

Lifestyle Changes Better Indicator of Chronic Disease

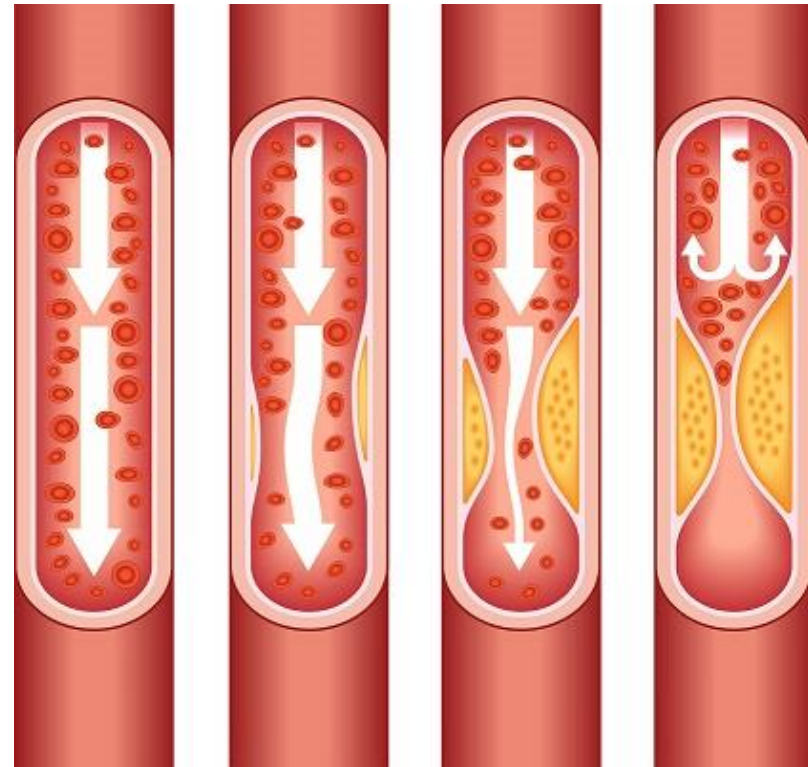
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Thinkful Capstone 3

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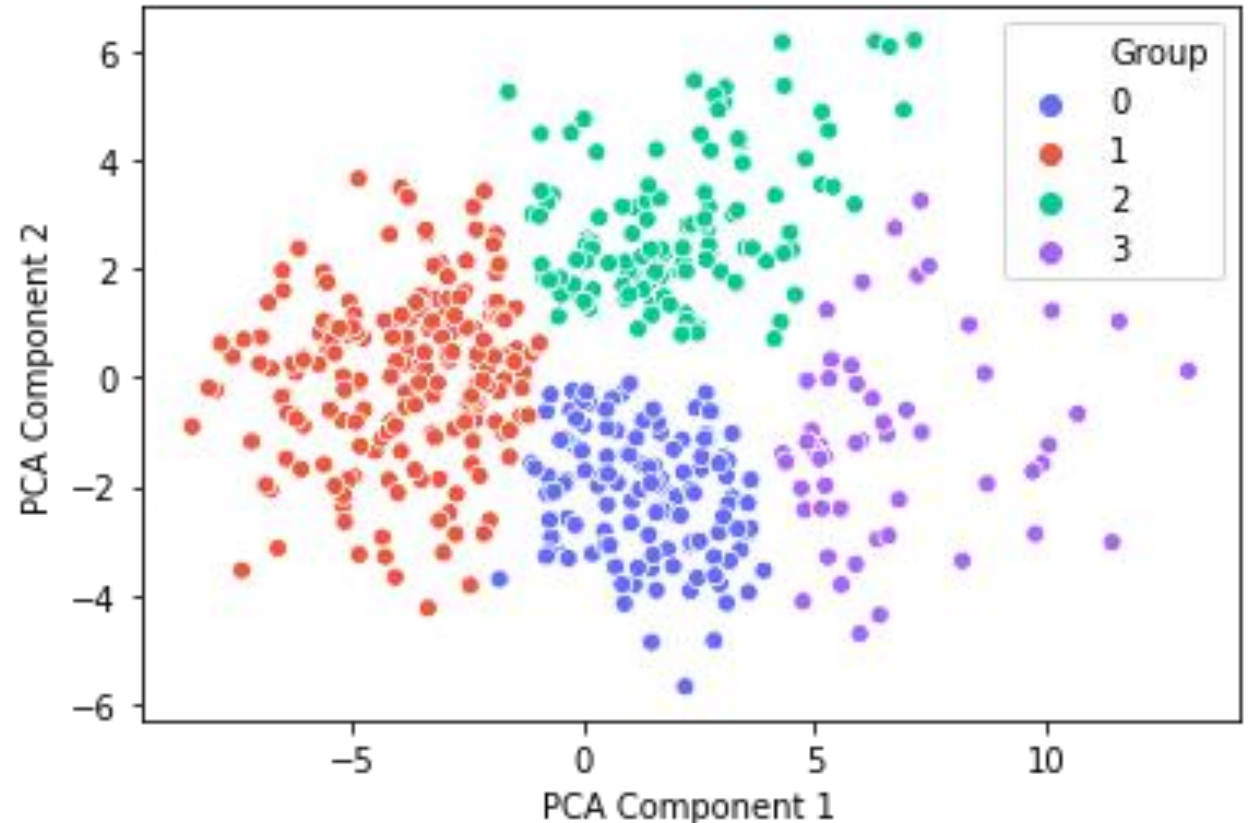
Many chronic disease can be prevented

