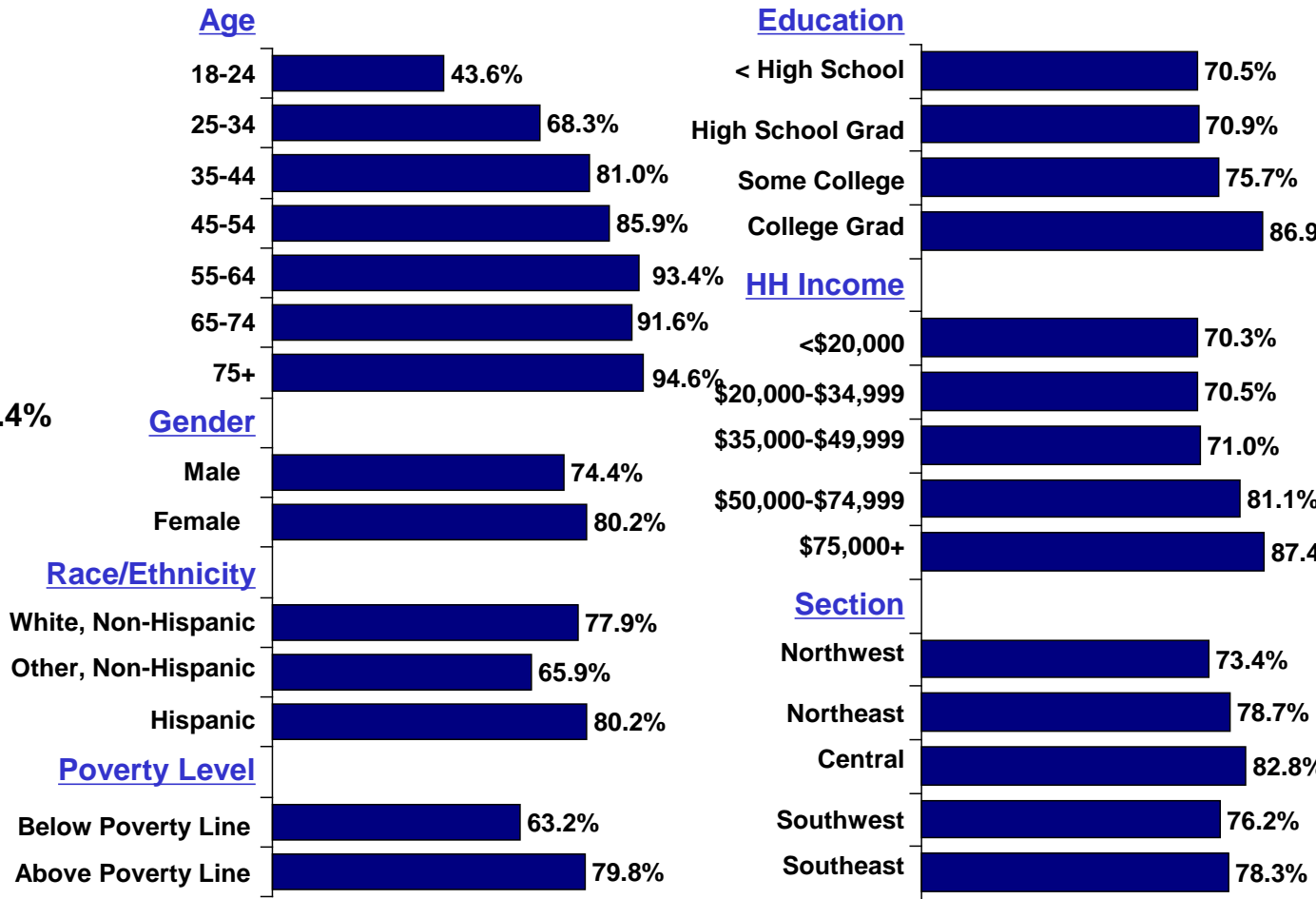
**Cholesterol Awareness**

**Ever Had Blood Cholesterol Checked\***  
**(Total Sample)**



\*Among all adults, the proportion who reported having had their blood cholesterol checked.

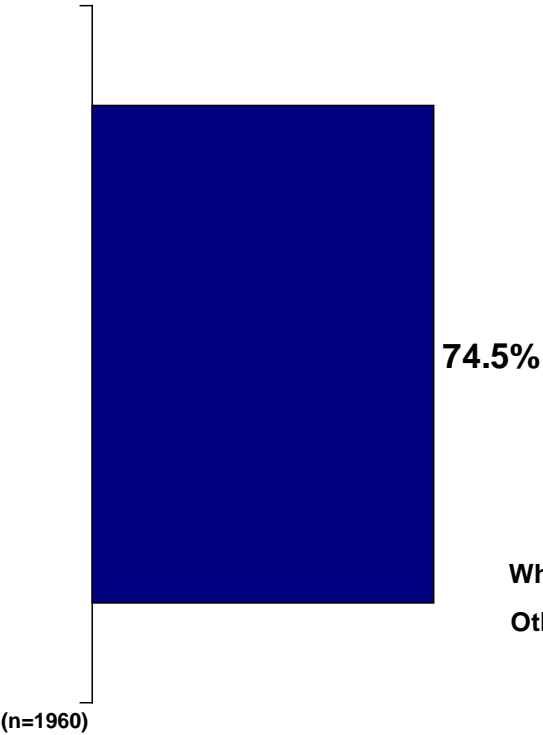
**Ever Had Blood Cholesterol Checked**  
**by Demographics**



Similarly, Ottawa County adults most likely to have their cholesterol checked within the past five years are: age 45+, living above the poverty line, in households with annual incomes of \$50K+, and college educated.

Cholesterol Awareness

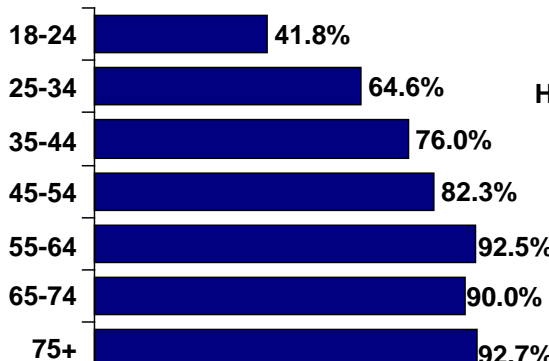
Had Blood Cholesterol Checked  
Within Past Five years\*  
(Total Sample)



\*Among all adults, the proportion who reported they have had their blood cholesterol checked within the past five years.

Had Blood Cholesterol Checked Within Past Five  
Years by Demographics

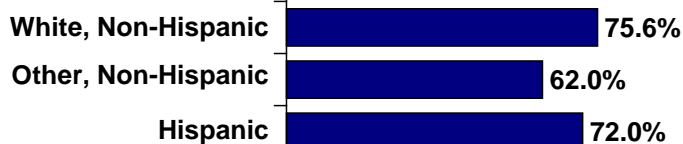
Age



Gender



Race/Ethnicity



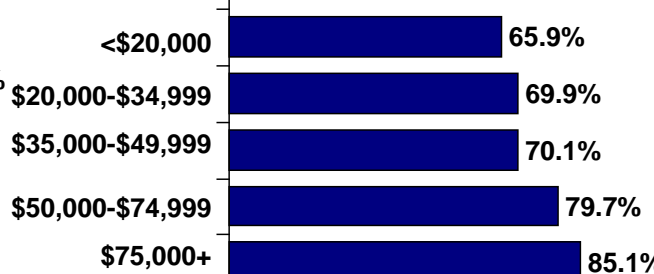
Poverty Level



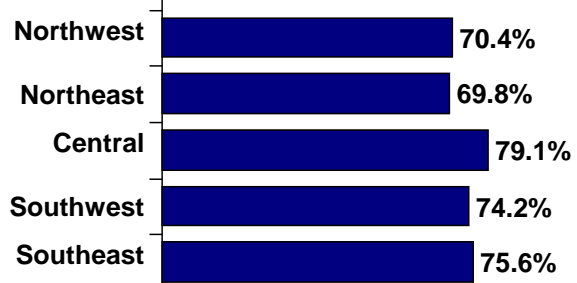
Education



HH Income



Section

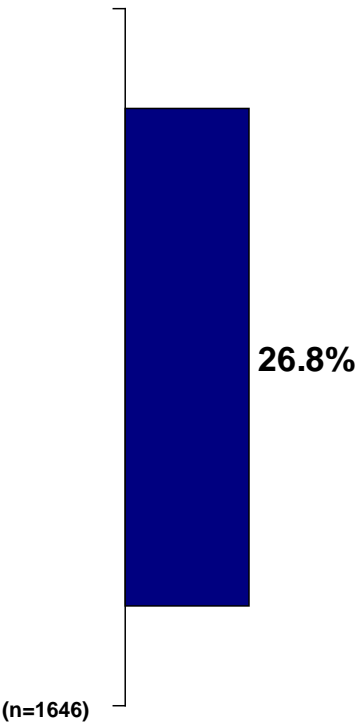




Ottawa County adults least likely to have high cholesterol are: under age 35, (2) non-Hispanic minorities, (3) living in households with annual incomes of \$50K+, and living in the central or northeast sections of the county.

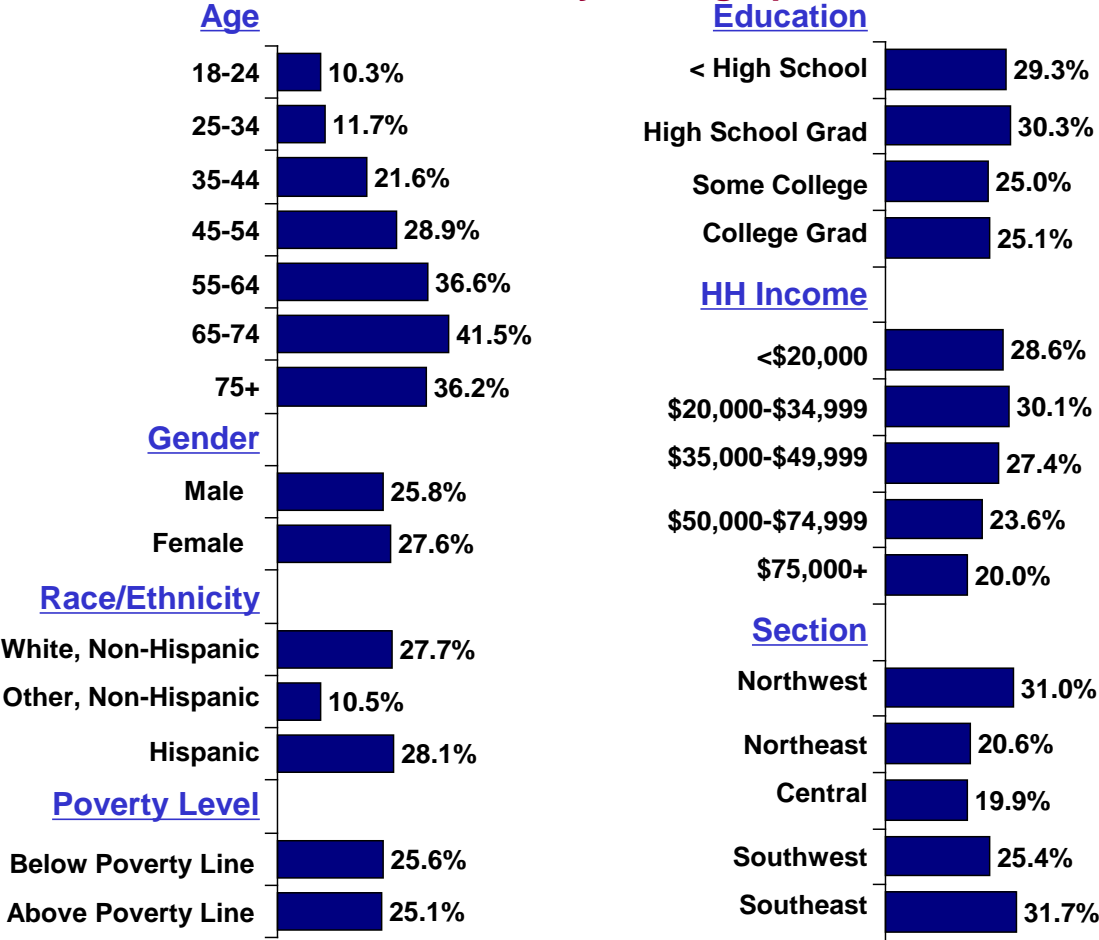
**Cholesterol Awareness**

**Ever Told Blood Cholesterol High\***  
**(Total Sample)**



\*Among adults who ever had their blood cholesterol checked, the proportion who reported that a doctor, nurse, or other health professional has told them that their cholesterol was high.

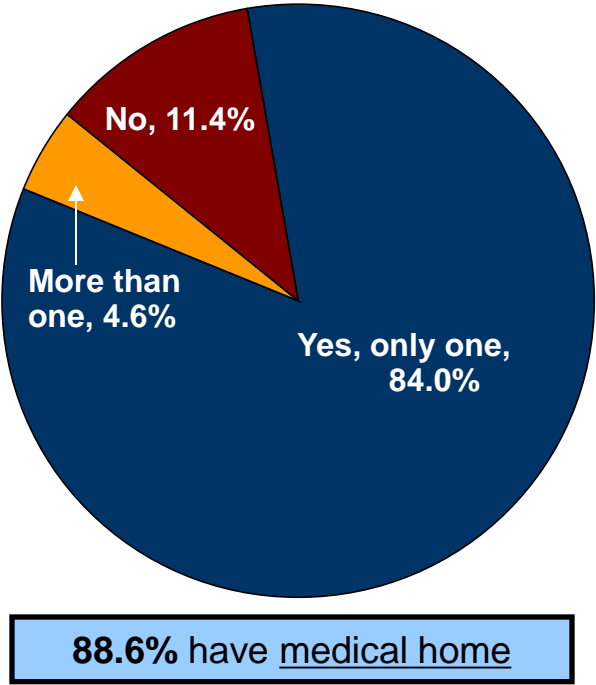
**Ever Told Blood Cholesterol High**  
**by Demographics**



Nearly nine in ten adults (88.6%) have a medical home (personal physician) and eight in ten (80.1%) have visited a physician for a routine checkup within the past year.

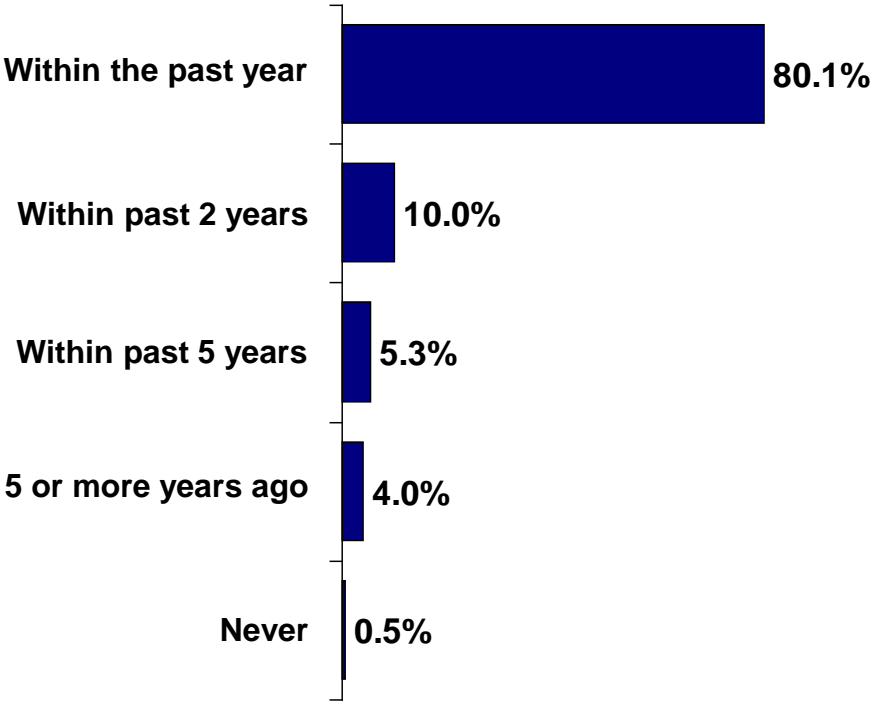
Personal Physician and Routine Checkups

Currently Have Personal Doctor/Health Care Provider



(n=2001)

Last Time Visited Doctor for Routine Checkup



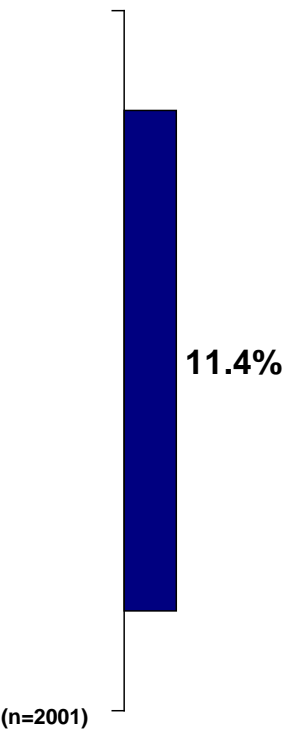
(n=1998)

Q3.3: Do you have one person you think of as your personal doctor or health care provider?  
Q3.6: About how long has it been since you last visited a doctor for a routine checkup? A routine checkup is a general physical exam, not an exam for a specific injury, illness, or condition.

More than one in ten (11.4%) Ottawa County adults have no medical home (no personal health care provider). Those least likely to have a medical home are younger (aged 18-34), male, non-White, and have not graduated from high school.

Personal Health Care Provider

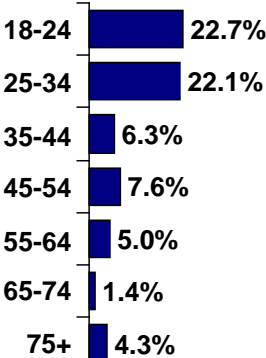
No Personal Health Care Provider\*  
(Total Sample)



\*Among all adults, the proportion who reported that they did not have anyone that they thought of as their personal doctor or health care provider.

No Provider by Demographics

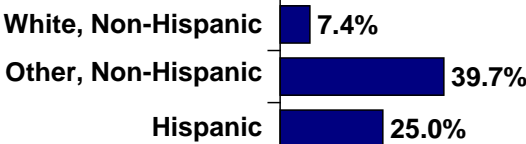
Age



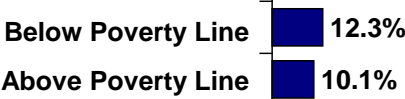
Gender



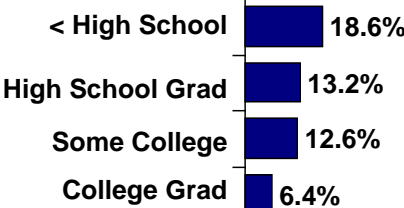
Race/Ethnicity



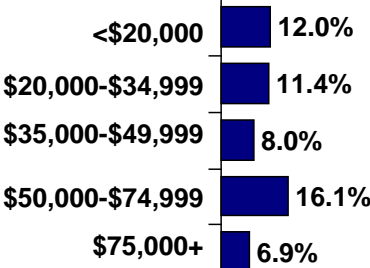
Poverty Level



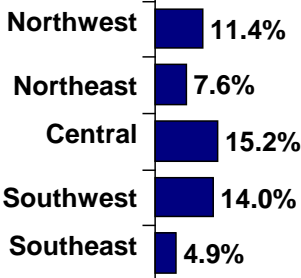
Education



HH Income



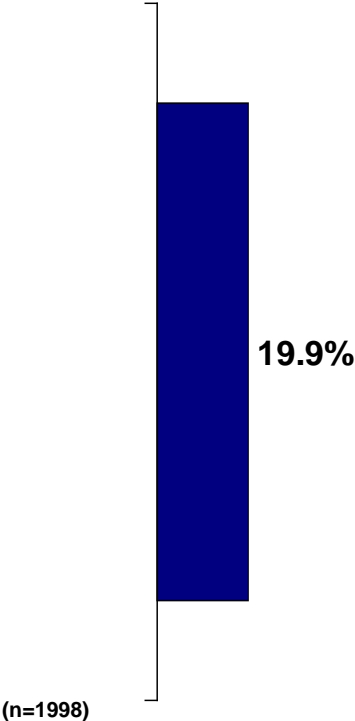
Section



One in five (19.9%) adults in Ottawa County have had no routine physical checkup in the past year. Having a timely routine physical checkup is directly related to age and associated with having a college degree. Non-Whites and men are less likely to have a timely physical exam compared to Whites and women, respectively.

Routine Physical Checkup in Past Year

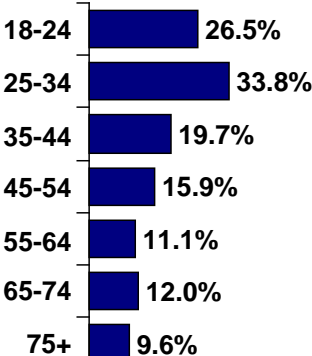
No Routine Physical Checkup in Past Year\*  
(Total Sample)



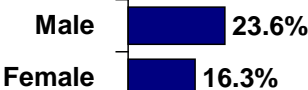
\*Among all adults, the proportion who reported that they did not have a routine checkup in the past year.

No Checkup by Demographics

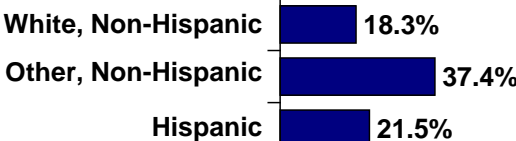
Age



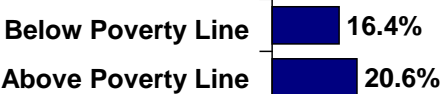
Gender



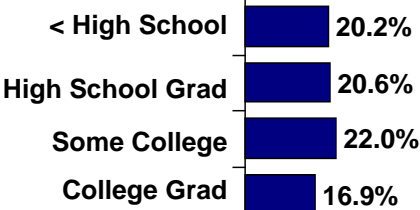
Race/Ethnicity



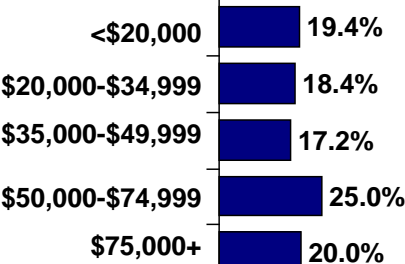
Poverty Level



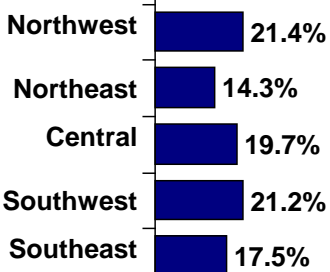
Education



HH Income



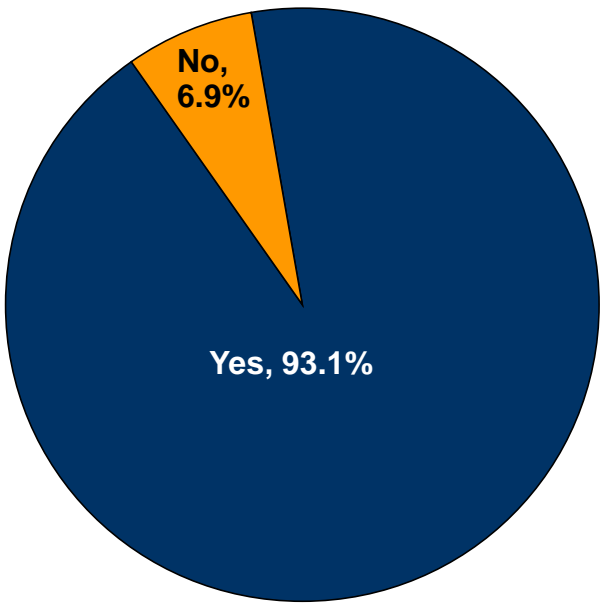
Section



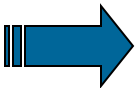
More than nine in ten (93.1%) Ottawa County women aged 40+ have had a mammogram to screen for breast cancer. Of those, the vast majority (71.8%) have had one within the past year. Of all women aged 40+, 66.8% have had a mammogram in the past year.

