Understanding Who Our Patients Are

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Considering our patients…

- How do we operationalize this in the clinical encounter?
- When we have a patient in our office…
  - what is their life like in the community?
  - what strengths/supports?
  - what barriers do they face?
Perceived Barriers to Colonoscopy

Percent; 2014; Age 50 years old and older; Both genders
State; New Hampshire
--- 95%CI

- Never thought about it or no reason
- Didn’t need or didn’t know was needed
- Doctor didn’t order or advise needed
- No insurance coverage
- Haven’t had any problems
- Putting off or didn’t get around to
- Too painful
- Fear
- No family history
- Insurance deductible or co-payment too high
- Has had colonoscopy past 10 years
- Other medical conditions prohibit for test
- Preparation for the test
- Don’t have doctor
- Had another type of colorectal exam
- Other

Estimated percent of population

~26% are for reasons relating to the social determinants of health or access to healthcare
Breakdown of “Other” Perceived Barriers to Colonoscopy

Considering our patients…

Transplantation
Access to healthy foods and physical activity
Social support
Time off from work
Housing
Understanding documents and procedures

~19% are for reasons relating to the social determinants of health or access to healthcare
How Health is Produced in Communities

Societal Influences
Social & Neighborhood Conditions
Risk Behaviors
Disease And/or Injury
Mortality or Recovery

Preventive Health
Sick Care

Health Factors
Health Outcomes

Inequities
Health Disparities

Adapted from Dr. Anthony Iton’s presentation
"Achieving Health Equity: Advancing Community Health & Moving the Needle on the SDOH"

The Two New Hampshires
Definition: Rural and Metro NH

- Rural and mountainous north and west significantly different from the more urban and populous counties in southeastern NH
- The latter are economically and officially linked (by the US Census Bureau) to the Boston Metropolitan area because of proximity to Boston, shared labor market, and industry connections and clusters

Two New Hampshires: What does it mean? Ross Gittell, CCSNH 2013  www.ccsnh.edu/whitepaper
The Two New Hampshires
Definition: Rural and Metro NH

- **Rural Counties**
  - Cheshire, Sullivan, Belknap, Carroll, Grafton, Coos

- **Boston Metro Counties**
  - Rockingham, Hillsborough, Strafford, Merrimack

The Two New Hampshires: What does it mean? Ross Gittle, CCSNH 2013 www.ccshn.edu/whitepaper

- **Rural Counties**
  - 57 residents per square mile
  - Very high percentage of older adults
    - As a separate state, Rural NH would have the 2nd highest percentage of residents over 65 years old (only behind FL)

- **Boston Metro Counties**
  - 338 residents per square mile
    - 3/4 of State’s resident population
    - 1/3 of the state’s total land area
  - Younger
  - Higher educational attainment
  - Higher personal income
Let's take a look at how...

NEW HAMPSHIRE IS CHANGING

Geography Matters Now

Statewide median age was 41.1 in 2010
More So Over Time

Projected Change in NH Population

Aged population will both age in place and grow due to migration
Racial/Ethnic Diversity is Increasing

Racial/Ethnic Minorities produced 50% of New Hampshire's gain from 2000-2010

Minorities represent 7.7% of New Hampshire's population in 2010 (4.9% in 2000)

http://scholars.unh.edu/cgi/viewcontent.cgi?article=1163&context=carsey

Racial/Ethnic Diversity is Increasing

Racial/Ethnic Minorities produced 50% of New Hampshire's gain from 2000-2010

Minorities represent 8.7% of New Hampshire's population in 2014 (4.9% in 2000)

http://scholars.unh.edu/cgi/viewcontent.cgi?article=1163&context=carsey
How Diverse are We?

Manchester = 18%
Nashua = 21%
Concord = 10%
Berlin = 5%
Hanover = 26%

http://scholars.unh.edu/cgi/viewcontent.cgi?article=1163&context=carsey
NH’s Growing Diversity

Racial/ethnic diversity is increasing
That diversity is spatially concentrated
And diversity is increasing from youngest to oldest
It's important to disaggregate your data to identify disparities 
...by age
...by income
...by education
...by insurance status
...by race/ethnicity

Cancer in New Hampshire
Age adjusted incidence rates by race/ethnicity 2008-2012

All Cancer - age adjusted rate

- White Caucasian
- White Hispanic
- African American
- Asian or Pacific Islander
- American Indian /Alaskan Native
What about looking at disparities in Met Mammography by Income?