- Heart disease is the highest killer in the US
- Blood pressure medications
- Cholesterol screenings
- Physical Activity

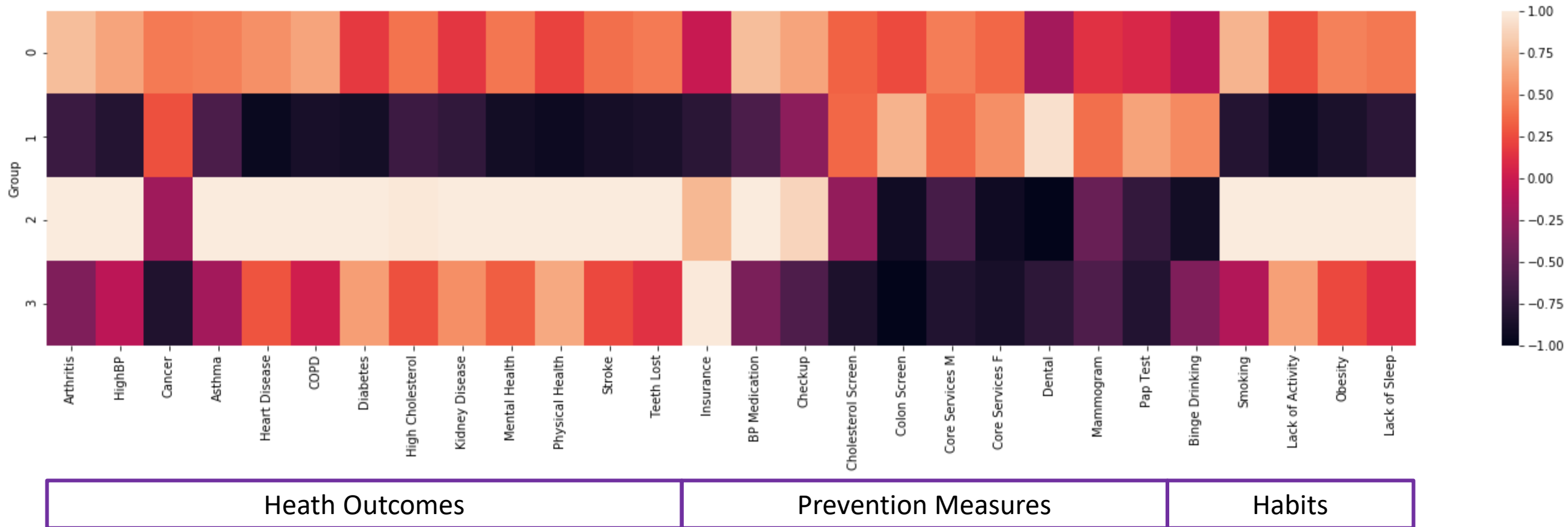


Who needs to be targeted for prevention?