Breast Cancer Screening Among Adult Females Aged 40+

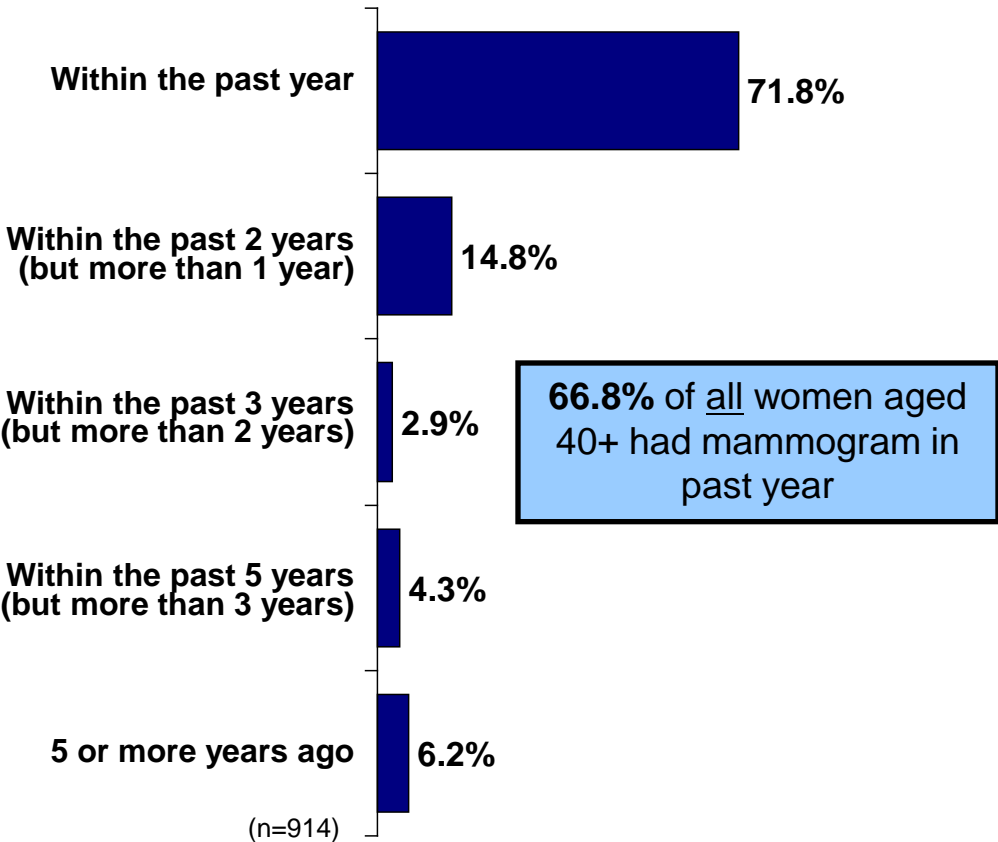
Have Had a Mammogram



(n=988)



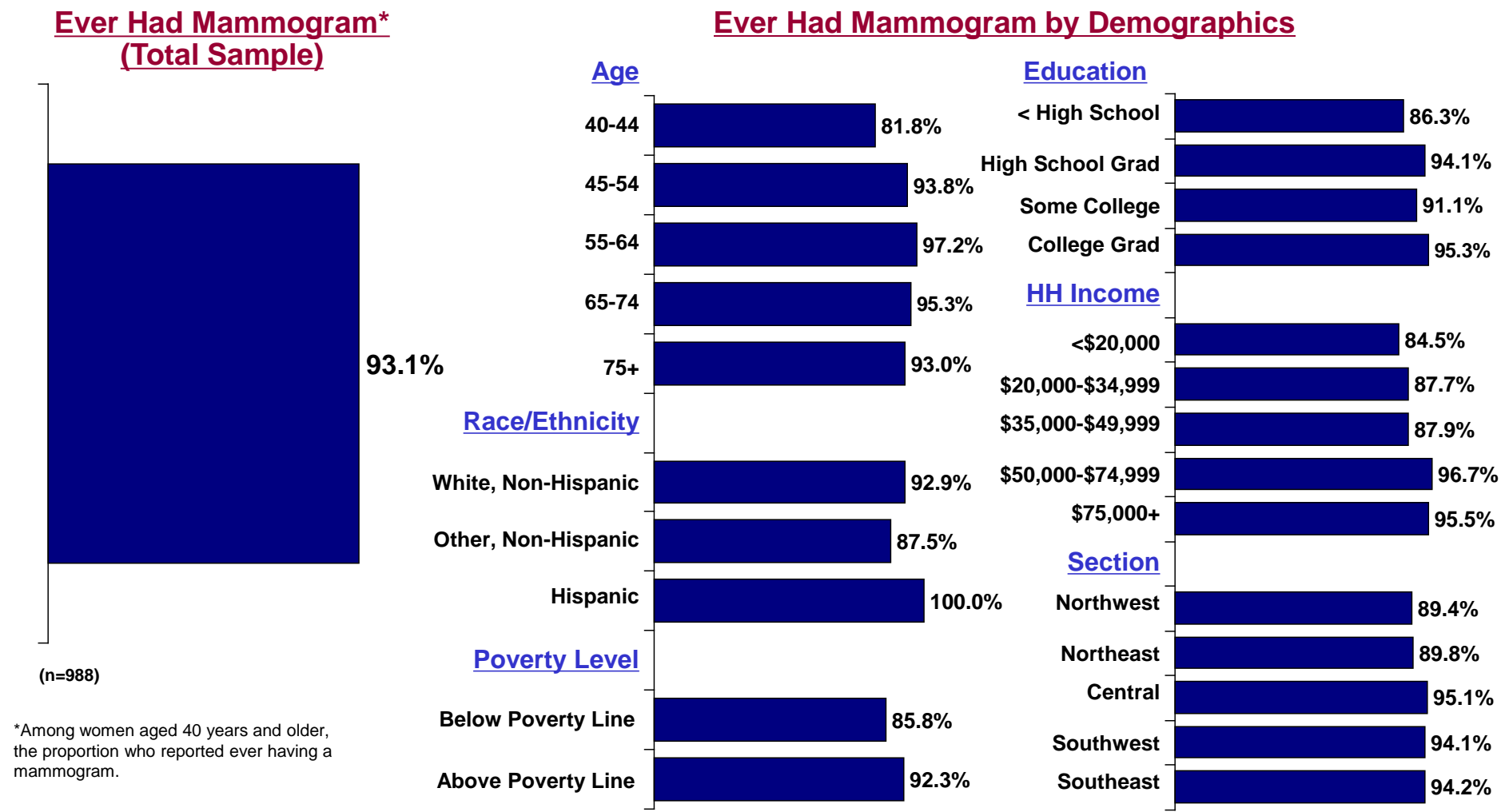
Last Time Had Mammogram



Q6.1: A mammogram is an x-ray of each breast to look for breast cancer. Have you ever had a mammogram?  
Q6.2: (If yes) How long has it been since you had your last mammogram?

Since most women 40 years of age or older in Ottawa County have had a mammogram at some point, there is very little difference among demographic groups.

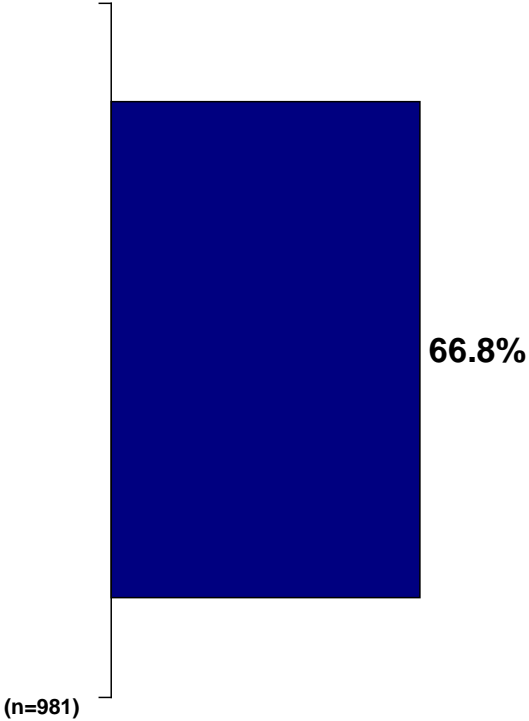
Mammography Indicators Among Women Aged 40 Years or Older



Having a timely mammogram is directly related to household income; 55.9% of women from households with incomes less than \$20K have had a mammogram within the past year, compared to 75.1% of women in households with incomes \$75K+. Education is also strongly associated with a timely mammogram, as women with less than a high school education are least likely to have a timely mammogram and women with a college degree are most likely.

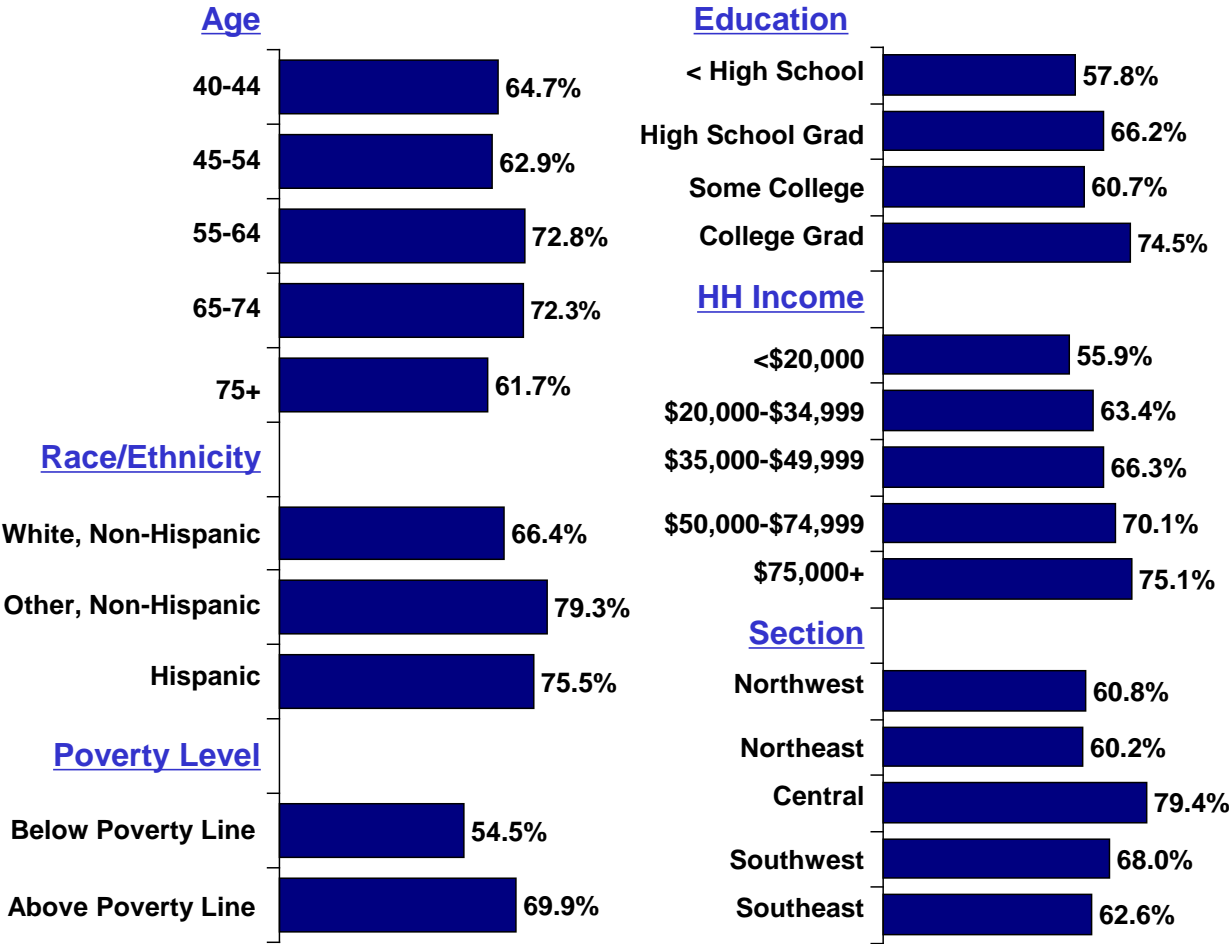
Mammography Indicators Among Women Aged 40 Years or Older (Cont'd.)

Had Mammogram in Past Year\*  
(Total Sample)



\*Among women aged 40 years and older, the proportion who reported having a mammogram in the past year.

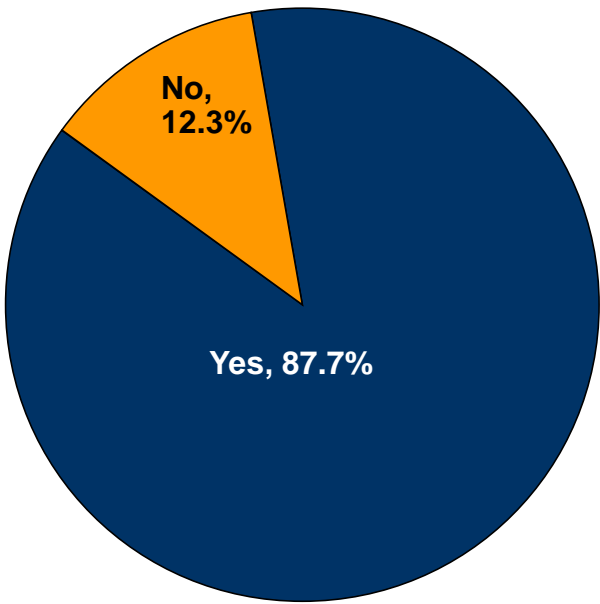
Had Mammogram in Past Year by Demographics



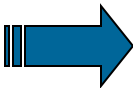
Almost nine in ten (87.7%) Ottawa County adult women have had a Pap test to screen for cervical cancer. Of those, half have had one within the past year and 81.3% have had one in the past three years. Of all adult women, 71.2% have had a Pap test within the past three years.

Cervical Cancer Screening Among Adult Females

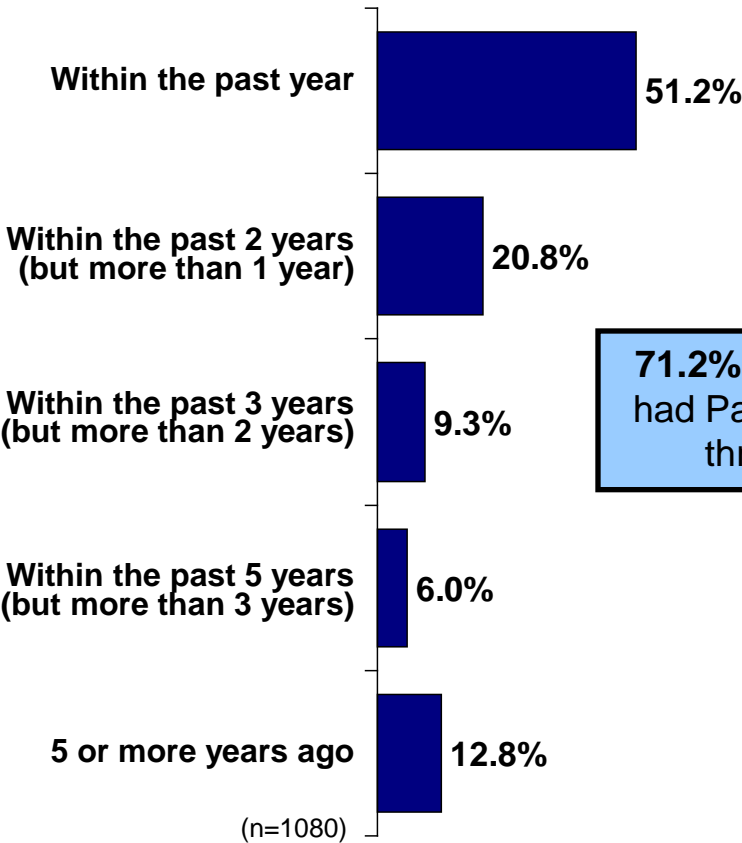
Have Had a Pap Test



(n=1235)



Last Time Had Pap Test



(n=1080)

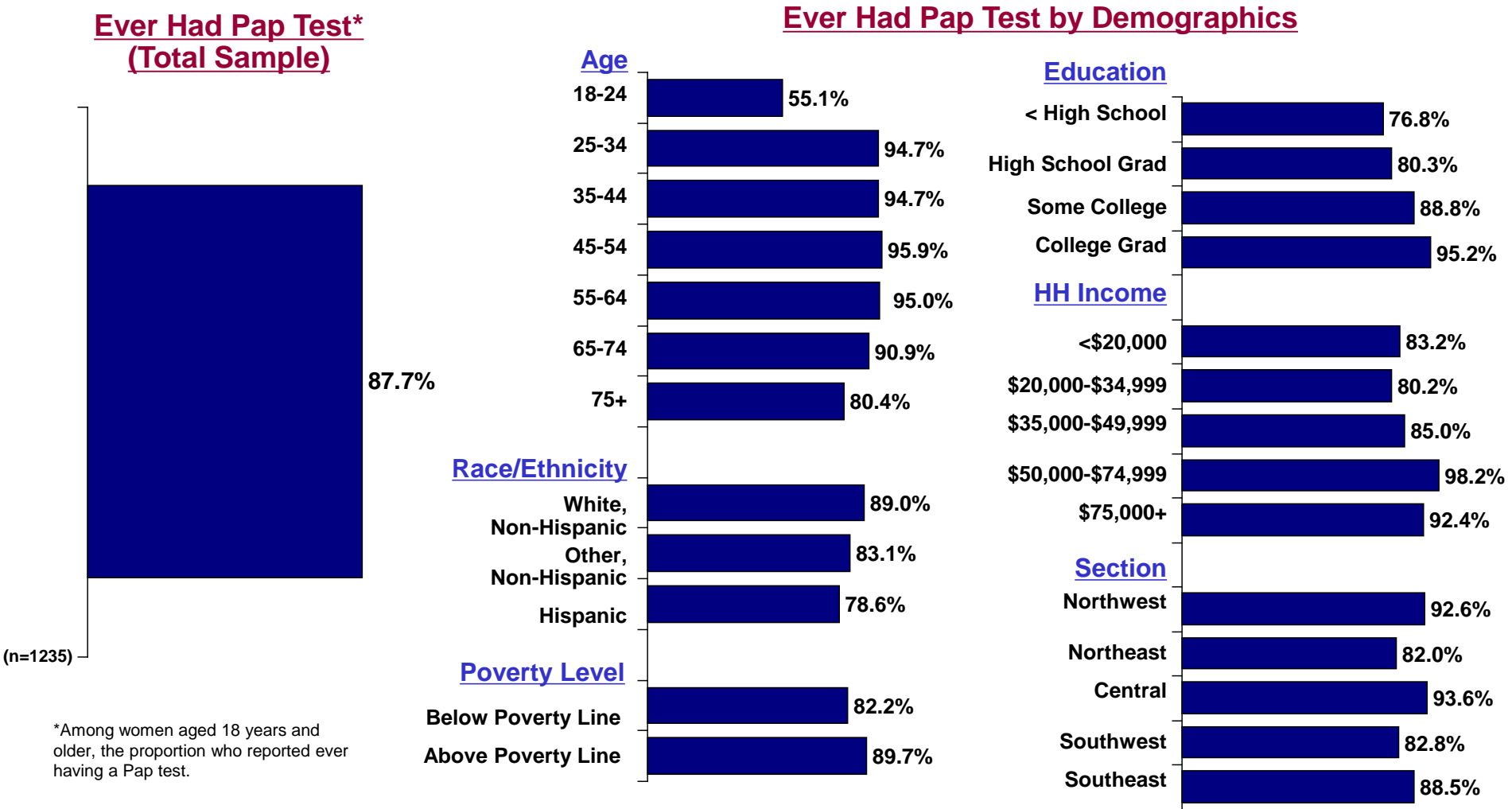
71.2% of all women had Pap test in past three years

Q6.3: A Pap test is a test for cancer of the cervix. Have you ever had a Pap test?  
Q6.4:(If yes) How long has it been since you had your last Pap test?



Pap test rates are lowest among women aged 18-24 and those with less than a high school degree. Rates are highest among college graduates and those with household incomes \$50K or more.

Cervical Cancer Screening

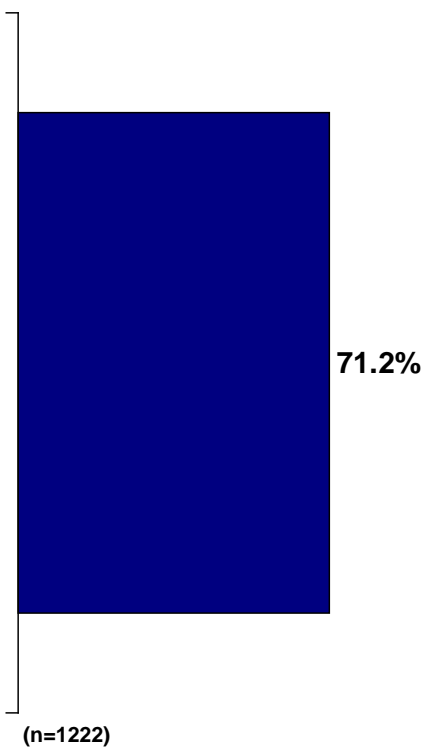


\*Among women aged 18 years and older, the proportion who reported ever having a Pap test.

Adult women least likely to have appropriately timed (within past three years) Pap tests are in the youngest (18-24) and oldest (65+) ages groups and/or are non-Hispanic minorities. Further, having an appropriately timed Pap test is directly related to education and income.

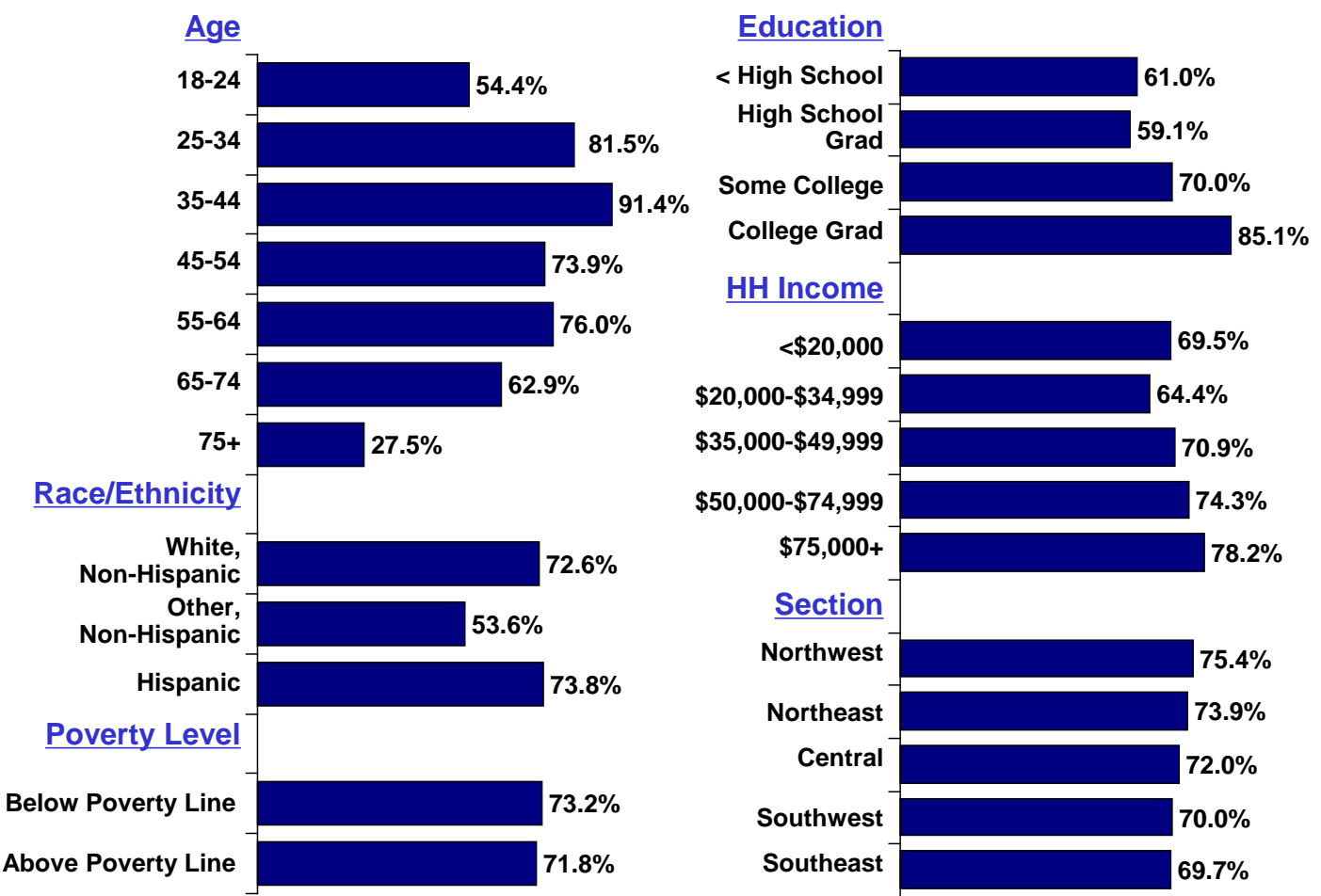
Cervical Cancer Screening (Cont'd.)