**SCREENING BY INCOME?**

**Met Mammography by Income**
**NH 2014 BRFSS**

<table>
<thead>
<tr>
<th>Household income</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>$75,000 or more*</td>
<td>90.0</td>
</tr>
<tr>
<td>$50,000 to $74,999*</td>
<td>89.0</td>
</tr>
<tr>
<td>$35,000 to $49,999*</td>
<td>87.0</td>
</tr>
<tr>
<td>$25,000 to $34,999</td>
<td>85.0</td>
</tr>
<tr>
<td>$15,000 to $24,999</td>
<td>83.0</td>
</tr>
<tr>
<td>Less than $15,000*</td>
<td>80.0</td>
</tr>
</tbody>
</table>
**SDOH: NH Data**

- In 2014, NH females with an annual income under $15,000 were significantly less likely to report having a mammogram in the past 2 years than females with income over $35,000.


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**Met Pap Test by Income NH 2014 BRFSS**

<table>
<thead>
<tr>
<th>Household Income</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $15,000*</td>
<td>0.0</td>
</tr>
<tr>
<td>$15,000 to $24,999</td>
<td>70.0</td>
</tr>
<tr>
<td>$25,000 to $34,999</td>
<td>80.0</td>
</tr>
<tr>
<td>$35,000 to $49,999</td>
<td>90.0</td>
</tr>
<tr>
<td>$50,000 to $74,999</td>
<td>100.0</td>
</tr>
<tr>
<td>$75,000 or more*</td>
<td>100.0</td>
</tr>
</tbody>
</table>

SDOH: NH Data

- In 2014, NH adult females with an annual income under $24,999 were significantly less likely to report having a Pap test in the past three years than females who earn $75,000 or more.


Met CRC Screening by Income
NH 2014 BRFSS

<table>
<thead>
<tr>
<th>Household Income</th>
<th>CRC Screening 50-75</th>
</tr>
</thead>
<tbody>
<tr>
<td>$75,000 or more*</td>
<td>[Bar Graph]</td>
</tr>
<tr>
<td>$50,000 to $74,999*</td>
<td>[Bar Graph]</td>
</tr>
<tr>
<td>$35,000 to $49,999</td>
<td>[Bar Graph]</td>
</tr>
<tr>
<td>$25,000 to $34,999*</td>
<td>[Bar Graph]</td>
</tr>
<tr>
<td>$15,000 to $24,999*</td>
<td>[Bar Graph]</td>
</tr>
<tr>
<td>Less than $15,000*</td>
<td>[Bar Graph]</td>
</tr>
</tbody>
</table>

*Income levels are approximate.
In 2014, NH adults with an annual income under $34,999 were significantly less likely to report having a colonoscopy than adults who earned $50,000 or more.
Met Pap Test by Education
NH 2014 BRFSS

Pap Test Women 21-65

<table>
<thead>
<tr>
<th>Educational attainment</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Graduate</td>
<td>90.1</td>
</tr>
<tr>
<td>Some Post-High School</td>
<td>85.4</td>
</tr>
<tr>
<td>High School Diploma or GED</td>
<td>83.3</td>
</tr>
<tr>
<td>Less Than High School*</td>
<td>60.7</td>
</tr>
</tbody>
</table>

Can we see differences by INDUSTRY?
**CRC Screening**

Employed or self-employed NH residents age between 50-75 who did not have colorectal screening as recommended by the USPSTF (2012 & 2013)

**Mammogram**

Employed or self-employed NH women aged 50 to 74 who did not have a mammogram in the past two years (BRFSS 2012)
Pap Test

NH female residents ages between 21-65 (employed or self-employed) who did not meet the USPTF pap test recommendation (have a test within the past 3 years) [2012]

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statewide (41,596)</td>
<td>13.1%</td>
</tr>
<tr>
<td>All Industries (27,181)</td>
<td>13%</td>
</tr>
<tr>
<td>OtherServices (2,926)</td>
<td>25.6%</td>
</tr>
<tr>
<td>AccomFoodServ (3,697)</td>
<td>31.2%</td>
</tr>
<tr>
<td>HltCareSocialAsst (5,191)</td>
<td>9.5%</td>
</tr>
<tr>
<td>Education (3,535)</td>
<td>10.7%</td>
</tr>
<tr>
<td>AdminSupp/Waste (948)</td>
<td>10.4%</td>
</tr>
<tr>
<td>ProTechSci (1,160)</td>
<td>8.8%</td>
</tr>
<tr>
<td>WholesaleRetail (4,025)</td>
<td>17.6%</td>
</tr>
<tr>
<td>Manufacturing (2,387)</td>
<td>15.3%</td>
</tr>
</tbody>
</table>

We’ve looked at SDOH statewide…

LET’S LOOK AT S.D.O.H. MORE LOCALLY
Colorectal Cancer Screening: A Tale of Two Regions

Determinants of Health (2008-2012)