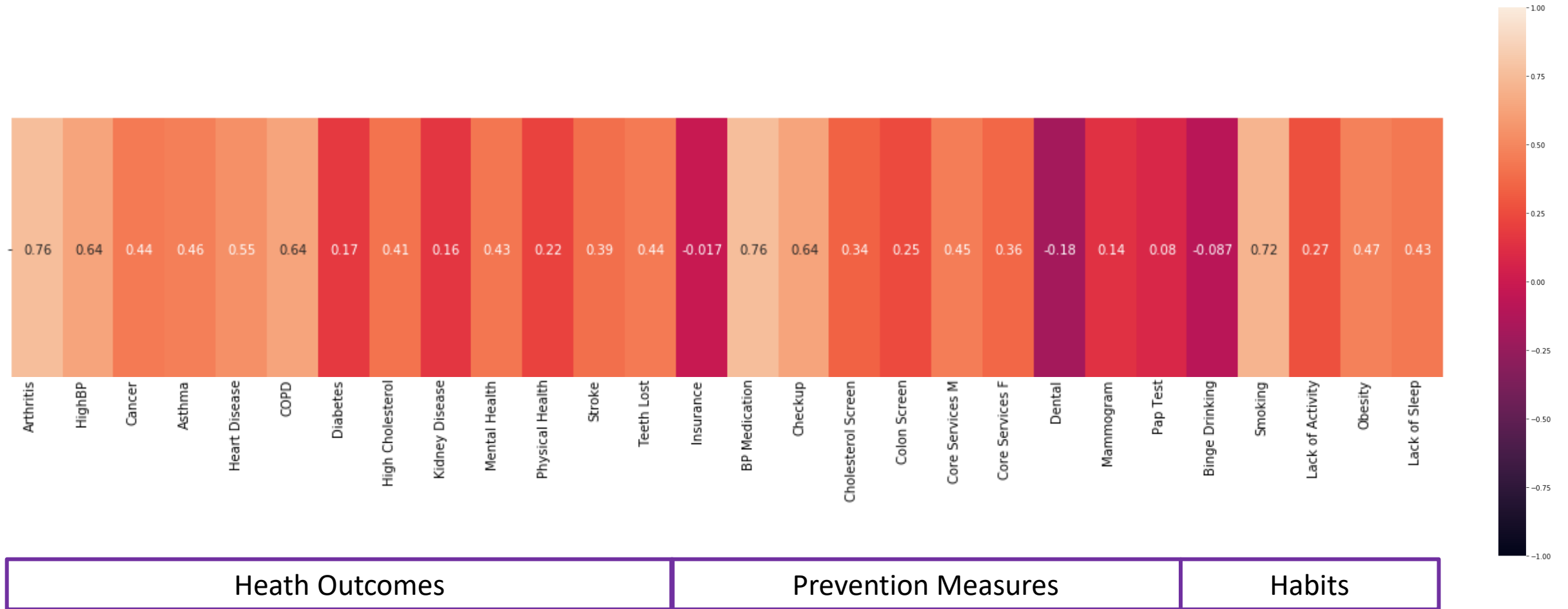
- Kmeans clusters health data into four groups
 - Health Outcomes
 - Prevention Measures
 - Behavioral Risk Factors