Had Appropriately Timed Pap Test\*  
(Total Sample)



\*Among women aged 18 years and older, the proportion who reported having a pap test within the previous three years..

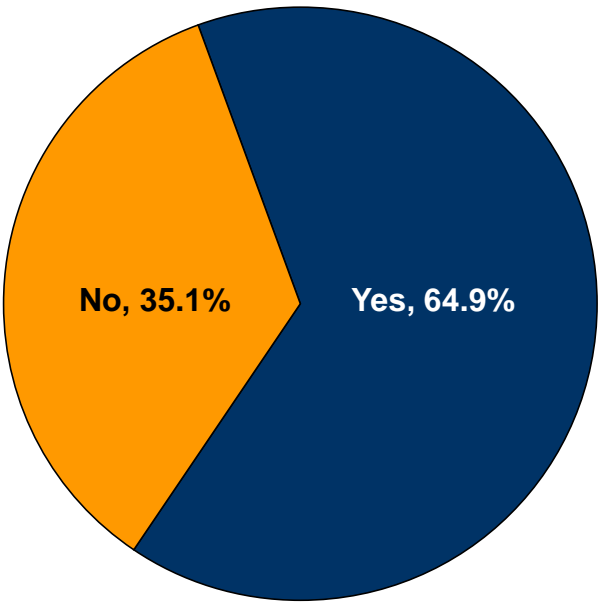
Appropriately Timed Pap Test by Demographics



More than six in ten Ottawa County males aged 50 or more have had a doctor recommend a prostate screening test such as PSA and a comparable proportion have actually received the test.

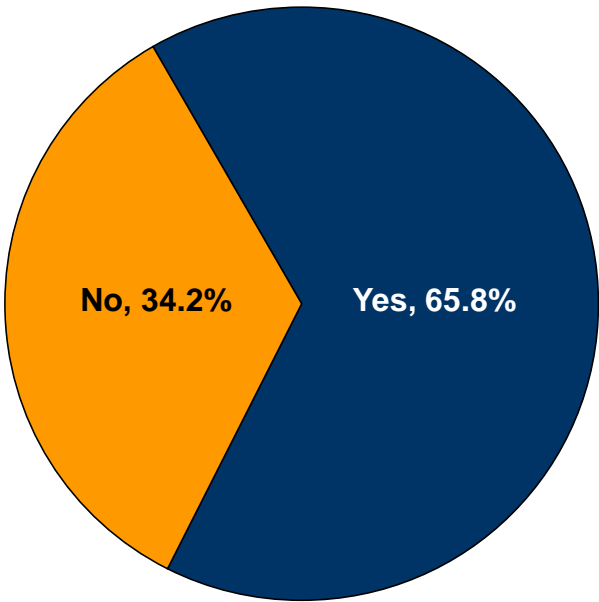
Prostate Cancer Screening Among Adult Males Aged 50+

PSA Test Ever Recommended



(n=422)

Ever Had PSA Test

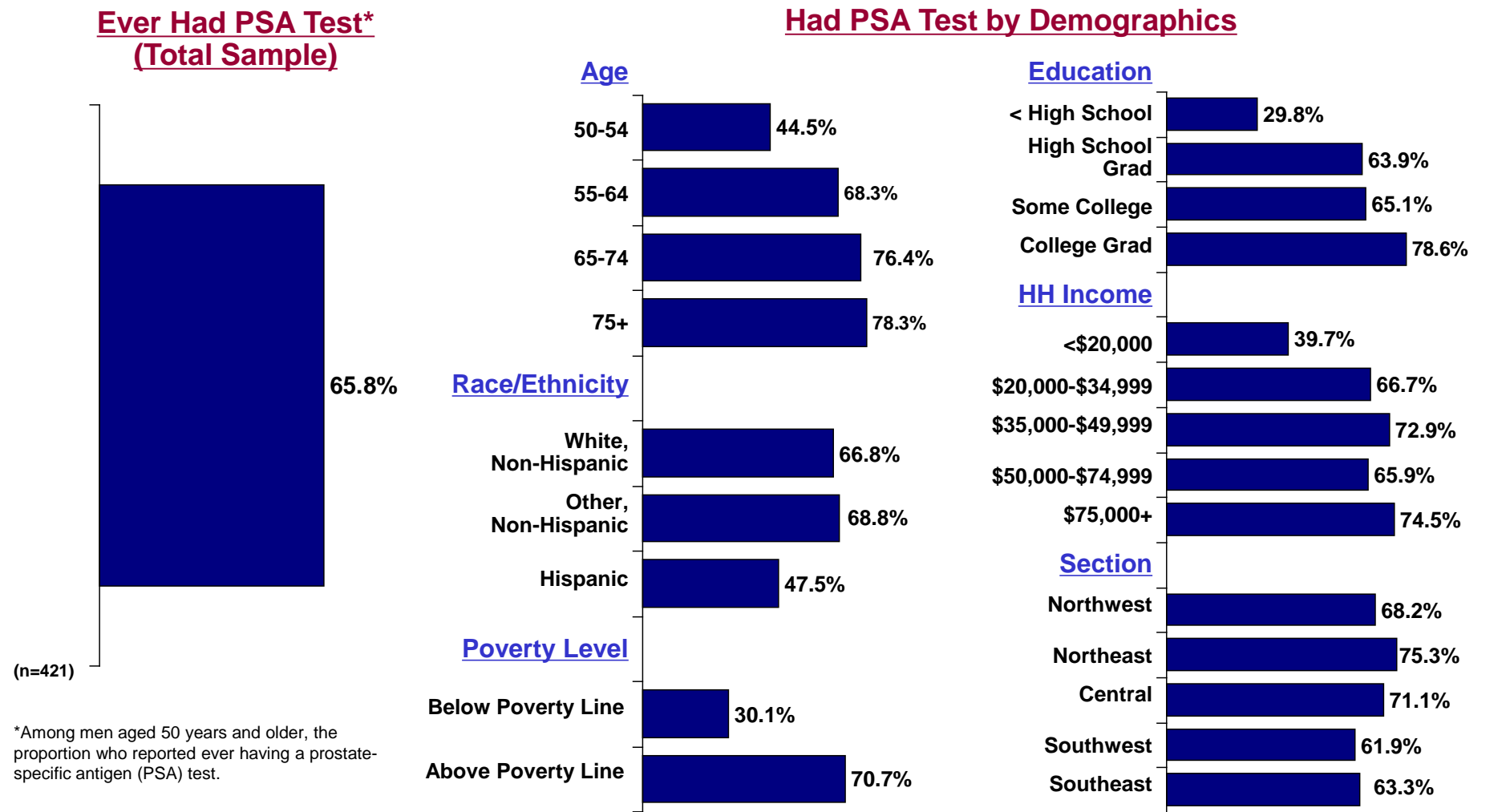


(n=421)

Q7.1: A prostate-specific antigen test, also called a PSA test, is a blood test used to check men for prostate cancer. Has a doctor EVER recommended that you have a PSA test?  
Q7.2: Have you EVER had a PSA test?

Two-thirds (65.8%) of men in Ottawa County aged 50 years or older have had a PSA test screening for prostate cancer. The rate falls to three in ten among men below the poverty line men and those with less than a high school education. Further, Hispanic men are less likely to get a PSA test than non-Hispanic men.

Prostate Cancer Screening Among Men Aged 50 Years and Older

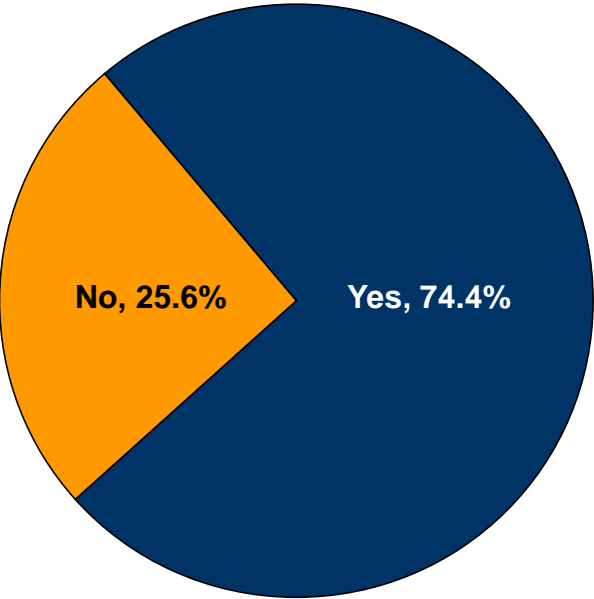


\*Among men aged 50 years and older, the proportion who reported ever having a prostate-specific antigen (PSA) test.

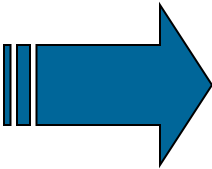
Three-fourths (74.4%) of Ottawa County adults aged 50 or more have had an exam to screen for colon cancer. Six in ten (62.5%) of those who have had an exam have had one in the past three years, while 83.6% have had one within the past five.

Colorectal Cancer Screening Among Adults Aged 50+

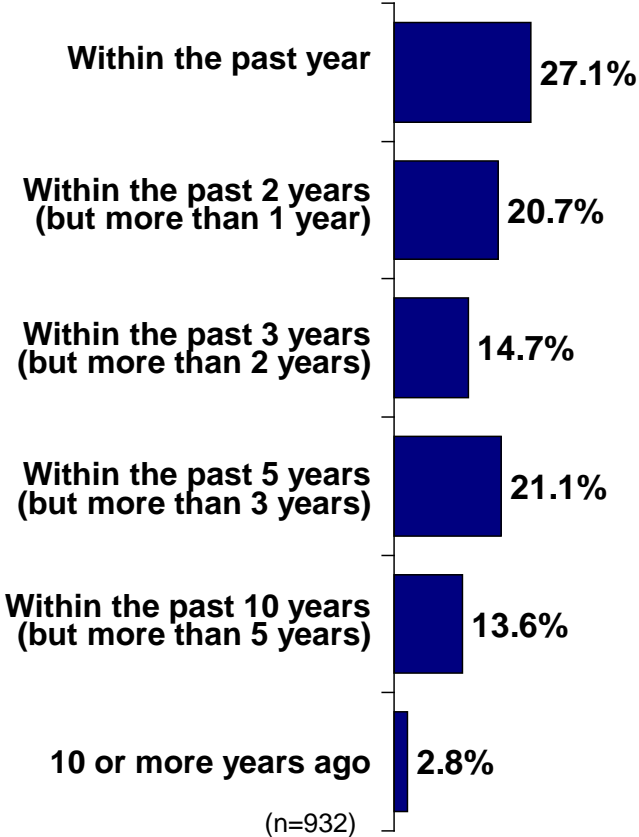
Have Had Sigmoidoscopy or  
Colonoscopy Exam



(n=1212)



Last Time Had Exam



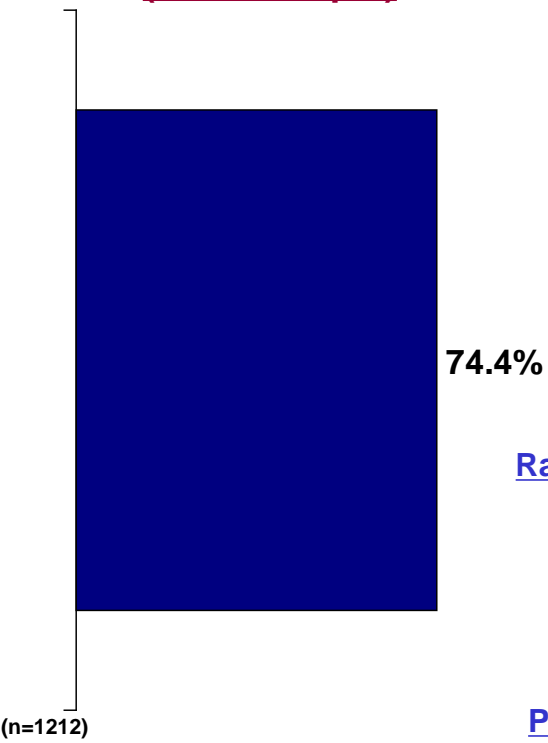
(n=932)

Q8.1: Sigmoidoscopy and colonoscopy are exams in which a tube is inserted in the rectum to view the colon for signs of cancer or other health problems. Have you ever had either of these exams?  
Q8.2: How long has it been since you had your last sigmoidoscopy or colonoscopy?

Demographic groups least likely to be screened for colorectal cancer are: people aged 50-54, Hispanic, those with less than a high school degree, and those living below the poverty line. Screening for colorectal cancer is directly related to income.

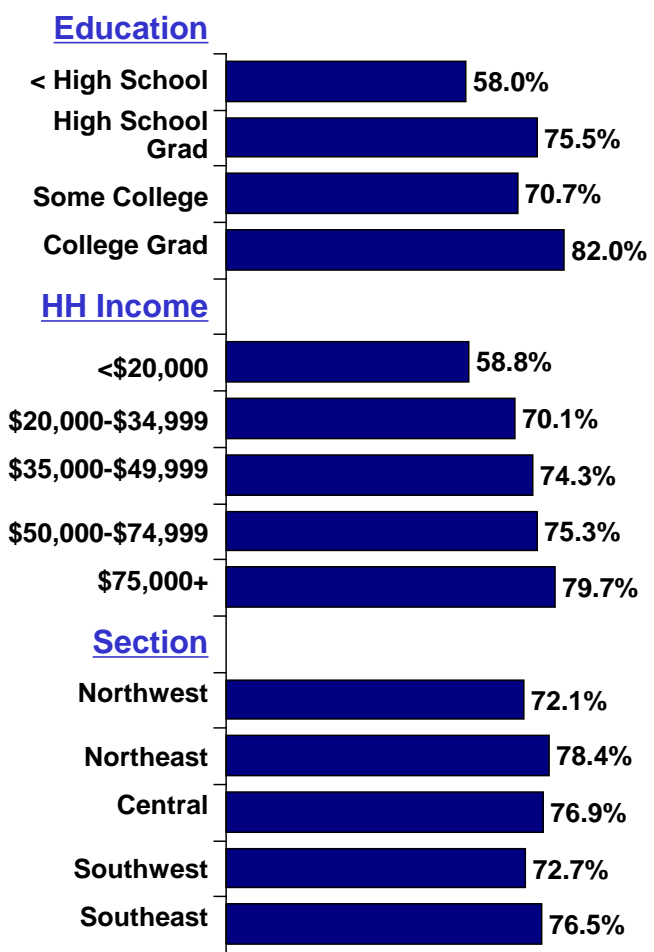
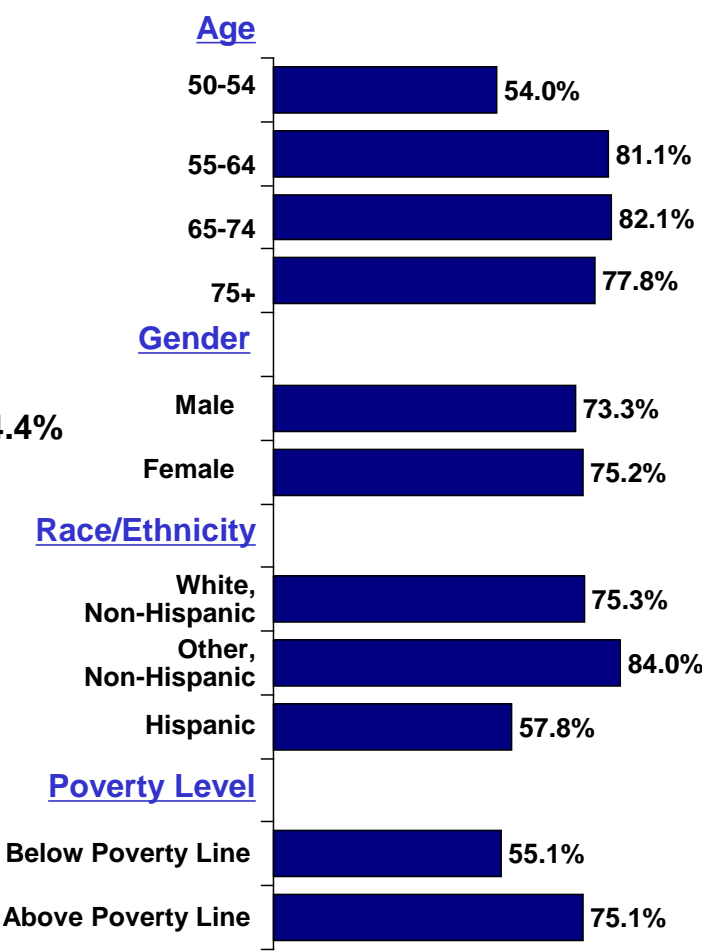
**Colorectal Cancer Screening (Sigmoidoscopy/Colonoscopy) Among Adults Aged 50 Years and Older**

**Ever Had Sigmoidoscopy or Colonoscopy\* (Total Sample)**



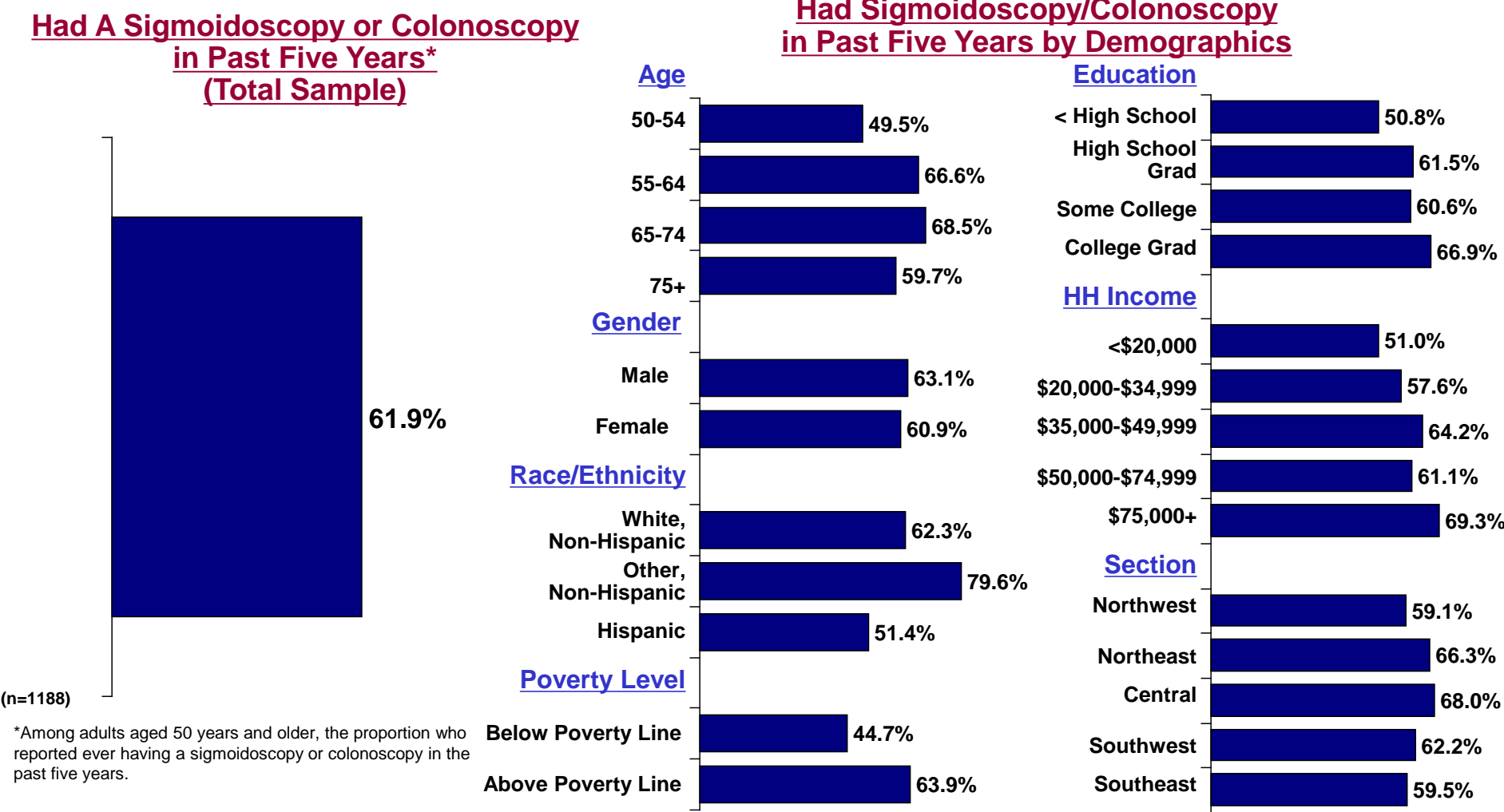
\*Among adults aged 50 years and older, the proportion who reported ever having a sigmoidoscopy or colonoscopy.

**Had Sigmoidoscopy/Colonoscopy by Demographics**



When looking at all adults aged 50 or older, six in ten (61.9%) have been screened for colorectal cancer in the past five years. Least likely to have been screened in the past five years are: people aged 50-54, Hispanic, those with less than a high school degree, from households with annual incomes less than \$20K, and living below the poverty line. Again, having been screened in a timely manner is directly related to income.

**Colorectal Cancer Screening (Sigmoidoscopy/Colonoscopy) Among Adults Aged 50 Years and Older (Cont'd.)**

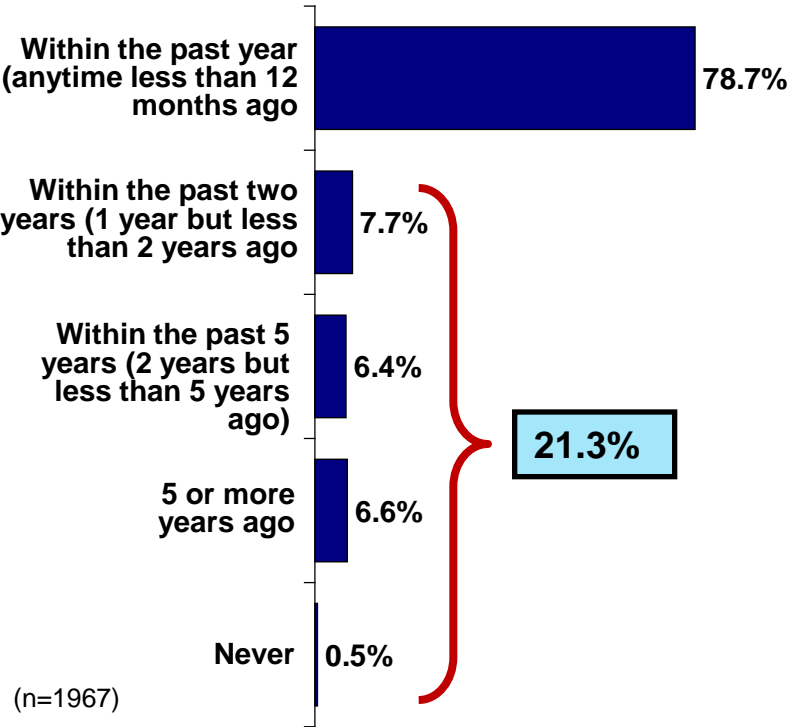


\*Among adults aged 50 years and older, the proportion who reported ever having a sigmoidoscopy or colonoscopy in the past five years.