<table>
<thead>
<tr>
<th></th>
<th>North Country (public health region)</th>
<th>Greater Nashua (public health region)</th>
<th>NH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Vulnerability Index (SVI): summary of 15 indicators</td>
<td>3.9</td>
<td>2.4</td>
<td>2.2</td>
</tr>
<tr>
<td>Adult education, age 25 or more without a high school diploma or equivalent (%)</td>
<td>13.9</td>
<td>8.2</td>
<td>8.6</td>
</tr>
<tr>
<td>Children, population age less than 18 (%)</td>
<td>19.4</td>
<td>23.8</td>
<td>21.7</td>
</tr>
<tr>
<td>Elderly, population age 65 and over (%)</td>
<td>15.9</td>
<td>11.8</td>
<td>13.7</td>
</tr>
<tr>
<td>Health insurance, age less than 65 without insurance (%)</td>
<td>18.0</td>
<td>9.9</td>
<td>12.0</td>
</tr>
<tr>
<td>Minority, Hispanic or non-white race (%)</td>
<td>4.2</td>
<td>12.7</td>
<td>7.8</td>
</tr>
<tr>
<td>Poverty, population living below Federal poverty level (%)</td>
<td>13.0</td>
<td>6.2</td>
<td>8.4</td>
</tr>
<tr>
<td>Per capita income (in 2012 inflation-adjusted $)</td>
<td>$24,946</td>
<td>$36,439</td>
<td>$32,758</td>
</tr>
</tbody>
</table>

https://wisdom.dhhs.nh.gov/wisdom/

A Tale of Two Regions

<table>
<thead>
<tr>
<th></th>
<th>North Country</th>
<th>Greater Nashua</th>
<th>NH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorectal Cancer Screening</td>
<td>*66.6% (2014)</td>
<td>80.0% (2014)</td>
<td>77.8% (2014)</td>
</tr>
<tr>
<td></td>
<td>15,422 adults</td>
<td>57,951 adults</td>
<td>383,479 adults</td>
</tr>
<tr>
<td>Colorectal Cancer Incidence</td>
<td>38.9 Per 100K people (2008 - 2012)</td>
<td>41.8 Per 100K people (2008 - 2012)</td>
<td>39.9 Per 100K people (2008 - 2012)</td>
</tr>
<tr>
<td></td>
<td>152 cases</td>
<td>423 cases</td>
<td>3,008 cases</td>
</tr>
<tr>
<td>Colorectal Cancer Mortality</td>
<td>19.3 Per 100K people (2010 - 2014)</td>
<td>13.1 Per 100K people (2010 - 2014)</td>
<td>13.5 Per 100K people (2010 - 2014)</td>
</tr>
<tr>
<td></td>
<td>79 cases</td>
<td>130 cases</td>
<td>1,041 cases</td>
</tr>
</tbody>
</table>
Colorectal Cancer Screening

Percent of adults who are aged 50+ that have ever had a sigmoidoscopy or a colonoscopy exam; Age 50 and older; Both genders
Public Health Region: 2014

A Tale of Two Regions

<table>
<thead>
<tr>
<th>North Country</th>
<th>Greater Nashua</th>
<th>NH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast Cancer Screening</td>
<td>72.4% (2014)</td>
<td>80.6% (2014)</td>
</tr>
<tr>
<td>8,971 adults</td>
<td>29,877 adults</td>
<td>211,116 adults</td>
</tr>
</tbody>
</table>

Breast Cancer Incidence

| | North Country | Greater Nashua | NH |
| | *116.3* Per 100K people (2008 - 2012) | 138.5 Per 100K people (2008 - 2012) | 136.0 Per 100K people (2008 - 2012) |
| | 221 cases | 819 cases | 5,508 cases |

Breast Cancer Mortality

| | North Country | Greater Nashua | NH |
| | 15.0 Per 100K people (2010 - 2014) | 19.6 Per 100K people (2010 - 2014) | 20.1 Per 100K people (2010 - 2014) |
| | 35 cases | 116 cases | 875 cases |
Breast Cancer Incidence

Putting the SDOH into Action in the Community

CDC: [http://www.cdc.gov/socialdeterminants/tools/index.htm](http://www.cdc.gov/socialdeterminants/tools/index.htm)

Community Toolbox:

County Health Rankings:
Example: CCC Equity Task Force

- Tools to help small businesses promote cancer screenings and increase accessibility to cancer screenings
- Focus group
- White paper

Impacting SDOH in Nashua
NH Data Sources: Demo

- NH Health WISDOM:  
  https://wisdom.dhhs.nh.gov/wisdom/#Topic_0A46F3243F264DBABDB40F4B8BABE471_Anon

- NH Social Vulnerability Index:  
  http://nhdphs.maps.arcgis.com/home/
SDOH Resources

- WHO: http://www.who.int/social_determinants/en/
- A New Way to Talk About the SDOH: http://www.rwjf.org/content/dam/farm/reports/reports/2010/rwjf63023
- CDC http://www.cdc.gov/socialdeterminants/

Thank you!

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- Ashley Conley, MS, CPH, CHEP aconley@sjhhnh.org