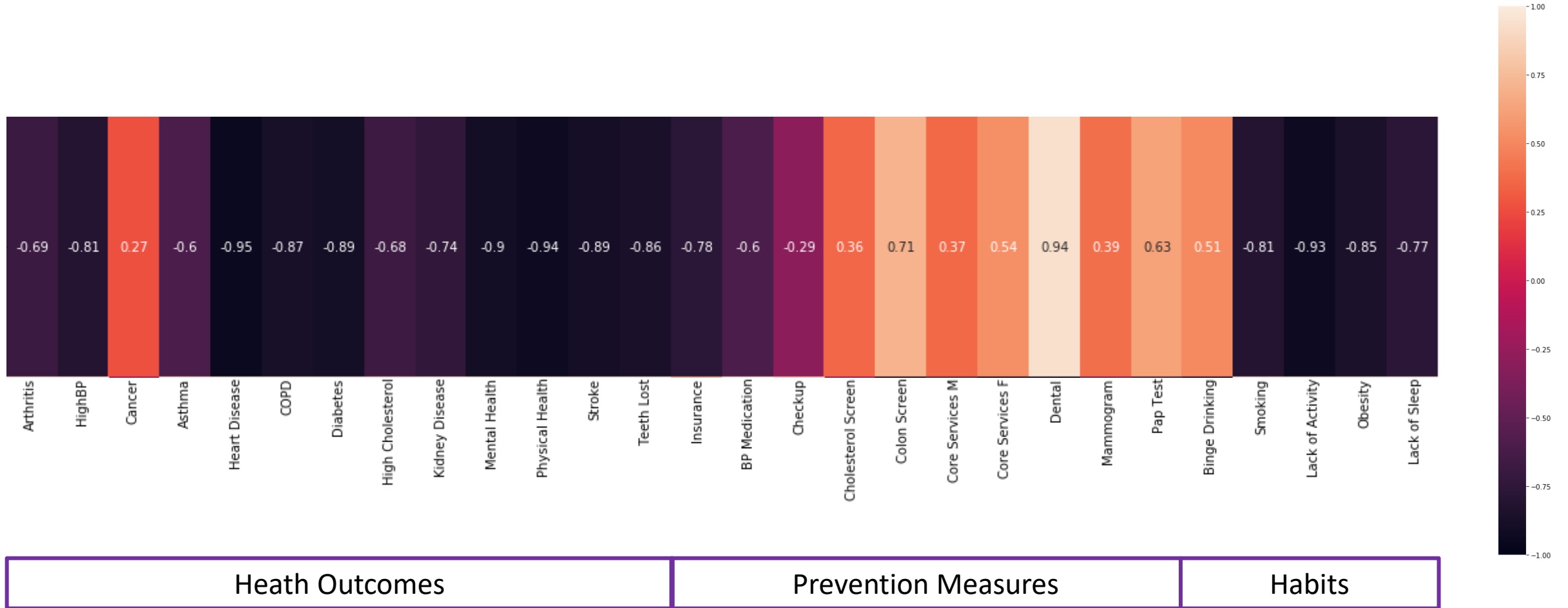
Who needs to be targeted for prevention?