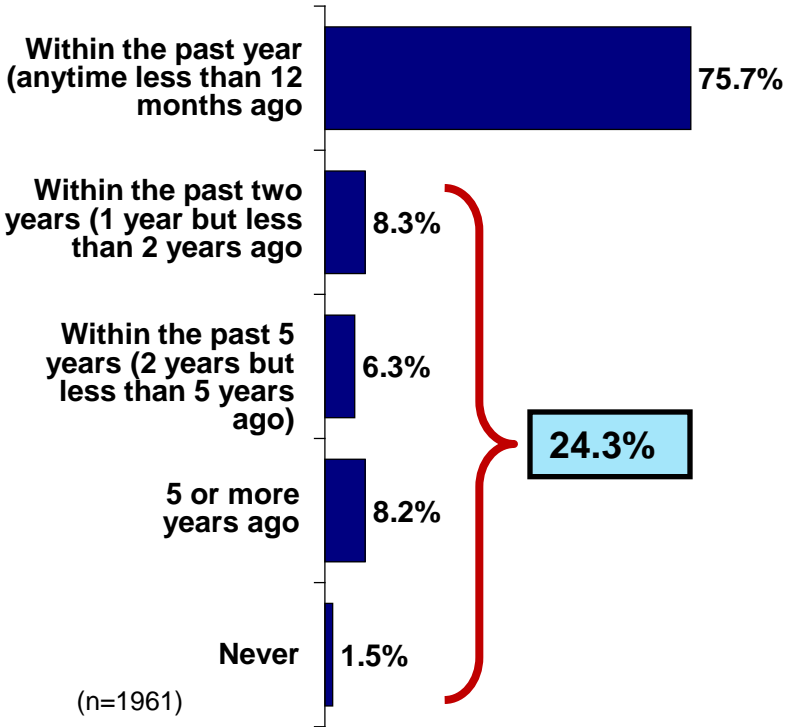
More than three-fourths of Ottawa County adults have visited a dentist or dental specialist in the past year. However, one-fourth (24.3%) are not exercising preventive oral health care, in other words, have not visited the dentist in the past year for a teeth cleaning.

Oral Health

When Last Visited Dentist for Any Reason



When Last Visited Dentist for Teeth Cleaning



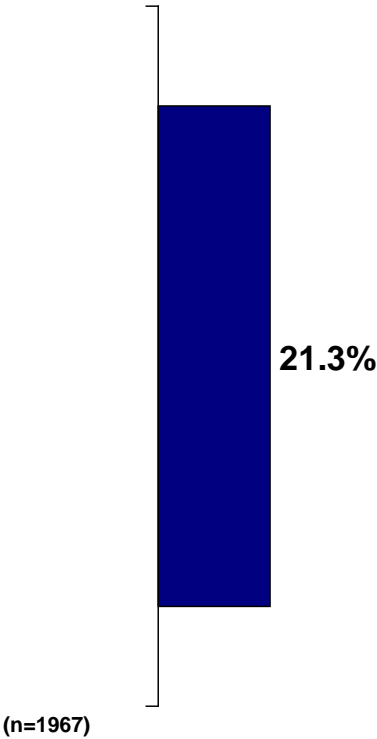
Q23.1: How long has it been since you last visited a dentist or dental clinic for any reason? Include visits to dental specialists, such as orthodontists.  
Q23.2: How long has it been since you had your teeth cleaned by a dentist or dental hygienist?



Visiting a dentist in a timely manner is directly related to education and income. In fact, more than half (51.9%) of adults with less than a high school education and more than four in ten (43.1%) living in a household with income less than \$20K have not visited a dentist in the past year. Further, 41.4% of adults living below the poverty line have not visited a dentist, in comparison to 18.5% of those living above the poverty line. Non-Whites are also less likely to have a timely dental visit/check-up compared to Whites.

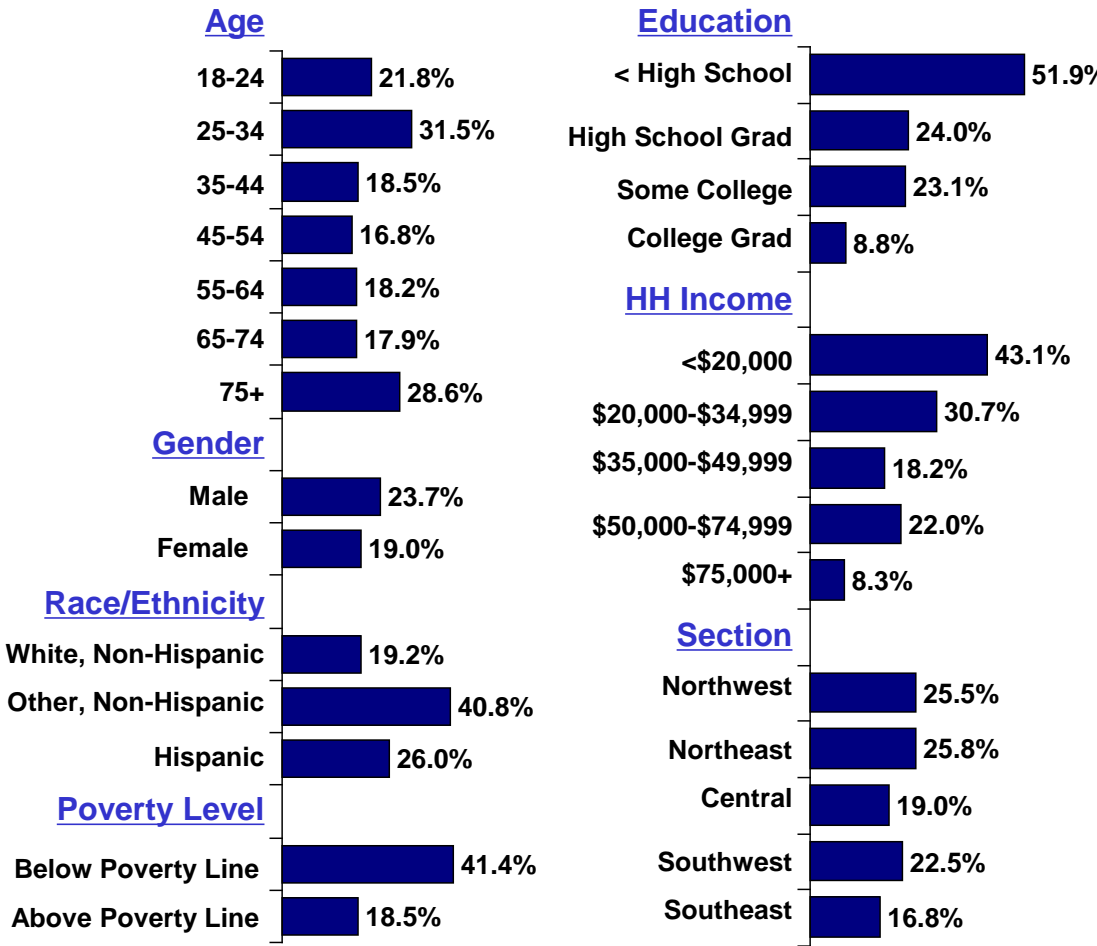
Oral Health (Cont'd.)

No Dental Visit in Past Year\*  
(Total Sample)



\*Among adults, the proportion who reported that they had not visited a dentist or dental clinic for any reason in the previous year.

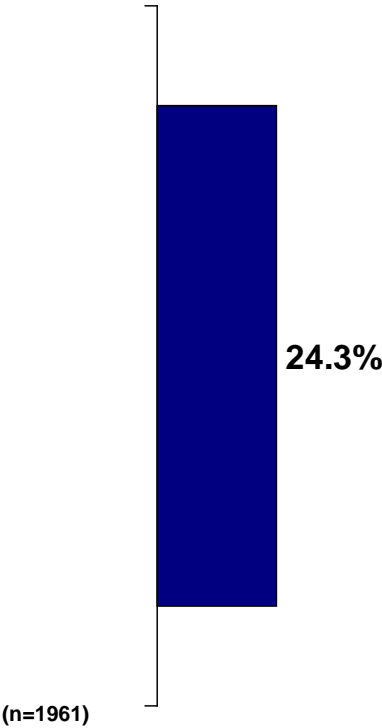
No Dental Visit in Past Year by Demographics



Similarly, having a recent teeth cleaning is directly related to education and income. Least likely to have a timely cleaning are those who have less than a high school education and those living in a household with income less than \$20K. The greatest discrepancy is seen between those living below the poverty line (45.4% have had not teeth cleaning in the past year) and those above the poverty line (22.0%)

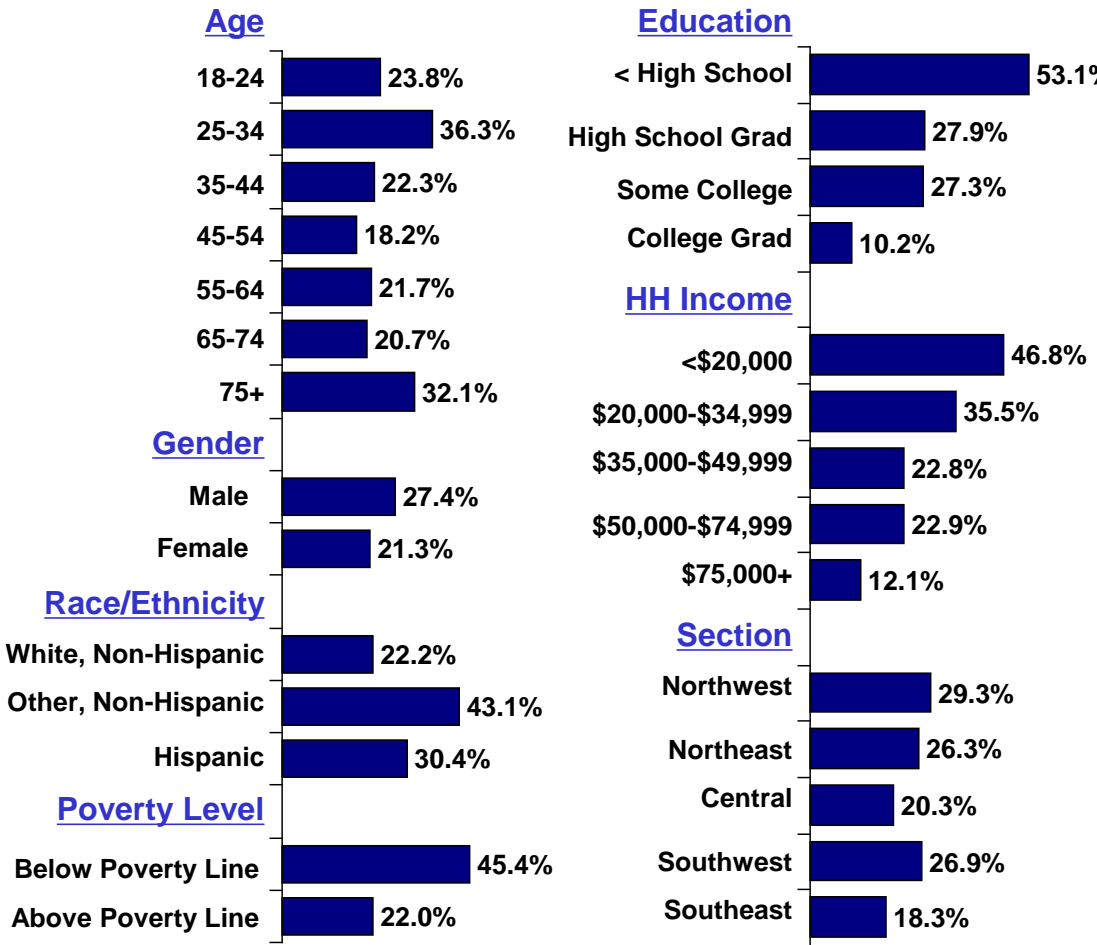
Oral Health (Cont'd.)

No Teeth Cleaning in Past Year\*  
(Total Sample)



\*Among adults, the proportion who reported that they did not have their teeth cleaned by a dentist or dental hygienist in the previous year.

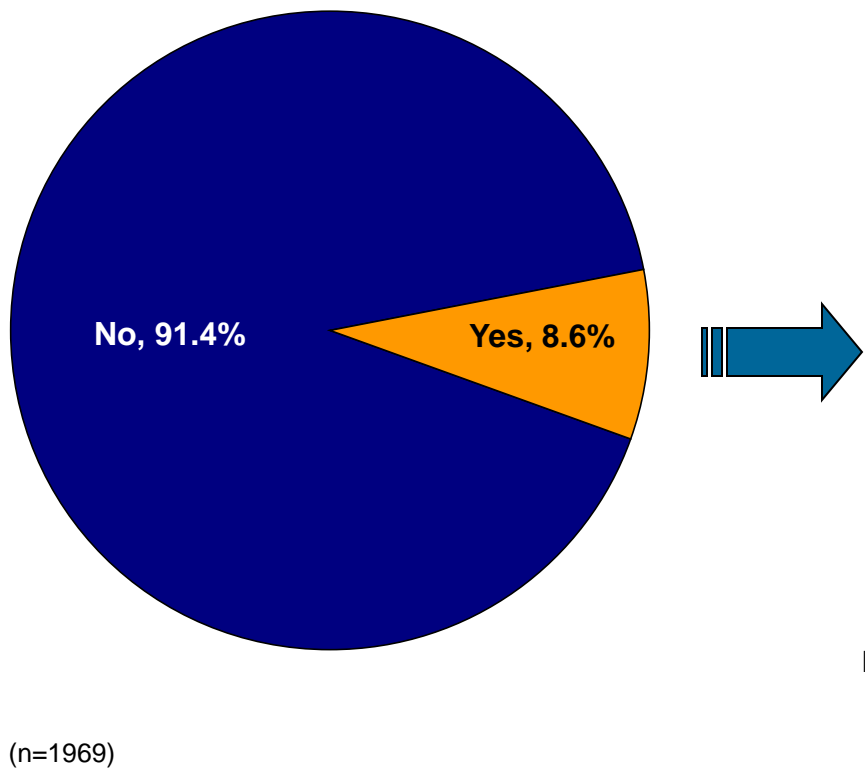
No Teeth Cleaning in Past Year by Demographics



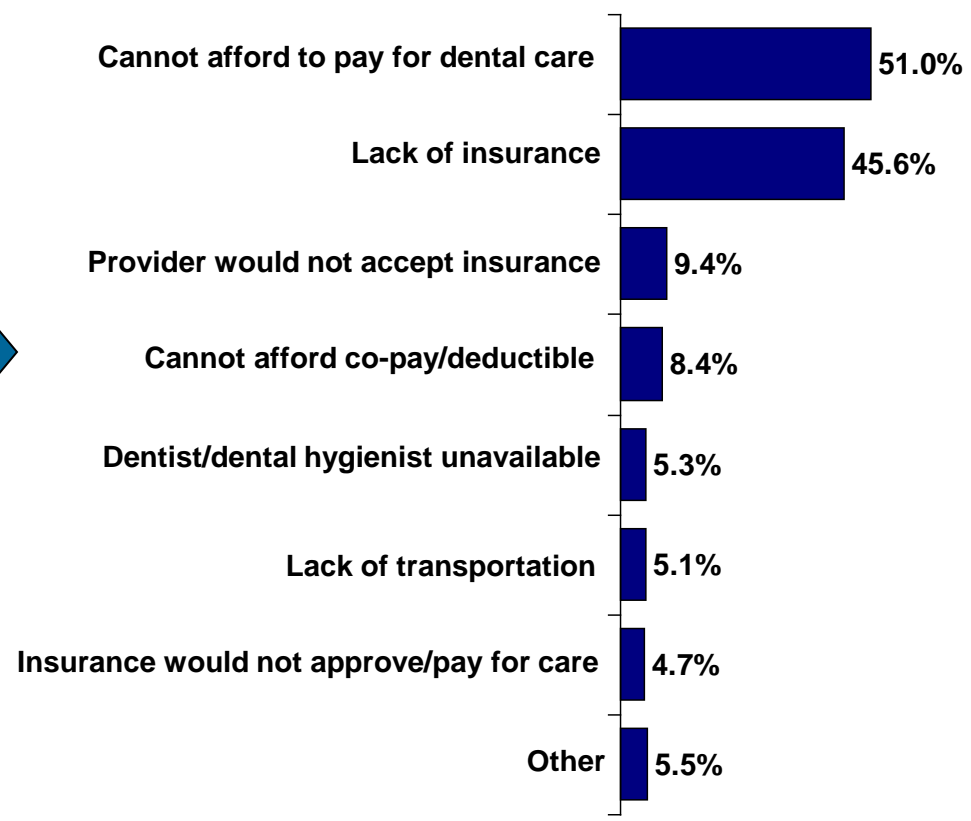
Less than one in ten (8.6%) Ottawa County adults have experienced problems receiving needed dental care. Those who have had problems cite an inability to pay for services and lack of insurance as the top barriers to receiving dental care.

Barriers to Dental Care

Problems Getting Needed Dental Care



Reasons for Difficulty in Getting Dental Care



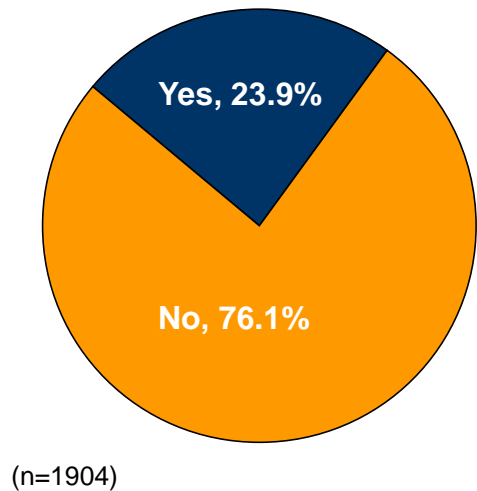
Q23.3: In the past 12 months, have you had problems getting needed dental care?  
Q23.4: Please provide the reason(s) for the difficulty in getting dental care. (Multiple responses allowed)

(n=120)  
Base=had trouble getting needed dental care

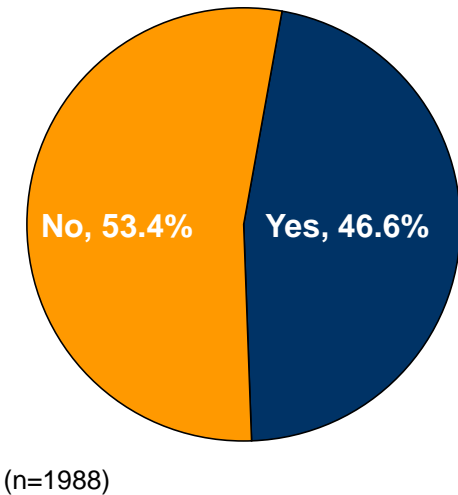
Among all Ottawa County adults, 23.9% have received a pneumonia shot at some point. More than four in ten (46.6%) have received a flu shot or vaccine in the past 12 months, and over half of them (58.3%) got it at a physician's office/HMO. Other common places to receive flu shots are at a store or at work.

Flu and Pneumonia Immunization

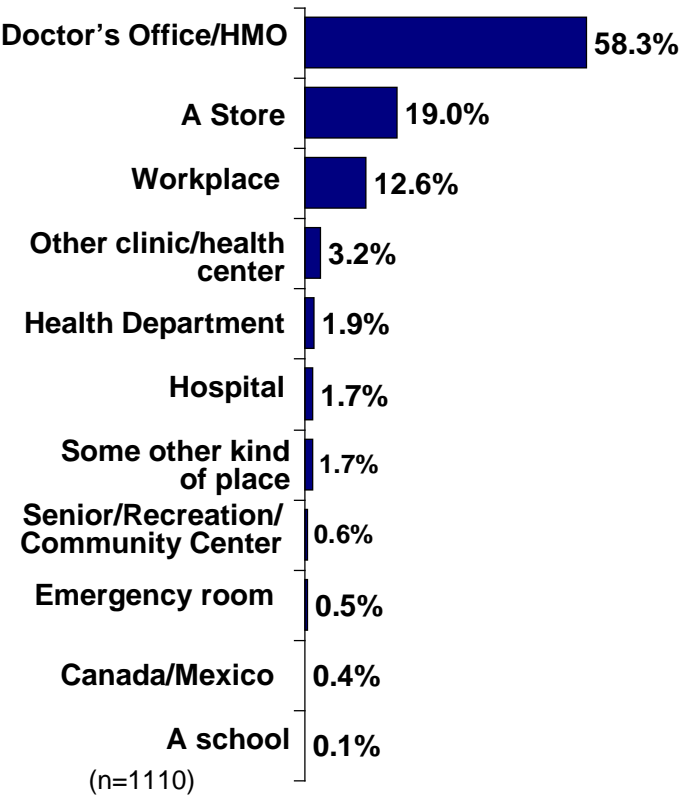
Ever Had a Pneumonia Shot



Had Flu Shot/Vaccine in Past 12 Months



Place Where Received Flu Shot/Vaccine

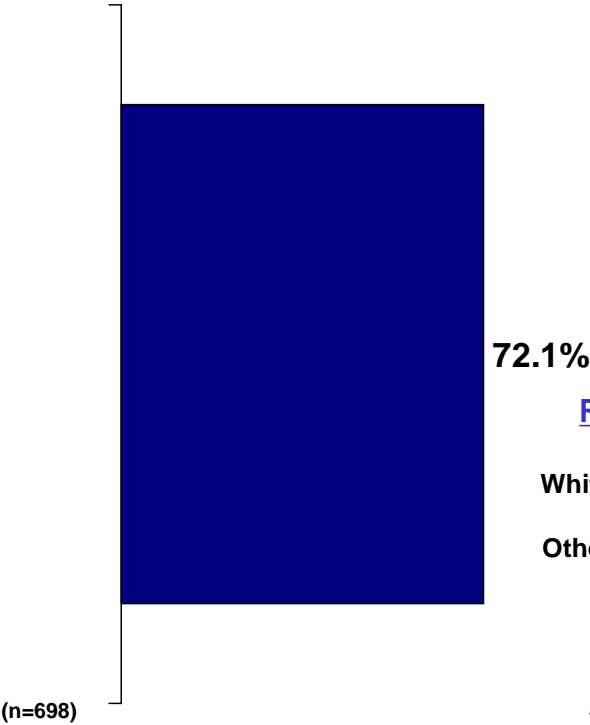


Q19.3: A pneumonia shot or pneumococcal vaccine is usually given only once or twice in a person's lifetime and is different from the flu shot. Have you ever had a pneumonia shot?  
Q19.1: During the past 12 months, have you had either a seasonal flu shot or a seasonal flu vaccine that was sprayed in your nose?  
Q19.2: At what kind of place did you get your last seasonal flu shot/vaccine?

More than seven in ten (72.1%) adults aged 65 or older have received a flu vaccine in the past year. Adults aged 75+ are more likely to have received one in the past year than those aged 65-74. Senior non-Whites are far more likely than Whites to have received a flu vaccine in the past year. Conversely, those with little education and incomes below \$20K are least likely to have received immunization from the flu.