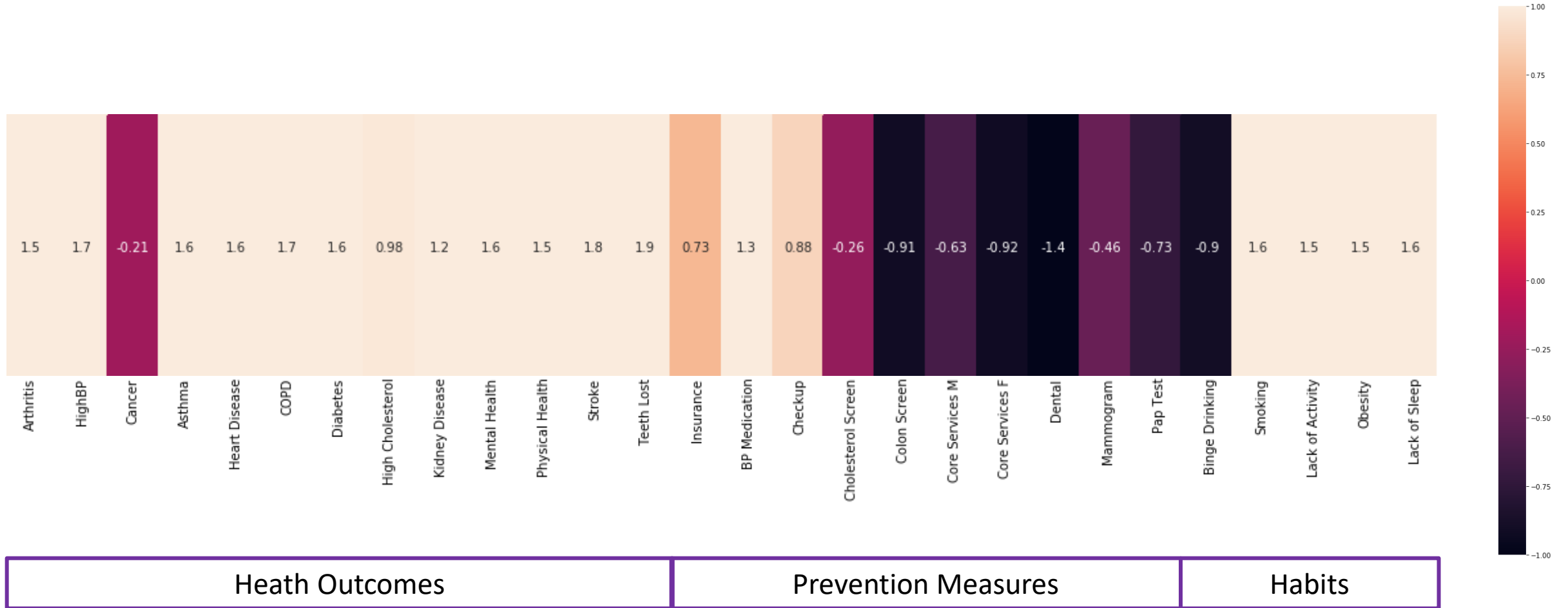
Group 0 – Catch-all



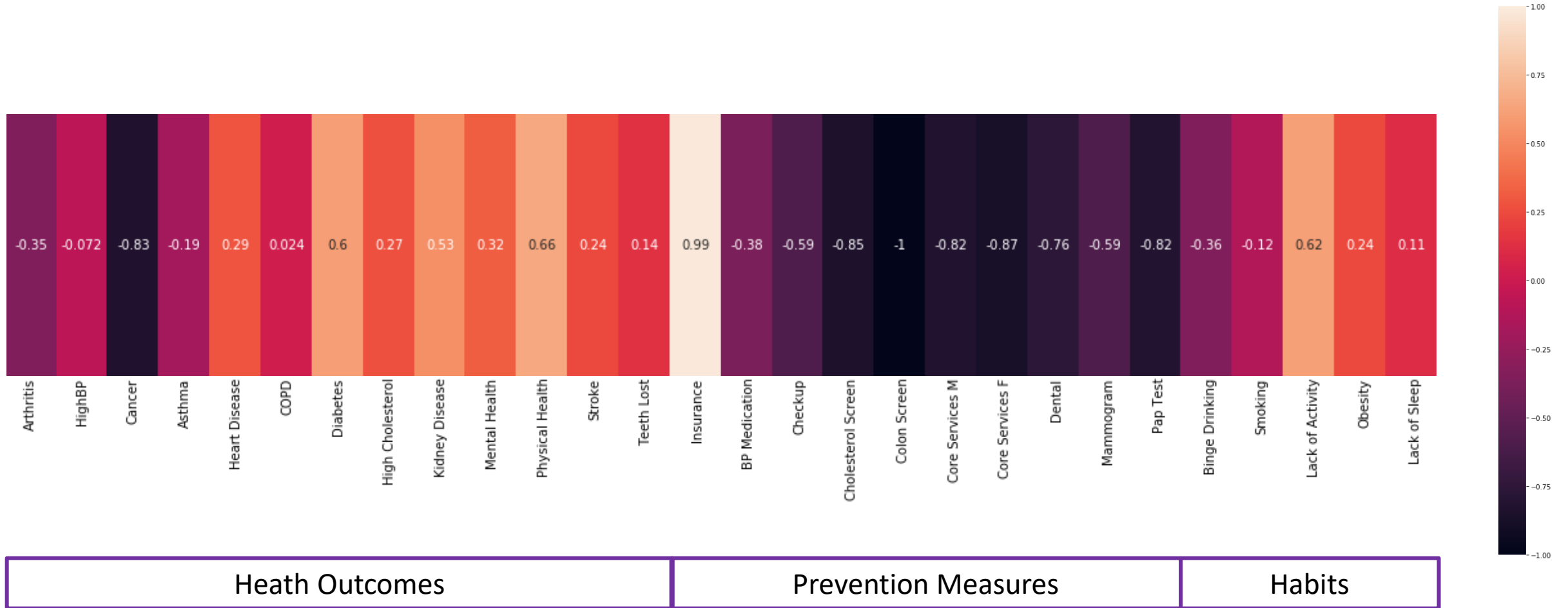