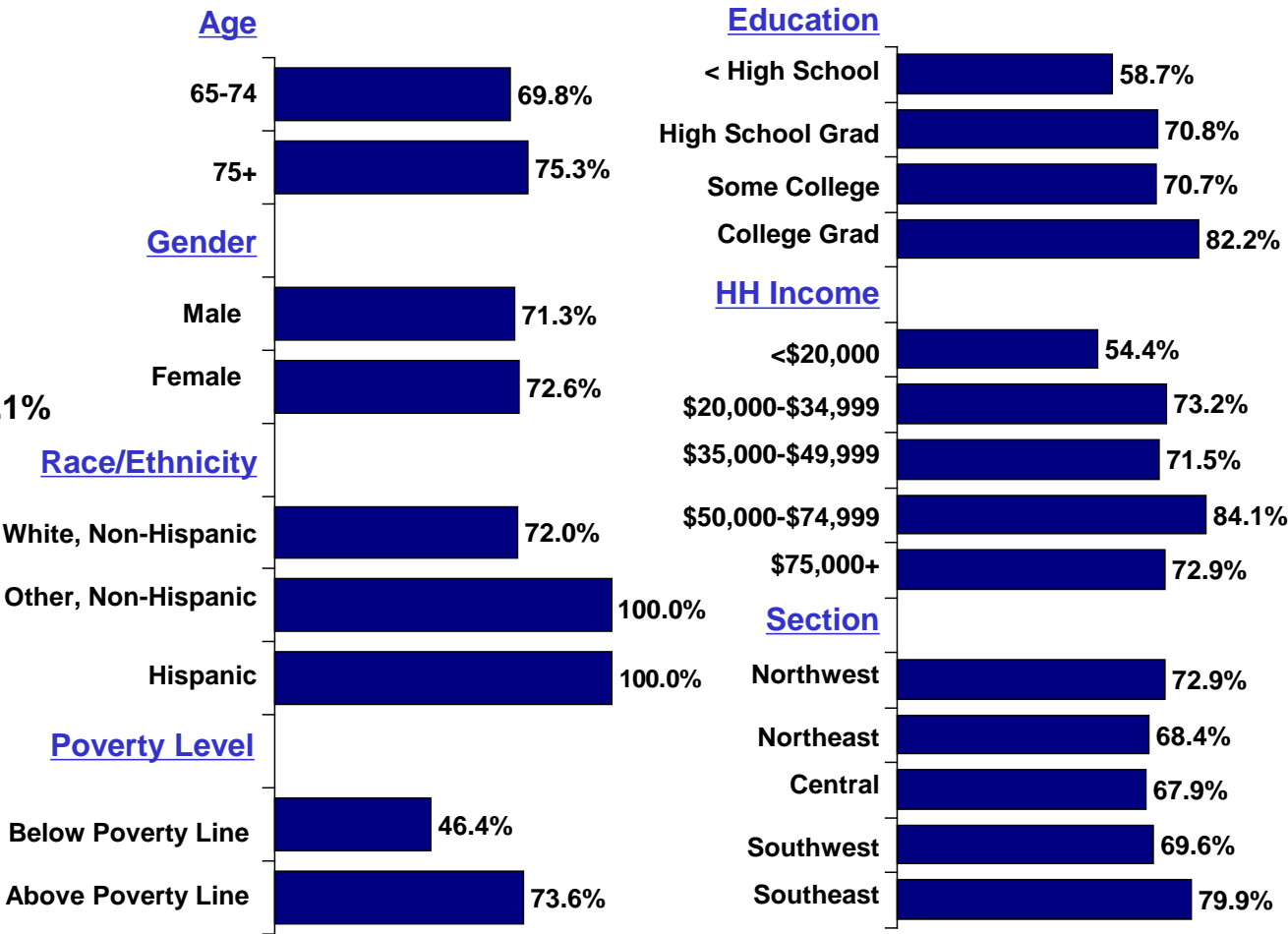
Immunizations Among Adults 65 Years and Older

Had Flu Vaccine in Past Year\*  
(Total Sample)



\*Among adults aged 65 years and older, the proportion who reported that they had a flu vaccine, either by an injection in the arm or sprayed in the nose during the past 12 months.

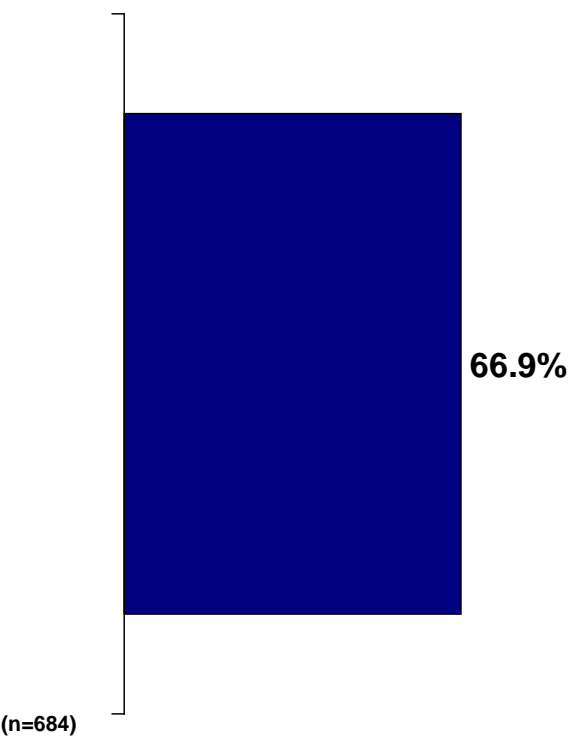
Had Flu Vaccine by Demographics



Additionally, two-thirds (66.9%) of adults aged 65 or older received a pneumonia vaccine at some point and this rate is higher for those aged 75 or older. The lowest rates are among adults who are non-Hispanic minorities and/or are living below the poverty line.

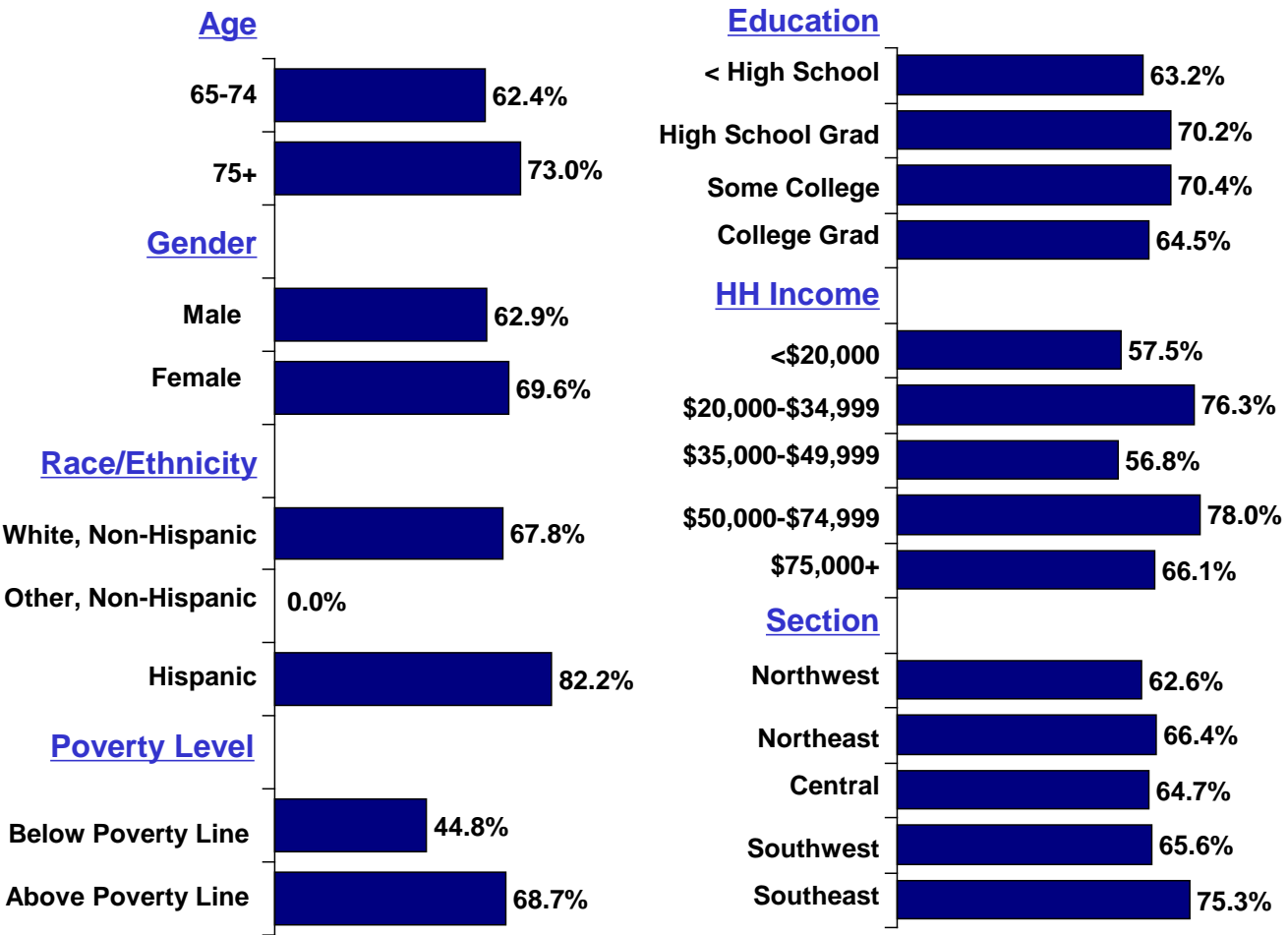
Immunizations Among Adults 65 Years and Older (Cont'd.)

Ever Had Pneumonia Vaccine\*  
(Total Sample)



\*Among adults aged 65 years and older, the proportion who reported that they ever had a pneumococcal vaccine.

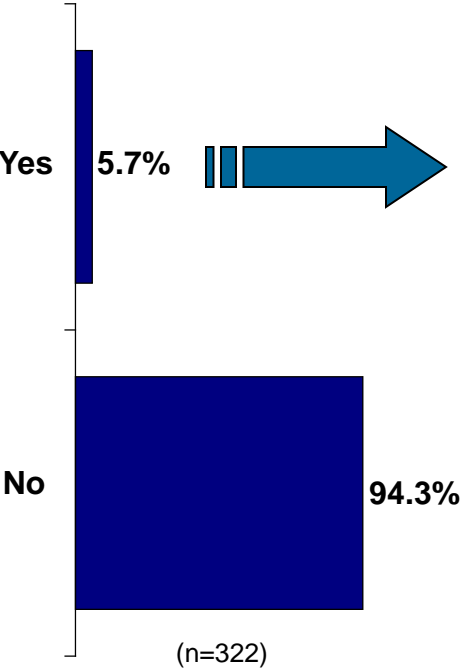
Had Pneumonia Vaccine by Demographics



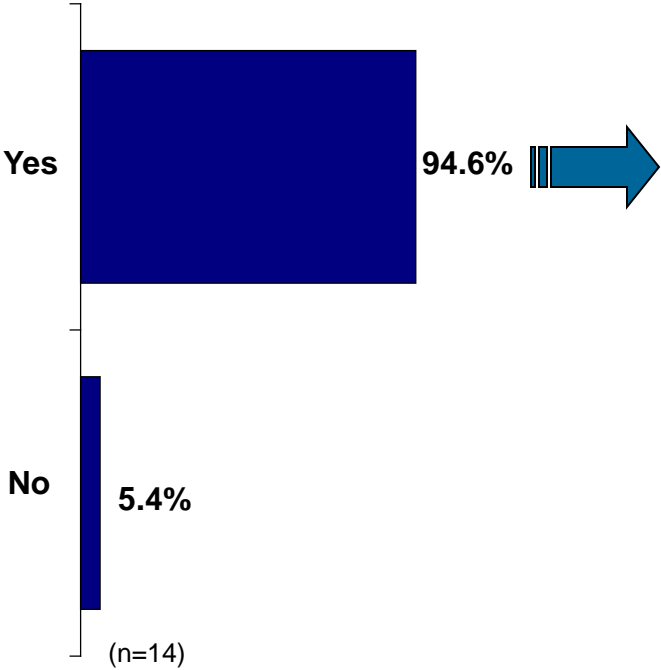
Among pregnant females, 94.6% are currently receiving prenatal care and all of them began their care in the first trimester. Additionally, more than three-fourths take a vitamin or supplement that contains folic acid.

Pregnancy and Prenatal Care

Currently Pregnant  
(Among Females  
<45 Years of Age)



Currently Receiving  
Prenatal Care

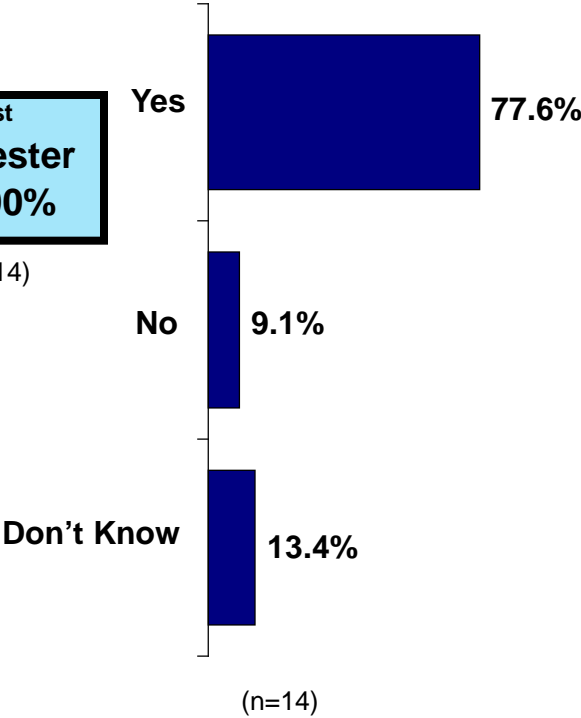


When Began  
Prenatal Care

1<sup>st</sup>  
Trimester  
= 100%

(n=14)

Currently Taking  
Folic Acid



Q13.17: To your knowledge, are you now pregnant?  
Q14.1 (If yes) Are you currently receiving prenatal care?  
Q14.2: (If yes) When did you start receiving prenatal care?  
Q14.3: (If yes) Are you currently taking a vitamin or supplement that contains folic acid?

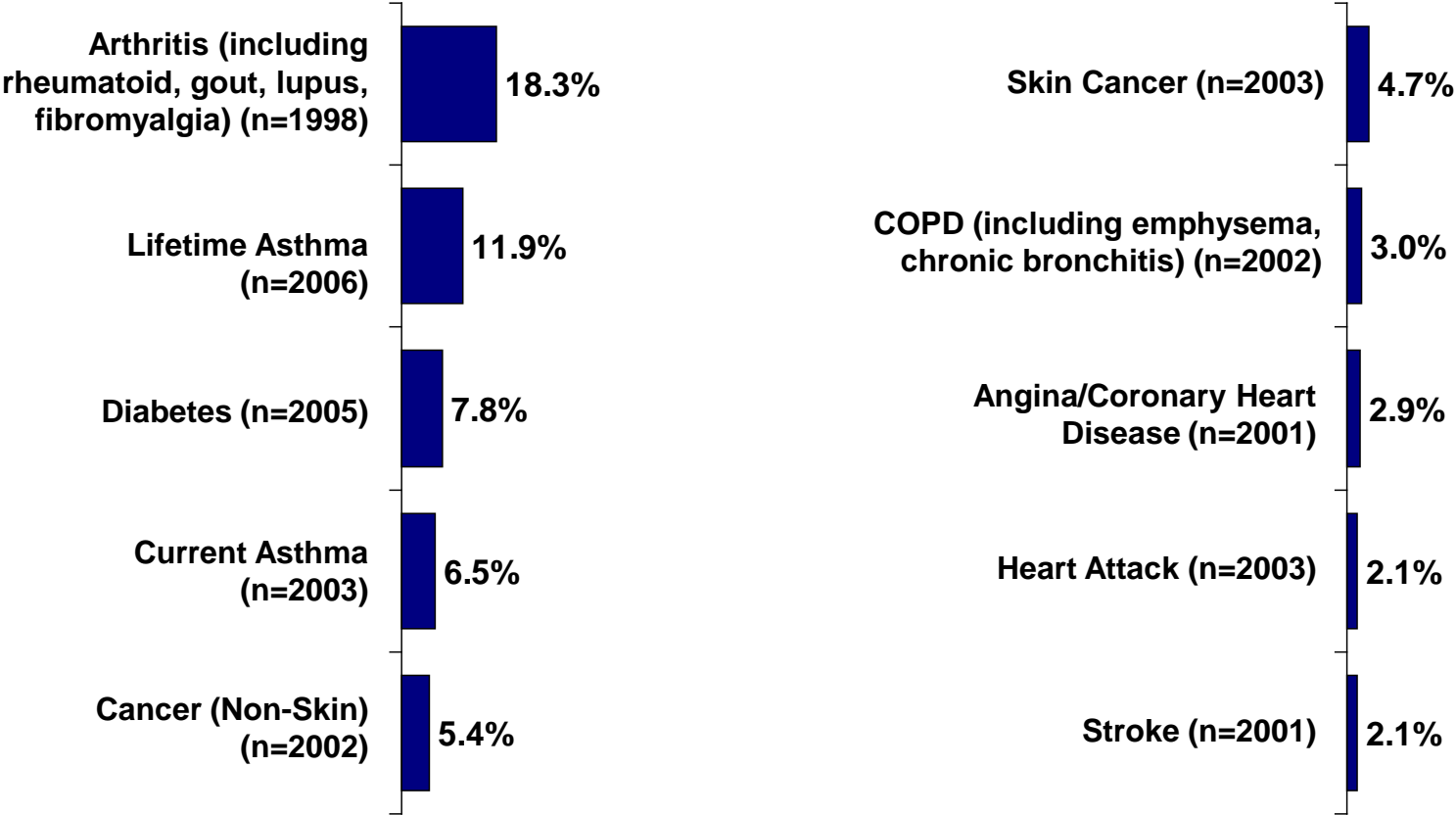
# ***Chronic Conditions***

---



Arthritis-related conditions are the most prevalent chronic conditions among Ottawa County adults, by far, followed by asthma and diabetes. Prevalence is low for heart conditions and stroke.

**Prevalence of Chronic Health Conditions**  
**(% Have Been Told They Have)**

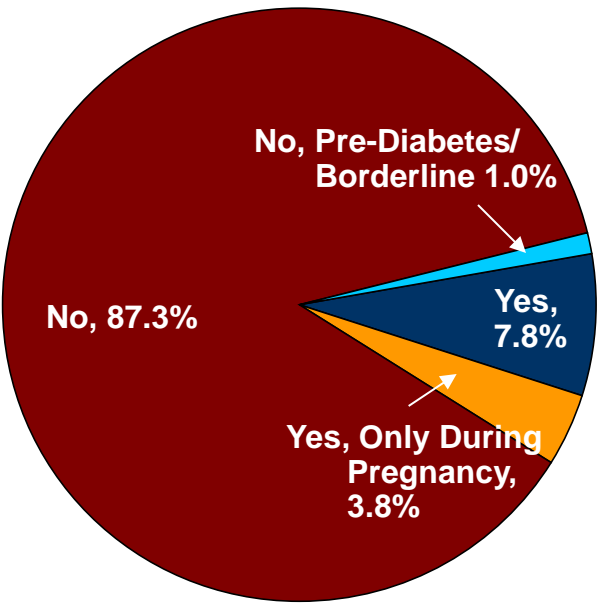


Q9.1-Q9.10: Has a doctor, nurse, or other health professional EVER told you that you had....  
Q9.2: Do you still have asthma?

Less than one in ten (7.8%) Ottawa County adults have ever been told they have diabetes. On average, those with diabetes see a health professional and/or are checked for A1c approximately three times a year.

Prevalence of Diabetes

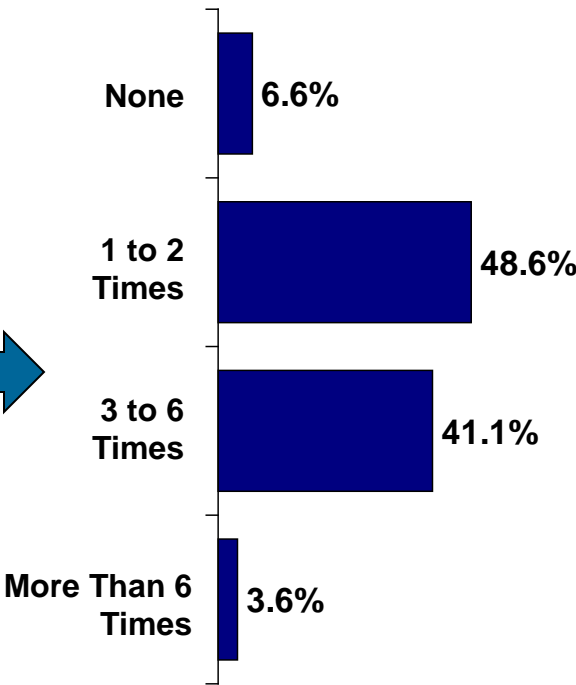
Ever Told Have Diabetes



(n=2005)



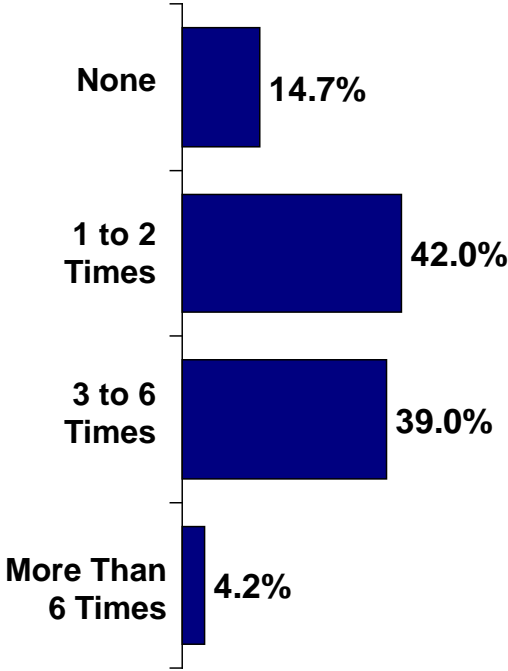
Number of Times in Past 12 Months Seen Health Professional for Diabetes



(n=216)

Mean = 3.3

Number of Times in Past 12 Months Checked for A1c



(n=209)

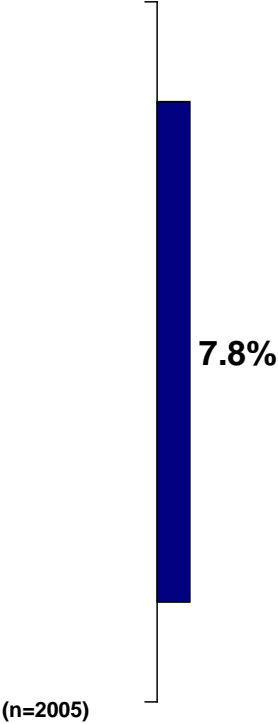
Mean = 2.9

Q9.10: Has a doctor, nurse, or other health professional EVER told you that you had diabetes?  
Q10.1: About how many times in the past 12 months have you seen a doctor, nurse, or other health professional for your diabetes?  
Q10.2: A test for "A one C" measures the average level of blood sugar over the past three months. About how many times in the past 12 months have a doctor, nurse, or other health professional checked you for "A one C?"

The prevalence of diabetes is greater for older adults (45+), Hispanics, those with incomes less than \$35K, and those in the northeast section.

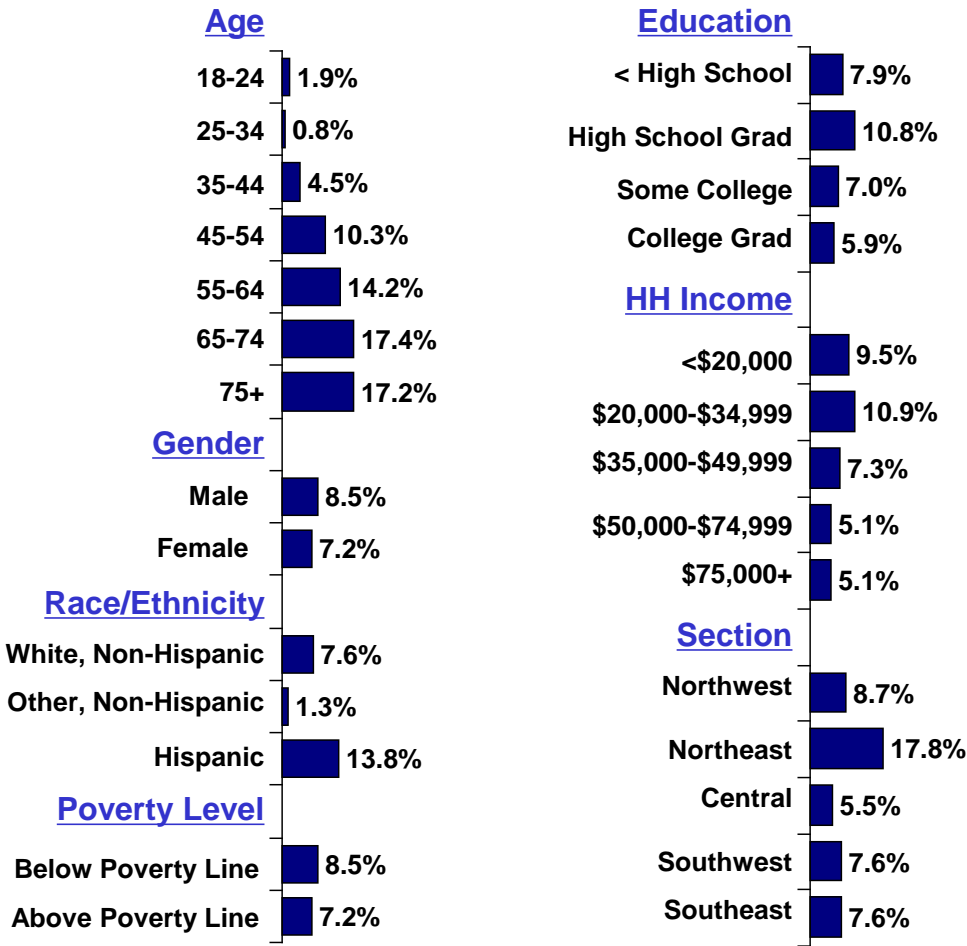
Diabetes

Ever Told Have Diabetes\*  
(Total Sample)



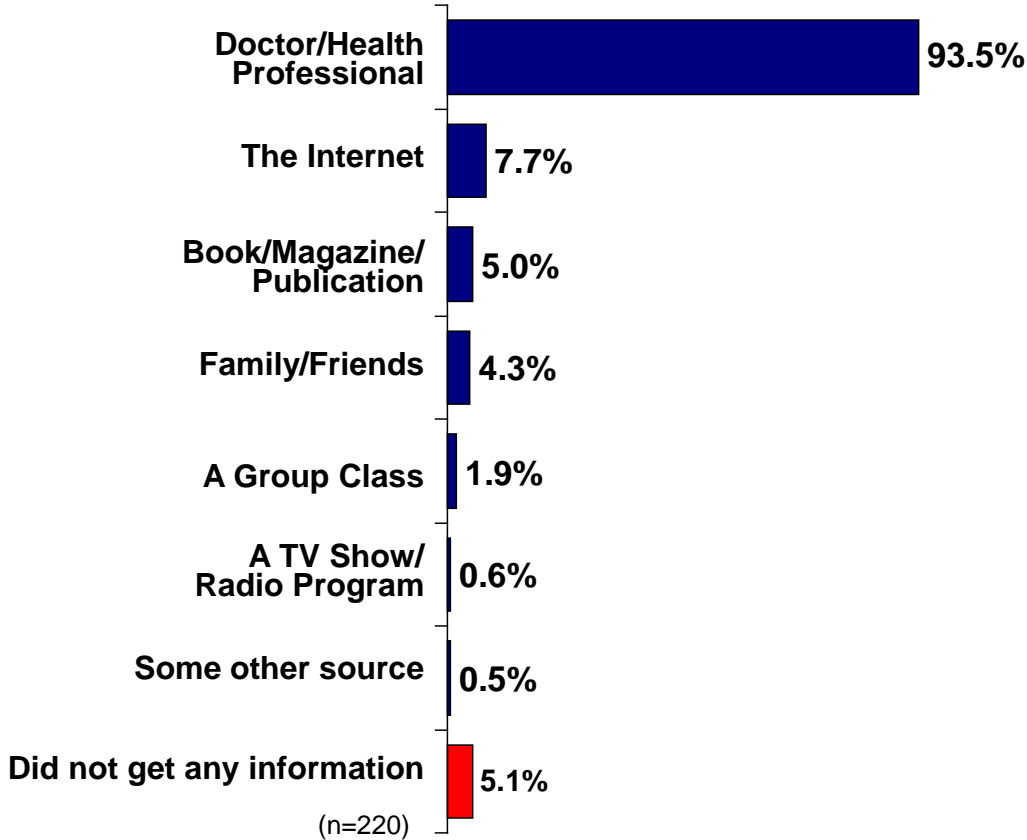
\*Among all adults, the proportion who reported that they were ever told by a doctor that they have diabetes. Adults who had been told they have prediabetes and women who had diabetes only during pregnancy were classified as not having been diagnosed.

Told Have Diabetes by Demographics



Almost all (95.0%) of Ottawa County adults who have diabetes have received information in the past 12 months on how to care for the condition and most, by far, have received it from a doctor or health care professional.

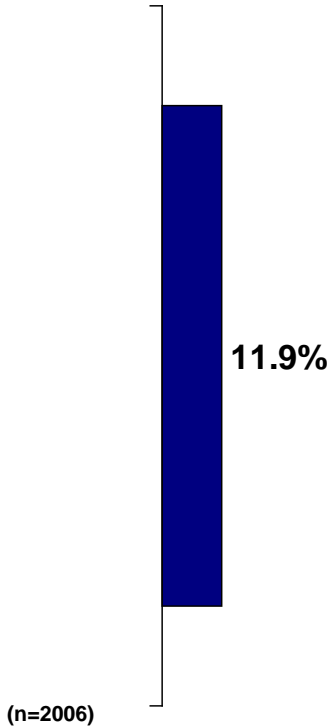
Information Sources for Management of Diabetes



More than one in ten (11.9%) adults in Ottawa County have been diagnosed with asthma in their lifetime. This rate is higher for females than males and higher for those living in northeast Ottawa County vs. residents in other sections.

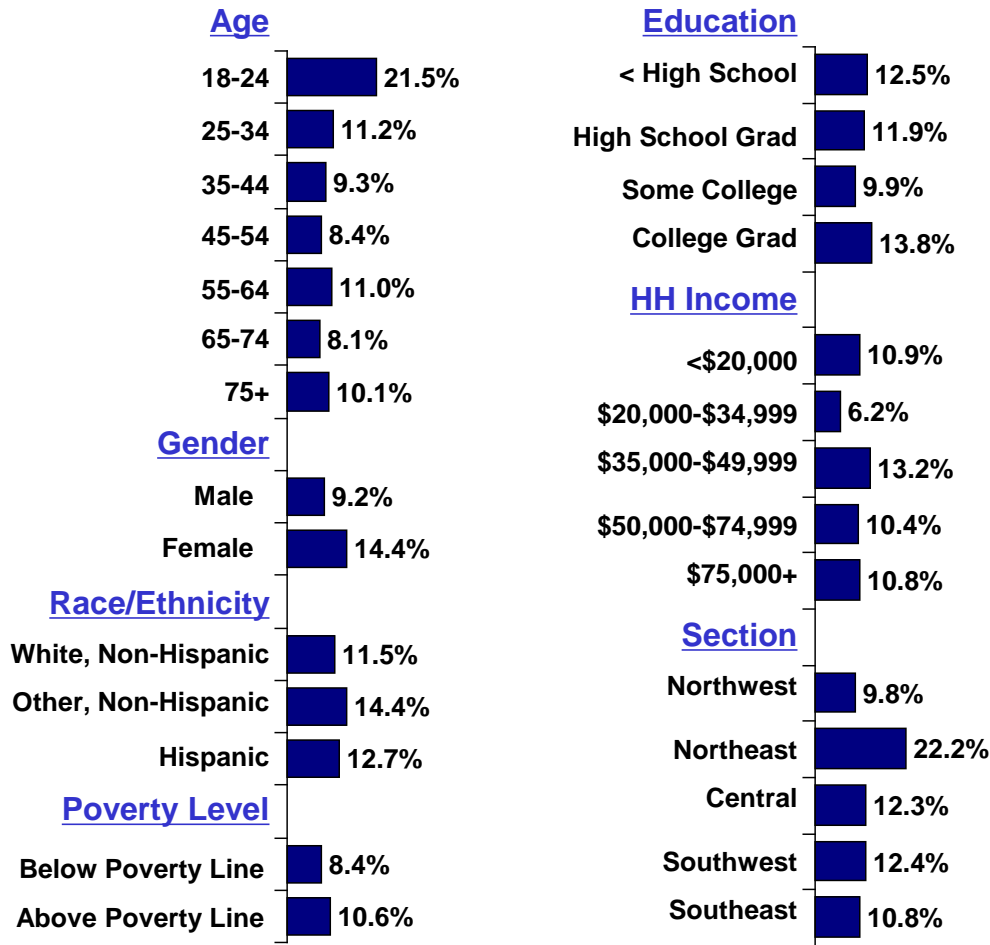
Asthma Among Adults

Lifetime Asthma Prevalence\*  
(Total Sample)



\*Among all adults, the proportion who reported that they were ever told by a doctor, nurse, or other health care professional that they had asthma.

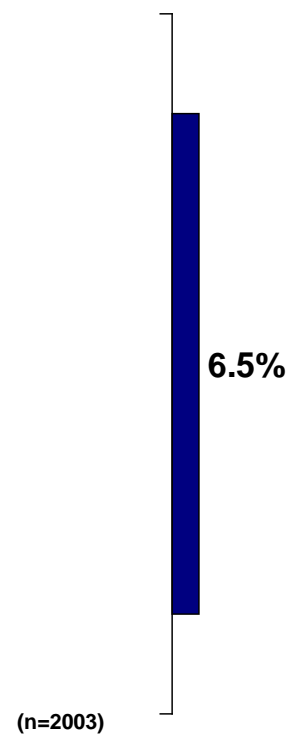
Lifetime Asthma by Demographics



Fewer (6.5%) adults in Ottawa County currently have asthma. Women are more likely to have asthma than men, and those with less than a high school education are more likely to have asthma than those with more education. The prevalence of asthma in northeast Ottawa County is highest. Non-Hispanic minorities are least likely to have asthma compared to other racial/ethnic groups.

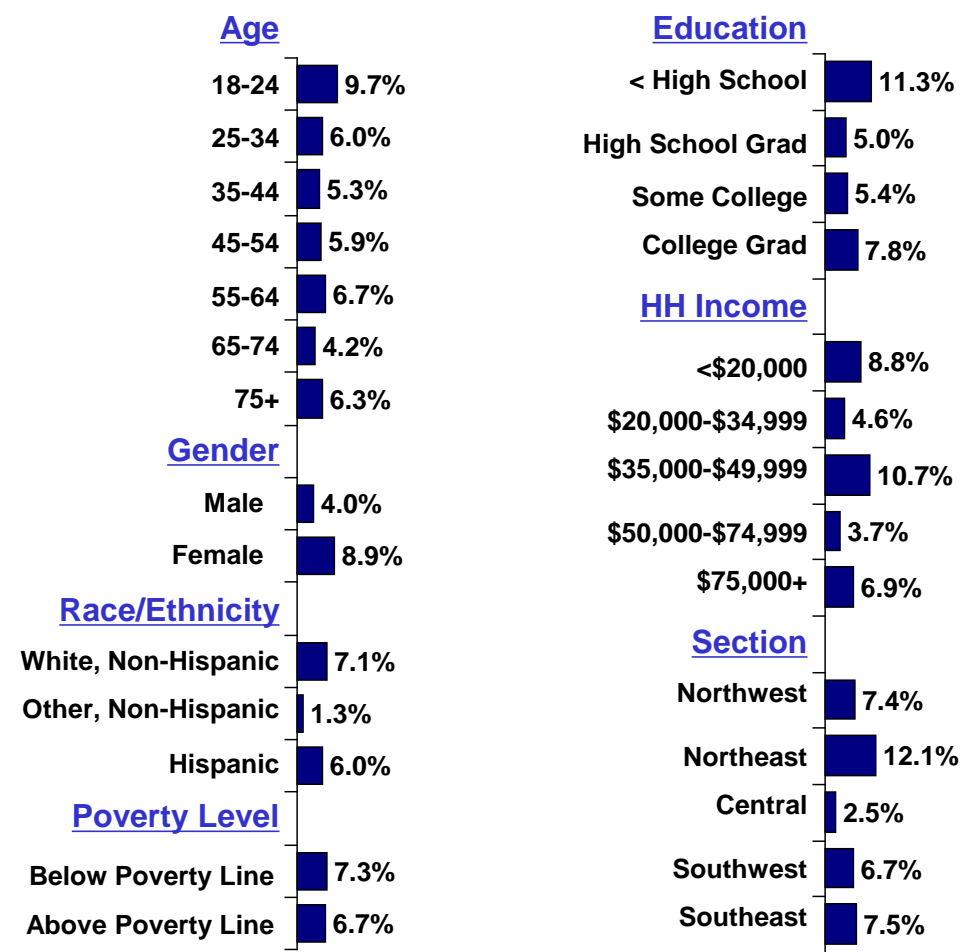
Asthma Among Adults (Cont'd.)

Current Asthma Prevalence\*  
(Total Sample)



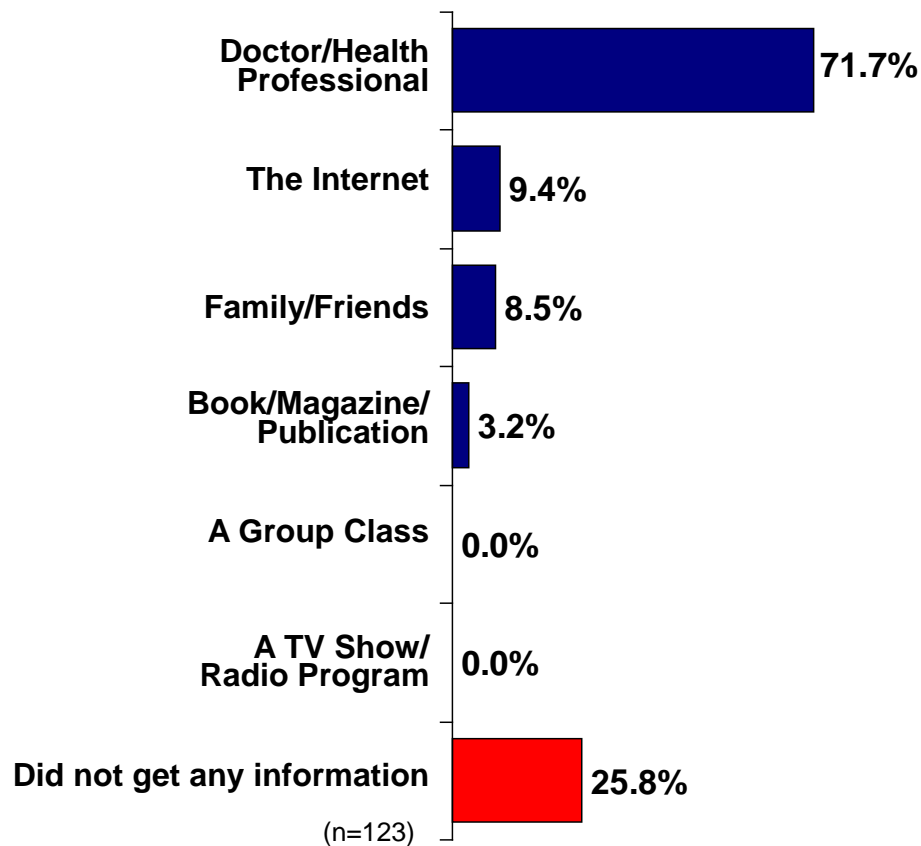
\*Among all adults, the proportion who reported that they still had asthma.

Current Asthma by Demographics



Almost three-fourths (74.2%) of Ottawa County adults who have asthma have received information in the past 12 months on how to care for the condition. The greatest information source is the physician or health care professional.

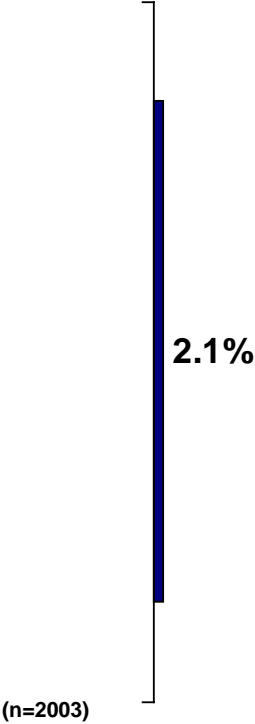
Information Sources for Management of Asthma



Very few Ottawa County adults have had a heart attack and this is true regardless of demographics. The proportion of adults who have had a heart attack is highest among adults aged 55+.

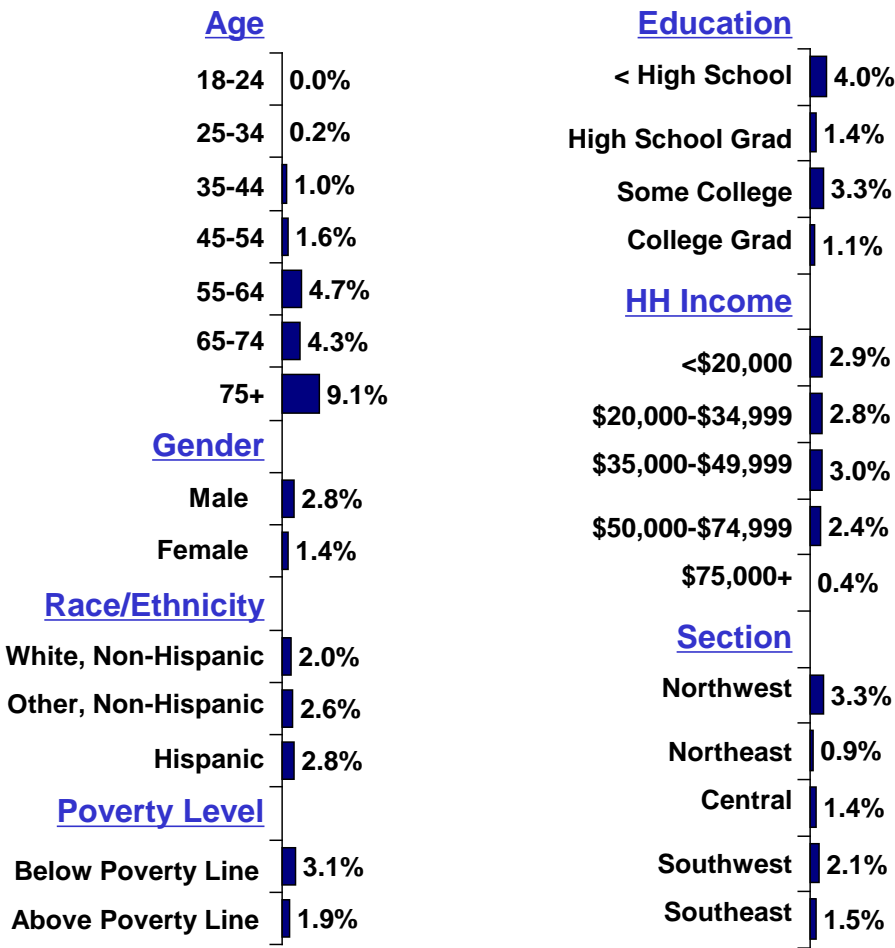
Cardiovascular Disease

Ever Told Had Heart Attack\*  
(Total Sample)



\*Among all adults, the proportion who had ever been told by a doctor that they had a heart attack or myocardial infarction.

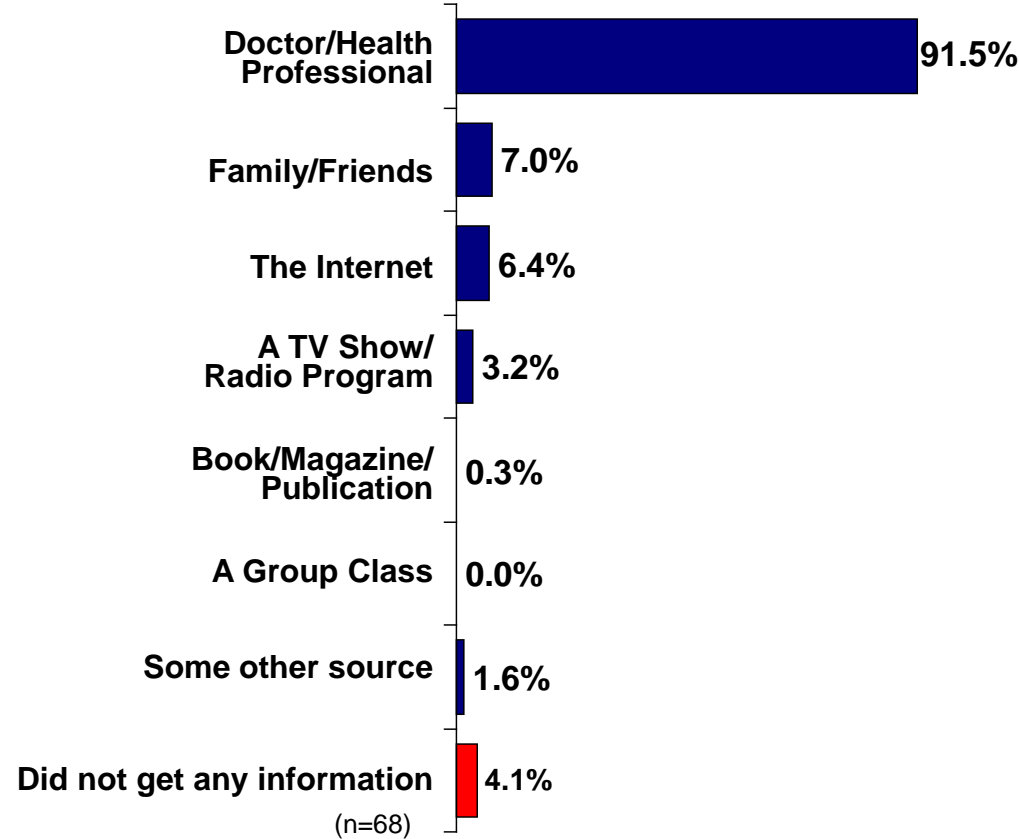
Told Had Heart Attack by Demographics





Almost all (95.9%) Ottawa County adults who have had a heart attack have received information in the past 12 months on how to care for the condition. The greatest information source is the physician or health care professional. Other sources include family, friends and the Internet.

Information Sources for Management of Cardiovascular Disease

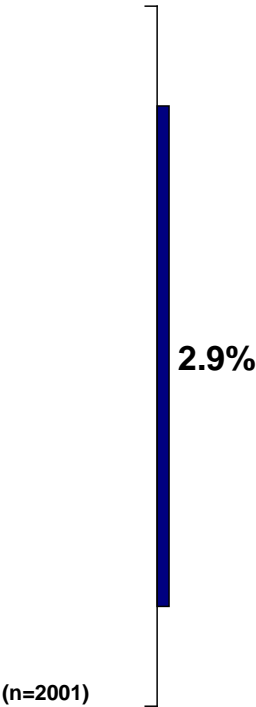


Q11.1: During the last 12 months, where did you get information about taking care of your [INSERT DISEASE]?

Very few Ottawa County adults have ever been told they have angina or coronary heart disease. The rate is higher for adults aged 65+ and those in the northeast section of the county. There is also an inverse relationship between experiencing angina or coronary heart disease and level of education.

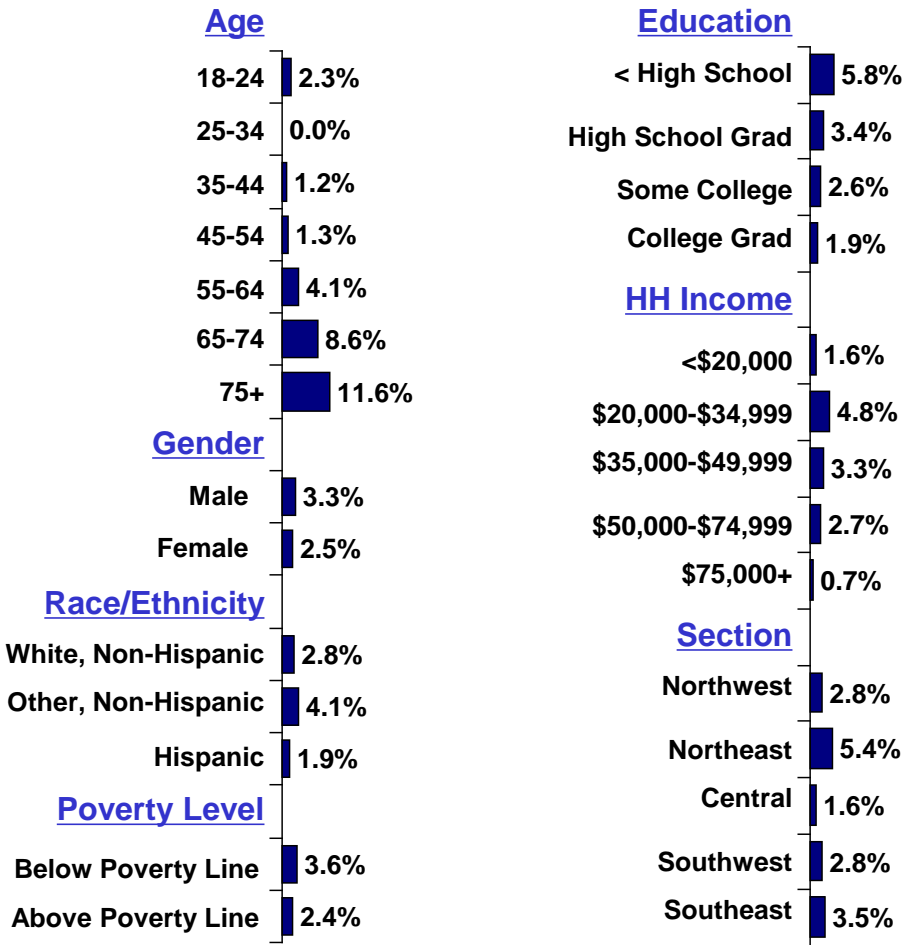
Cardiovascular Disease (Cont'd.)

Ever Told Have Angina/Coronary Heart Disease\*  
(Total Sample)



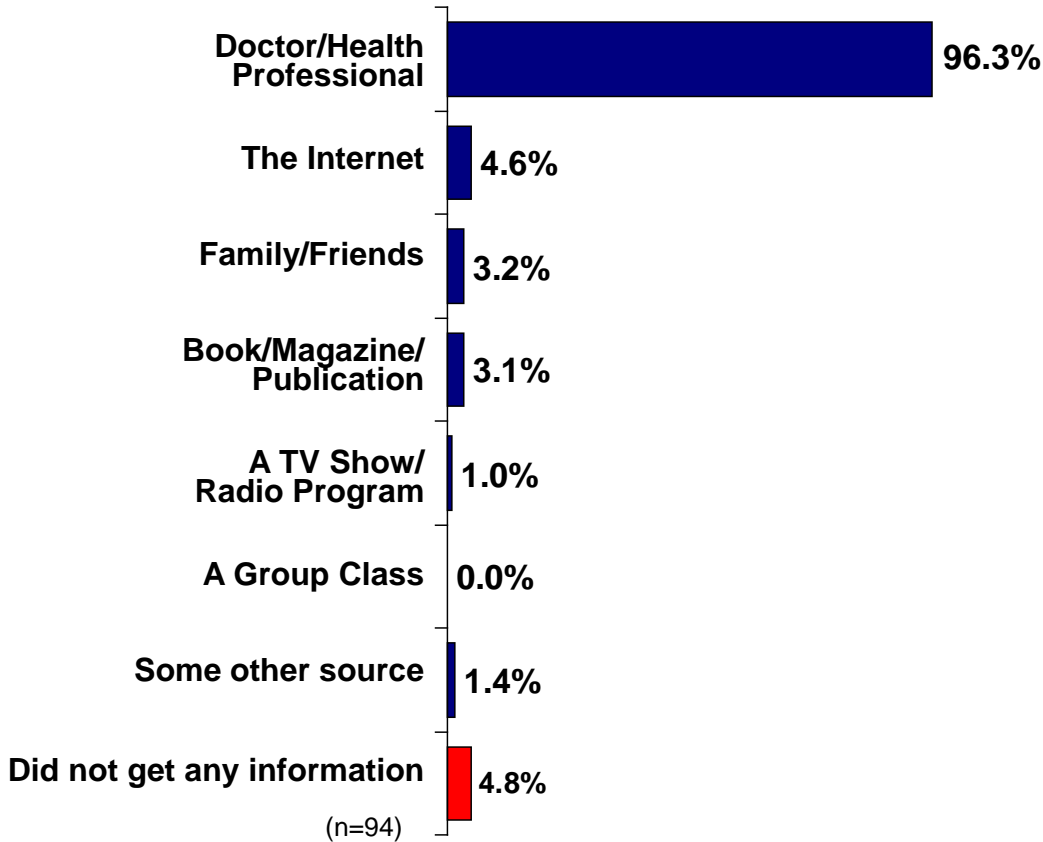
\*Among all adults, the proportion who had ever been told by a doctor that they had angina or coronary heart disease.

Told Have Angina/Coronary Heart Disease by Demographics



Almost all (95.2%) of Ottawa County adults who have angina or coronary heart disease have received information in the past 12 months on how to care for these conditions. The greatest information source is the physician or health care professional. Other sources include the Internet, family/friends, and publications.

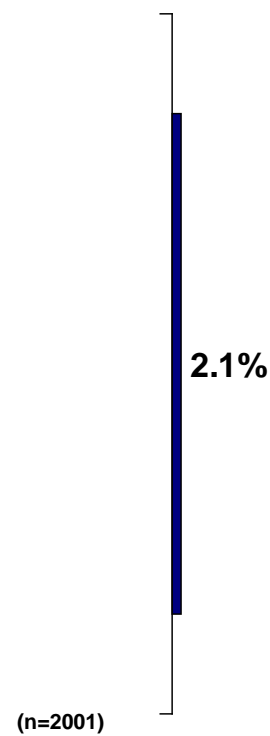
Information Sources for Management of Angina



Few Ottawa County adults have had a stroke. The highest prevalence of stroke can be found in the highest age, lowest education, and lowest income groups.

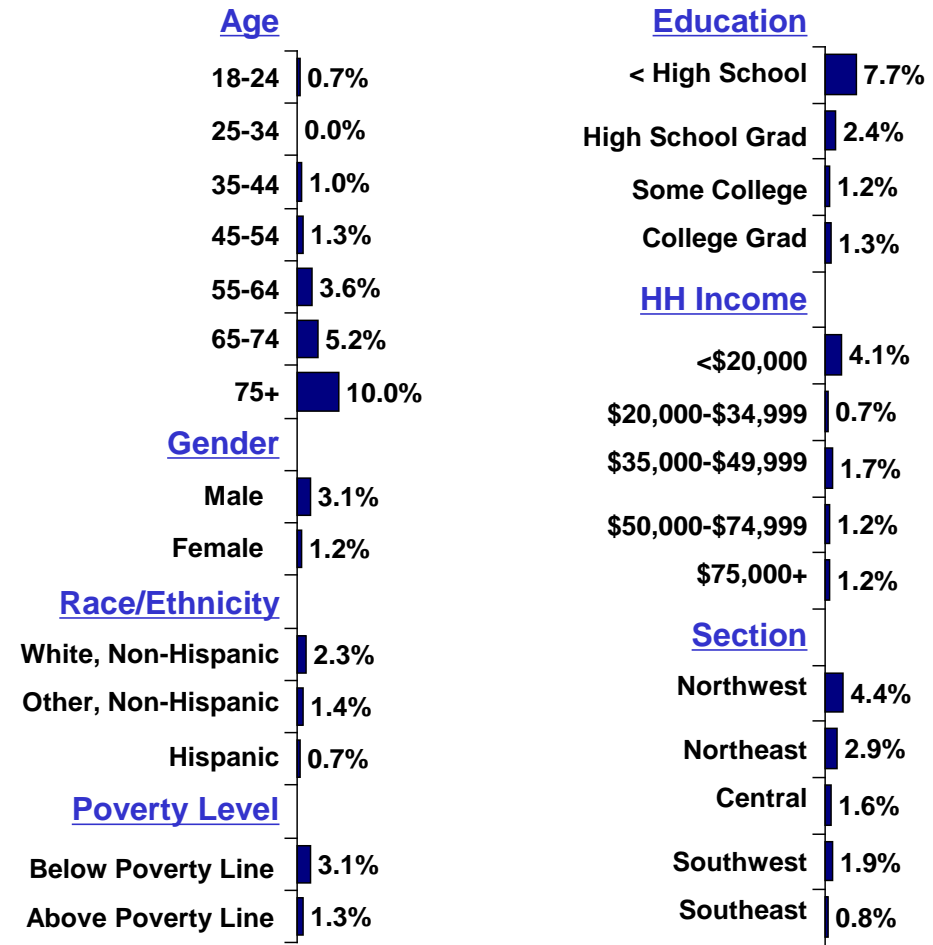
Cardiovascular Disease (Cont'd.)

Ever Told Had a Stroke\*  
(Total Sample)



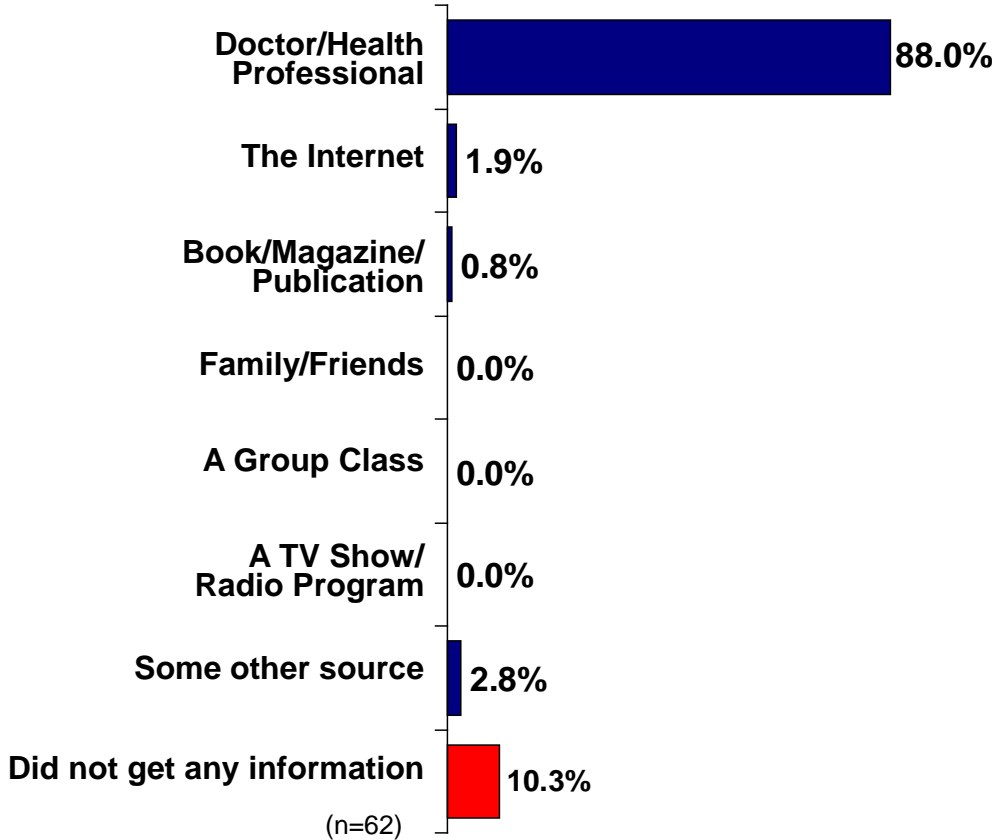
\*Among all adults, the proportion who had ever been told by a doctor that they had a stroke.

Told Had Stroke by Demographics



Nine in ten (89.7%) Ottawa County adults who have had a stroke have received information in the past 12 months on how to care for the condition and they received their information almost solely from doctors or health care professionals.

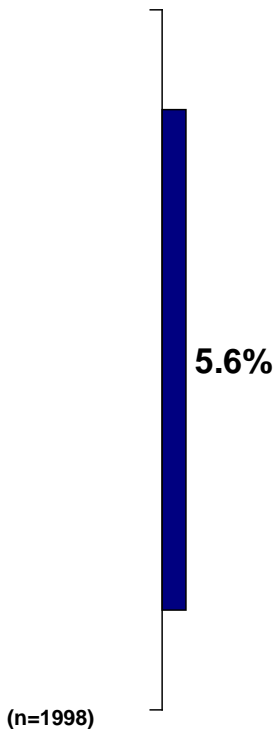
Information Sources for Management of Stroke



Having any form of cardiovascular disease (heart attack, angina, stroke) is directly related to age and inversely related to education and income. For example, 3.6% of college graduates have experienced heart disease in some form, compared to 15.5% of those with less than a high school diploma.

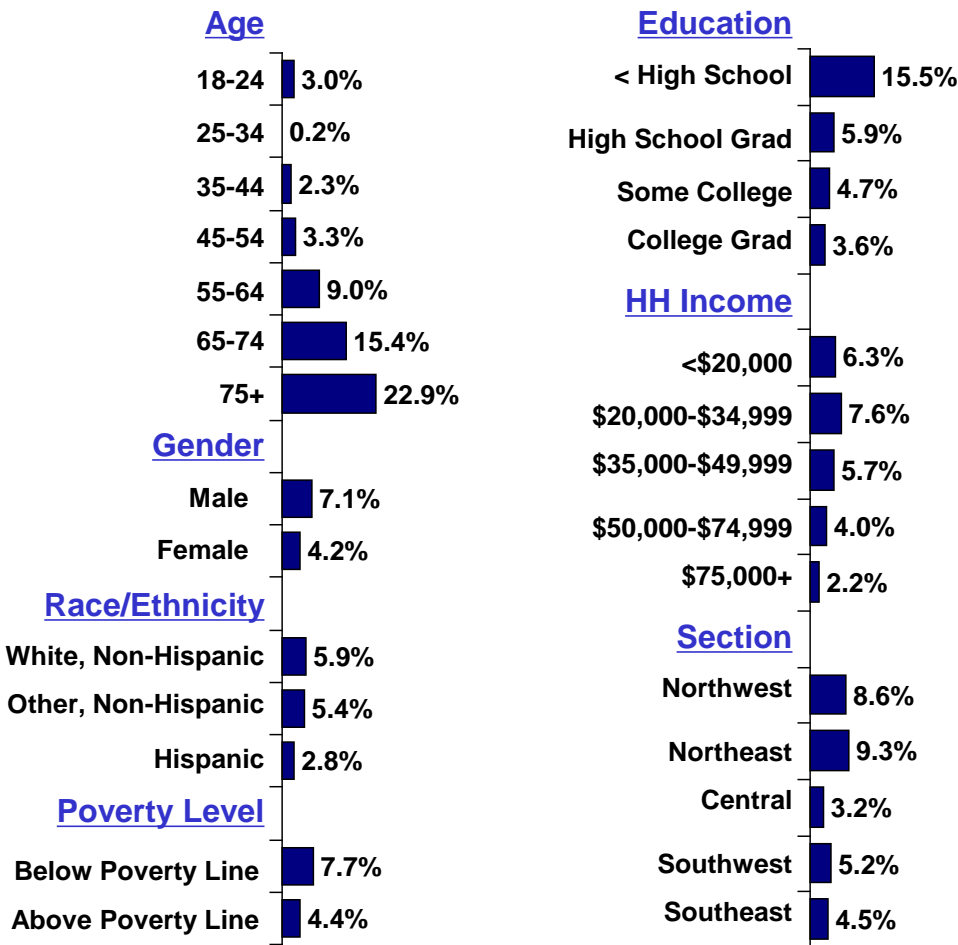
Any Cardiovascular Disease

Ever Told Had Heart Attack, Angina, or Stroke\*  
(Total Sample)



\*Among all adults, the proportion who had ever been told by a doctor that they had a heart attack, angina, or stroke.

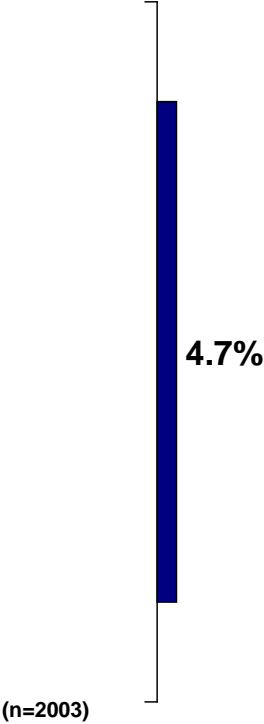
Told Had Stroke by Demographics



Less than one in twenty (4.7%) Ottawa County adults have been told by a doctor they have skin cancer. Expectedly, this proportion rises dramatically with age; one-fourth (24.0%) of people aged 75 or older have been told they have skin cancer. People living above the poverty line are more likely to be diagnosed with skin cancer than people living below the poverty line. Residents in northeast Ottawa County are more likely to have skin cancer than residents in other sections of the county.

Skin Cancer

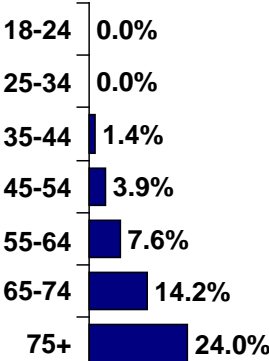
Ever Told Have Skin Cancer\*  
(Total Sample)



\*Among all adults, the proportion who reported that they were ever told by a doctor that they have skin cancer.

Told Have Skin Cancer by Demographics

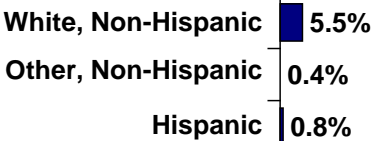
Age



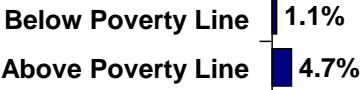
Gender



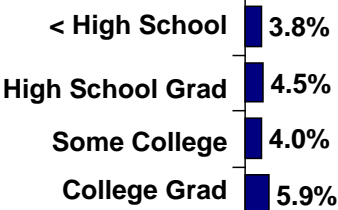
Race/Ethnicity



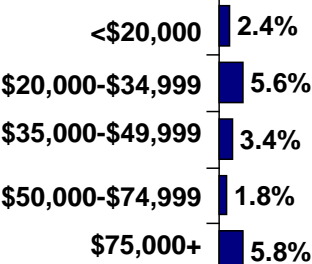
Poverty Level



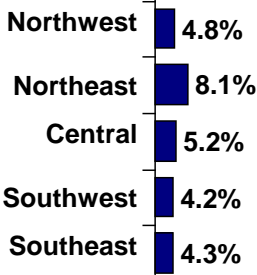
Education



HH Income

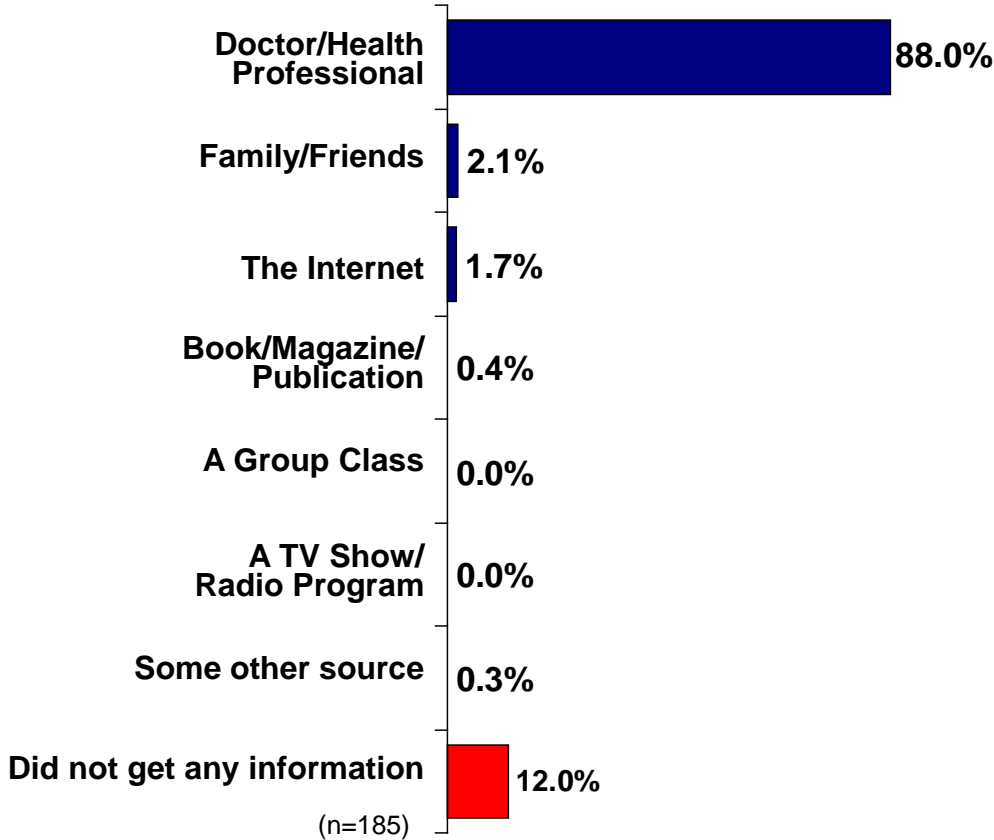


Section



Almost nine in ten (88.0%) Ottawa County adults who have skin cancer have received information in the past 12 months on how to care for the condition and get the information primarily from physicians and health care professionals.

Information Sources for Management of Skin Cancer



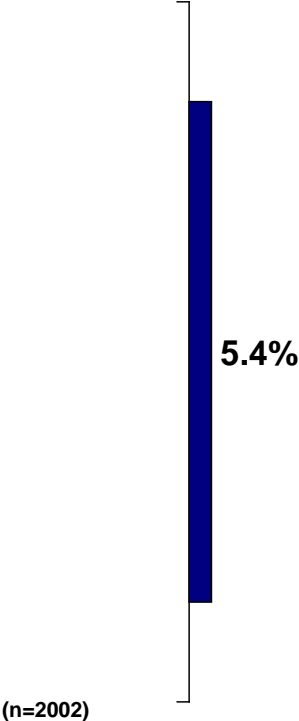
Q11.1: During the last 12 months, where did you get information about taking care of your [INSERT DISEASE]?



One in twenty (5.4%) Ottawa County adults have been told by a doctor they have non-skin cancer. This proportion also rises dramatically with age; 19.2% of residents aged 75 or older have been diagnosed with some form of non-skin cancer. Residents in northwest Ottawa County are more likely to have cancer than residents in other sections of the county.

Cancer (Other Than Skin)

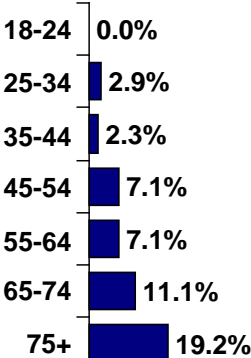
Ever Told Have Cancer (Other Than Skin)\*  
(Total Sample)



\*Among all adults, the proportion who reported that they were ever told by a doctor that they have cancer (other than skin).

Told Have Cancer by Demographics

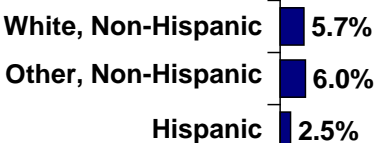
Age



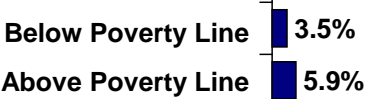
Gender



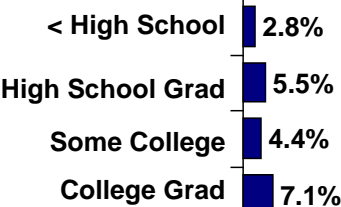
Race/Ethnicity



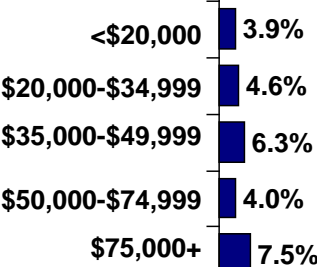
Poverty Level



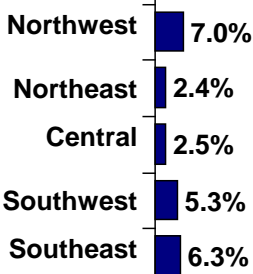
Education



HH Income

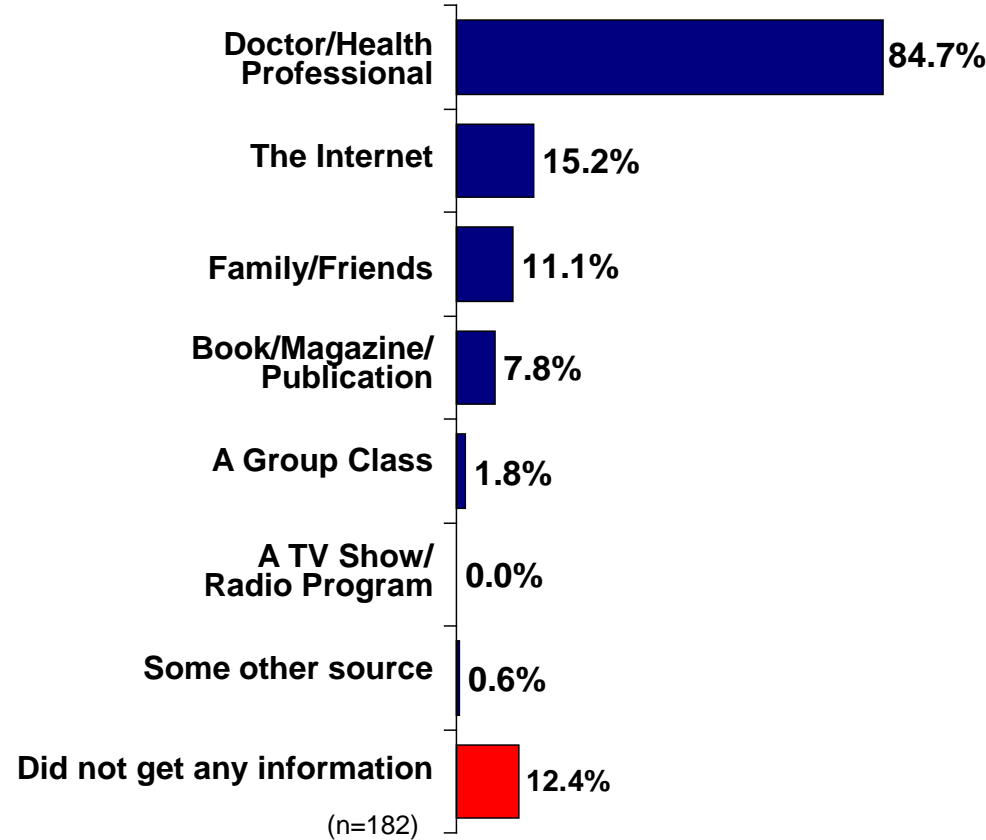


Section



Nearly nine in ten (87.6%) Ottawa County adults who have cancer (other than skin) have received information in the past 12 months on how to care for the condition. Although physicians and health care professionals top the list, other sources of information are the Internet, family/friends, and publications.

Information Sources for Management of Cancer (Other Than Skin)

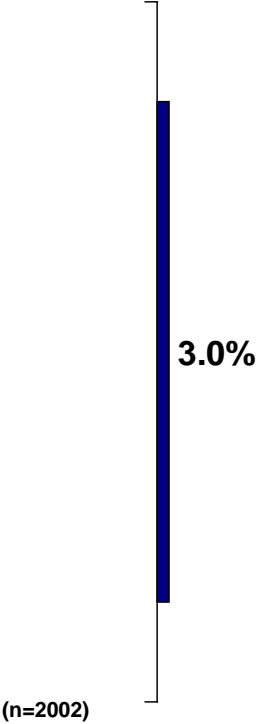


Q11.1: During the last 12 months, where did you get information about taking care of your [INSERT DISEASE]?

A small proportion (3.0%) of Ottawa County residents have been told they have chronic obstructive pulmonary disease (COPD). The disease is more common among residents who are older (55+), have less education (high school graduate or less), and live in the northeast section.

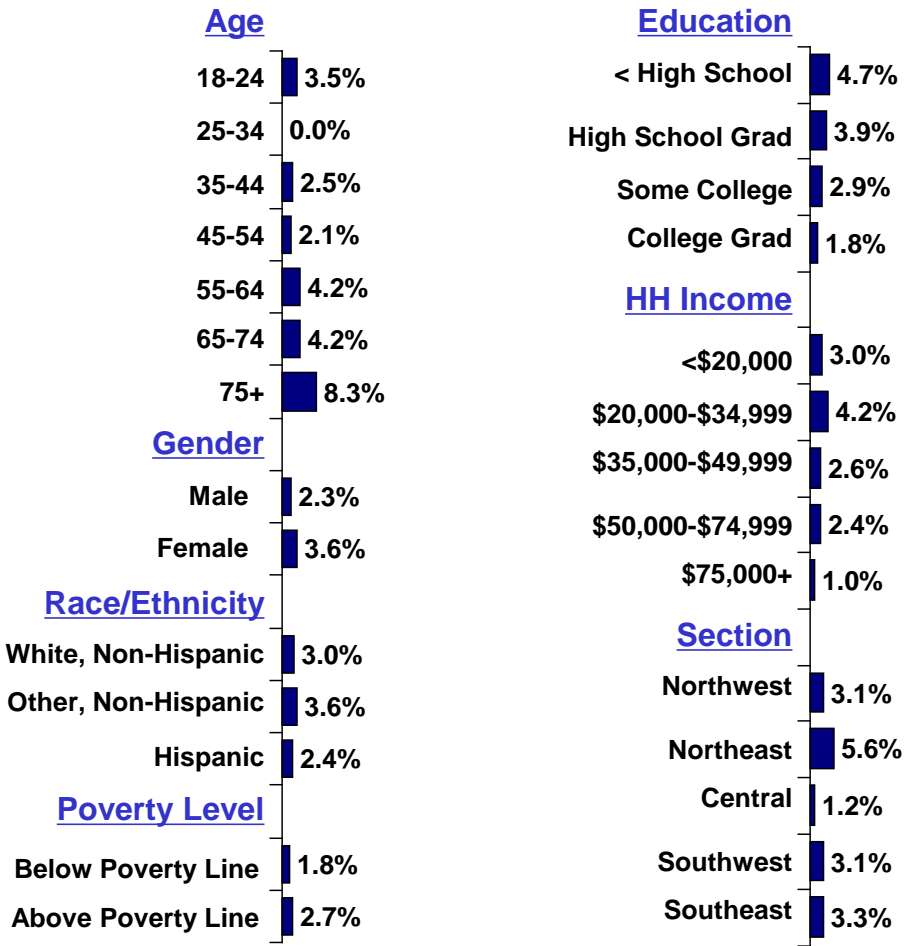
**COPD**

**Ever Told Have COPD\*  
(Total Sample)**



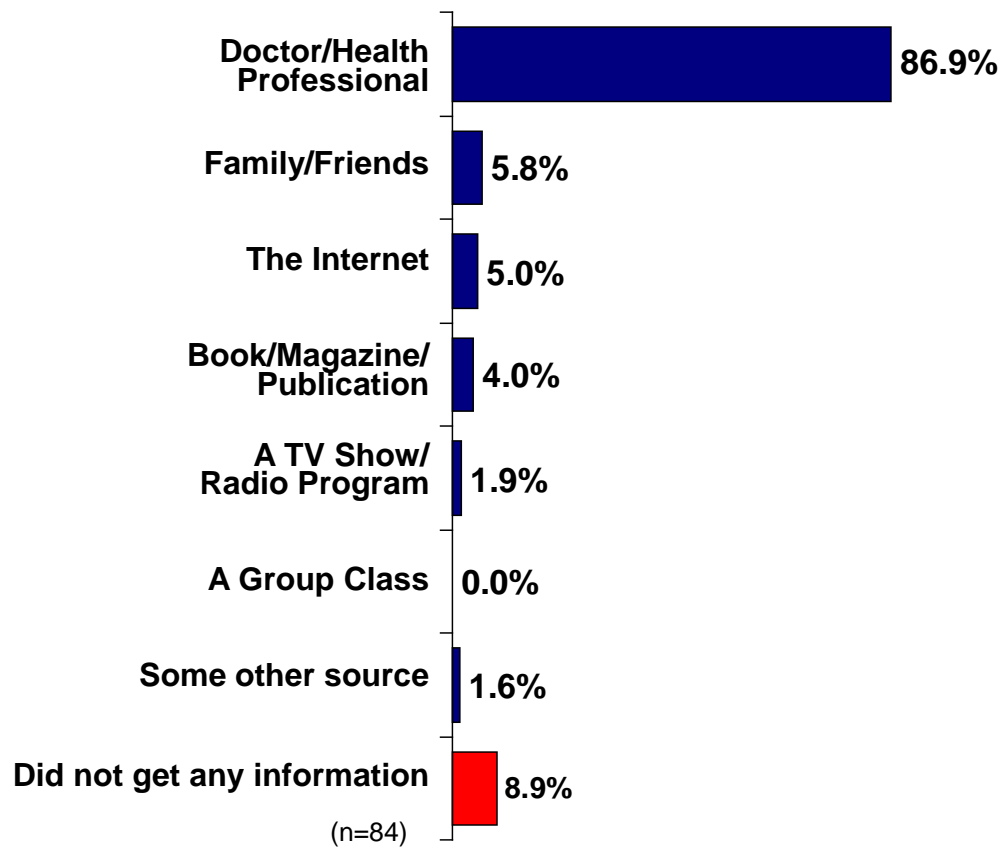
\*Among all adults, the proportion who reported that they were ever told by a doctor that they have chronic obstructive pulmonary disease (COPD), emphysema, or chronic bronchitis.

**Told Have COPD by Demographics**



Nine in ten (91.1%) Ottawa County adults who have COPD have received information in the past 12 months on how to care for the condition. The greatest information source for management of COPD is health care professionals; although used far less often, others include family/friends, the Internet, and publications.

Information Sources for Management of COPD

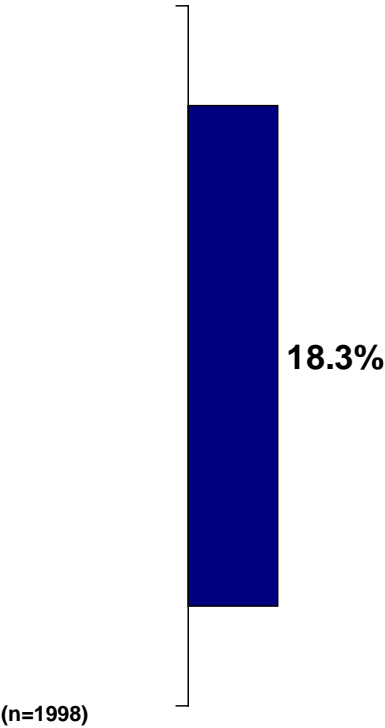


Q11.1: During the last 12 months, where did you get information about taking care of your [INSERT DISEASE]?

Less than one in five (18.3%) Ottawa County adults have ever been told by a health care professional they have arthritis. This rate, not surprisingly, rises dramatically with age. Non-Hispanic minority adults are least likely to have received this diagnosis. Having arthritis is more prevalent among women than men, and more prevalent among groups with less than a college education compared to those who attended college or received a college degree.

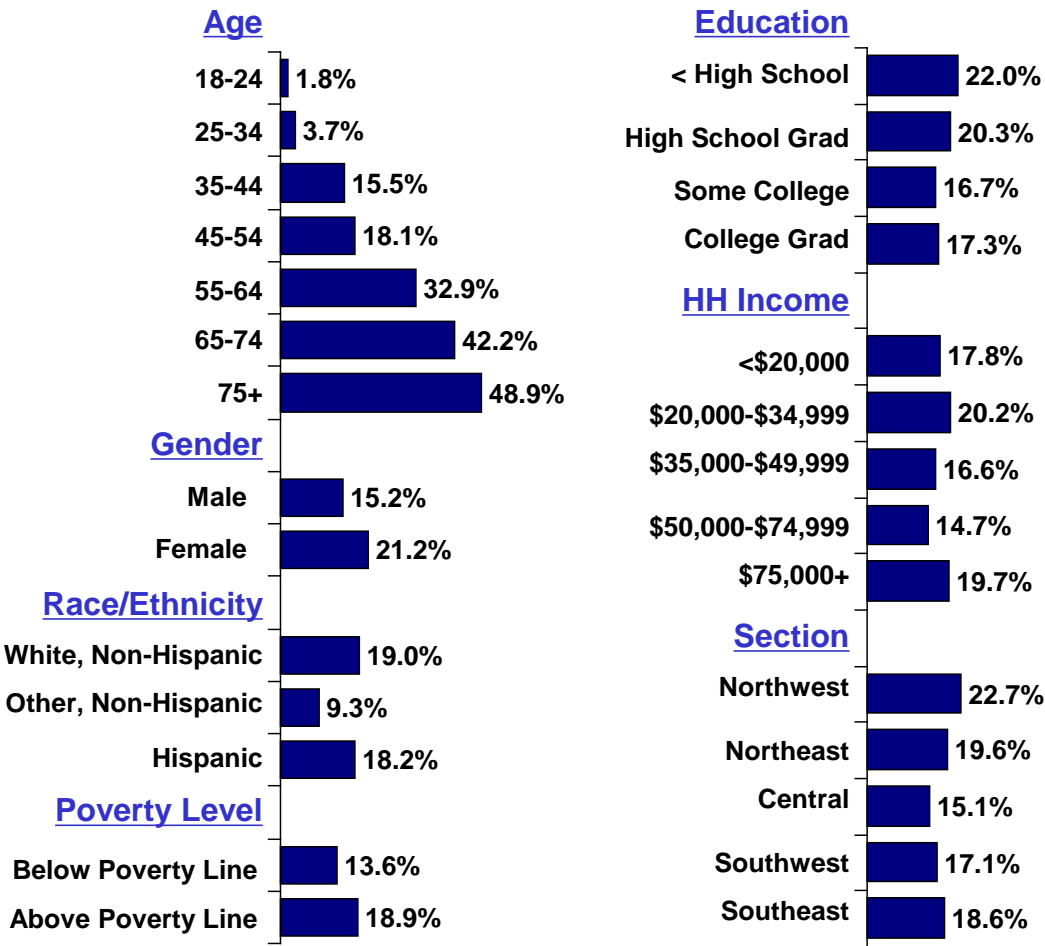
Arthritis

Ever Told Have Arthritis\*  
(Total Sample)



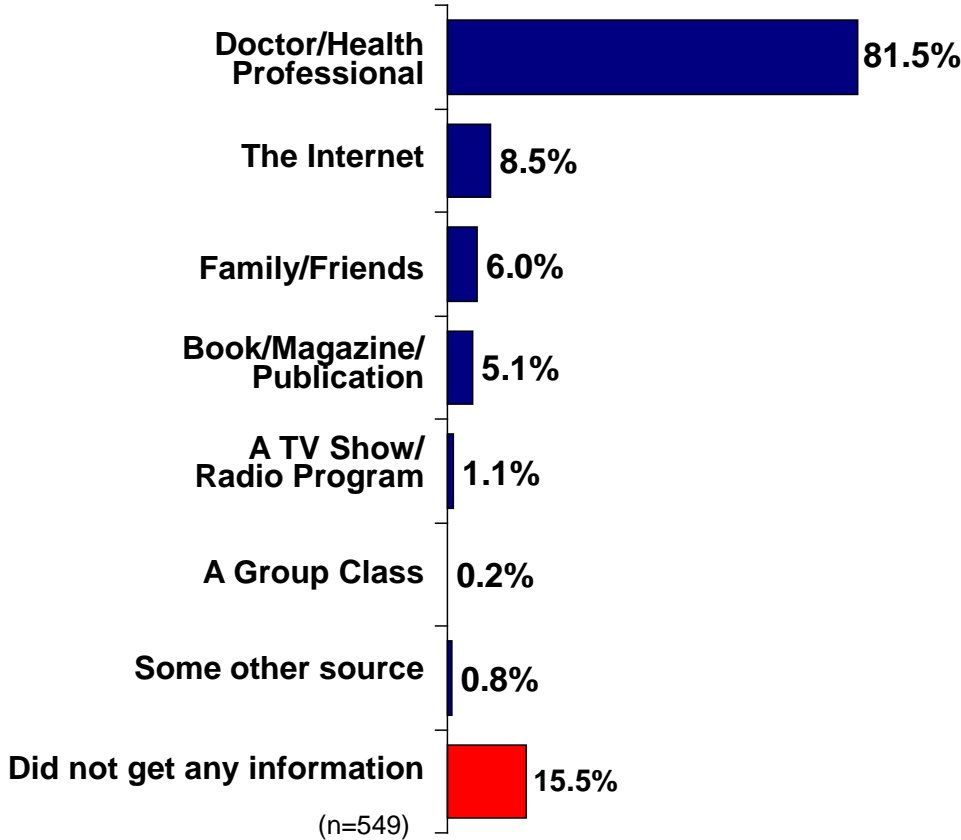
\*Among all adults, the proportion who reported ever being told by a health care professional that they had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia.

Told Have Arthritis by Demographics



More than eight in ten (84.5%) Ottawa County adults who have arthritis have received information in the past 12 months on how to care for the condition. In addition to physicians and health care professionals, others sources include the Internet, family/friends, and publications, although the latter are used far less often.

Information Sources for Management of Arthritis



# ***APPENDIX A***

---

# ***Respondent Demographics***

---



# Gender, Age, Race/Ethnicity and Section of Residence

	TOTAL	A. Northwest	B. Northeast	C. Central	D. Southwest	D. Southeast
<b>Gender</b>	(n=2008)	(n=460)	(n=74)	(n=175)	(n=948)	(n=339)
Male	48.8%	50.1%	41.4%	48.2%	53.2%	42.0%
Female	51.2%	49.9%	58.6%	51.8%	46.8%	58.0%
<b>Age</b>	(n=1995)	(n=459)	(n=74)	(n=173)	(n=943)	(n=335)
18 to 24	18.7%	12.9%	11.8%	23.4%	22.3%	15.4%
25 to 34	16.0%	16.0%	17.1%	14.4%	18.1%	13.6%
35 to 44	16.3%	17.1%	21.0%	17.1%	16.7%	13.7%
45 to 54	20.3%	23.6%	15.3%	19.1%	18.7%	22.3%
55 to 64	14.5%	17.4%	14.8%	13.9%	11.6%	17.4%
65 to 74	8.2%	7.4%	11.4%	7.7%	7.5%	9.9%
75 or Older	5.9%	5.7%	8.7%	4.4%	5.0%	7.8%
<b>Race/Ethnicity</b>	(n=1988)	(n=456)	(n=71)	(n=174)	(n=940)	(n=338)
White, non-Hispanic	83.4%	93.2%	81.9%	75.6%	74.5%	96.5%
Other, non-Hispanic	7.1%	4.1%	10.8%	14.1%	8.2%	2.1%
Hispanic	9.5%	2.7%	7.4%	10.3%	17.3%	1.4%
<b>Section of Ottawa County</b>	(n=1996)	(n=460)	(n=74)	(n=175)	(n=948)	(n=335)
Northwest	18.3%	100%				
Northeast	4.1%		100%			
Central	16.0%			100%		
Southwest	39.3%				100%	
Southeast	22.3%					100%

# Marital Status and Number of Household Members

	TOTAL	A. Northwest	B. Northeast	C. Central	D. Southwest	D. Southeast
<u>Marital Status</u>	(n=2000)	(n=459)	(n=74)	(n=174)	(n=945)	(n=338)
Married	59.3%	62.0%	51.6%	62.4%	52.6%	67.9%
Divorced	6.7%	7.6%	7.9%	6.8%	6.9%	5.3%
Widowed	2.9%	2.5%	4.7%	3.7%	2.5%	3.0%
Separated	0.7%	0.5%	0.0%	1.0%	1.2%	0.0%
Never married	29.7%	26.9%	34.2%	25.9%	36.1%	23.4%
A member of an unmarried couple	0.6%	0.5%	1.6%	0.3%	0.8%	0.4%
<u>Number of Children Less Than Age 18 At Home</u>	(n=2007)	(n=460)	(n=74)	(n=174)	(n=948)	(n=339)
None	58.0%	61.1%	56.1%	57.0%	56.1%	58.9%
One	17.1%	16.6%	21.5%	20.6%	17.9%	13.2%
Two	13.9%	15.0%	16.4%	10.2%	14.4%	14.9%
Three or more	11.0%	7.3%	6.0%	12.2%	11.7%	13.1%
<u>Number of Adults and Children in Household</u>	(n=2007)	(n=460)	(n=74)	(n=174)	(n=948)	(n=339)
One	8.9%	8.1%	14.2%	4.1%	10.6%	8.9%
Two	28.6%	34.9%	34.8%	22.0%	27.8%	28.4%
Three	17.0%	20.5%	10.9%	15.4%	14.9%	20.2%
Four	18.4%	18.1%	12.6%	17.7%	19.0%	19.6%
Five	12.4%	8.1%	5.6%	24.7%	11.2%	10.8%
More than five	14.6%	10.2%	21.8%	16.2%	16.6%	12.1%

# Education and Employment Status

	TOTAL	A. Northwest	B. Northeast	C. Central	D. Southwest	D. Southeast
<u>Education</u>	(n=2000)	(n=458)	(n=74)	(n=173)	(n=946)	(n=339)
Never attended school, or only Kindergarten	0.5%	0.0%	0.0%	0.0%	0.0%	2.2%
Grades 1-8 (Elementary)	2.1%	1.3%	4.0%	0.3%	4.1%	0.5%
Grades 9-11 (Some high school)	5.9%	5.9%	7.5%	5.3%	7.3%	3.5%
Grade 12 or GED (High school graduate)	28.0%	25.5%	27.8%	31.3%	27.3%	29.1%
College 1 year to 3 years (Some college)	33.2%	35.3%	34.9%	34.4%	31.9%	31.9%
College 4 years or more (College graduate)	30.3%	31.9%	25.7%	28.7%	29.4%	32.9%
<u>Employment Status</u>	(n=2001)	(n=459)	(n=74)	(n=175)	(n=944)	(n=338)
Employed for wages	54.0%	49.3%	59.1%	60.0%	52.7%	54.9%
Self-employed	6.6%	4.7%	7.1%	5.0%	7.7%	7.5%
Out of work for more than a year	2.6%	3.1%	0.0%	6.1%	2.0%	1.2%
Out of work for less than a year	2.0%	1.2%	1.0%	2.9%	3.1%	0.4%
A homemaker	5.7%	8.0%	4.0%	5.9%	5.0%	5.4%
A student	5.7%	5.5%	0.0%	3.3%	7.7%	5.3%
Retired	18.7%	21.8%	24.0%	14.0%	16.9%	21.1%
Unable to work	4.6%	6.5%	4.7%	2.8%	4.7%	4.1%

# Household Income, Poverty Status and Military Service

	TOTAL	A. Northwest	B. Northeast	C. Central	D. Southwest	D. Southeast
<u>Household Income</u>	(n=1210)	(n=292)	(n=50)	(n=105)	(n=569)	(n=188)
Less than \$10,000	3.8%	2.5%	0.8%	2.8%	4.0%	6.0%
\$10,000 to less than \$15,000	5.1%	5.2%	7.3%	4.9%	3.9%	7.2%
\$15,000 to less than \$20,000	4.9%	5.1%	4.2%	2.3%	7.5%	2.0%
\$20,000 to less than \$25,000	8.6%	10.5%	11.9%	5.0%	8.1%	9.2%
\$25,000 to less than \$35,000	13.4%	14.8%	3.8%	14.9%	15.4%	9.5%
\$35,000 to less than \$50,000	19.4%	19.0%	29.7%	16.6%	20.9%	16.8%
\$50,000 to less than \$75,000	18.3%	17.6%	20.7%	22.0%	16.3%	19.8%
\$75,000 or more	26.4%	25.4%	21.5%	31.6%	23.8%	29.5%
<u>Poverty Status</u>	(n=1210)	(n=292)	(n=50)	(n=105)	(n=569)	(n=188)
Income under poverty line	17.0%	11.9%	28.9%	20.9%	18.7%	13.6%
Income over poverty line	83.0%	88.1%	71.1%	79.1%	81.3%	86.4%
<u>Military Service</u>	(n=2008)	(n=460)	(n=74)	(N=175)	(n=948)	(n=339)
Served	8.2%	10.1%	5.4%	10.9%	6.0%	9.1%
Did not serve	91.8%	89.9%	94.6%	89.1%	94.0	90.9%