Group 1 – Healthy



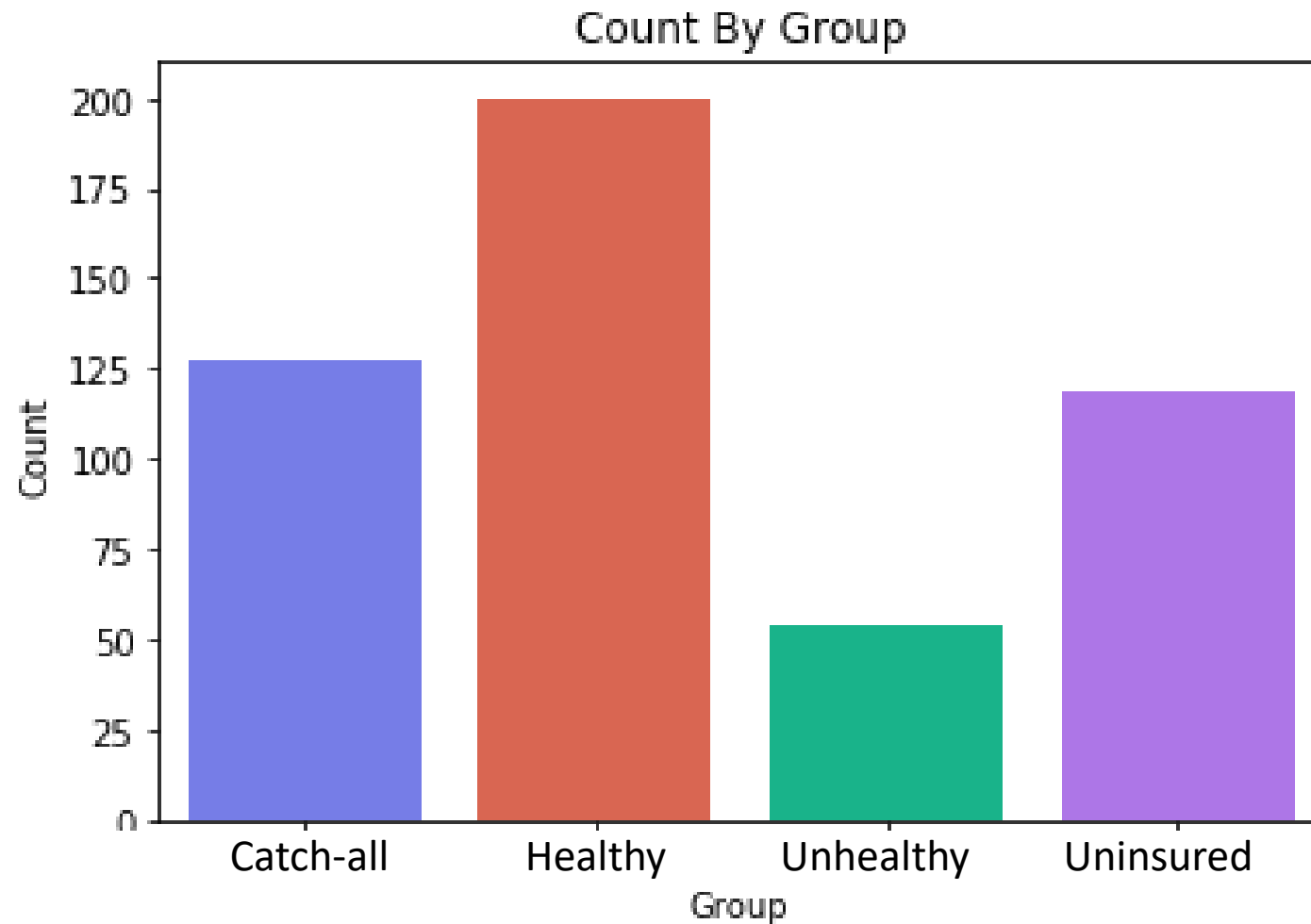
Group 2 – Unhealthy

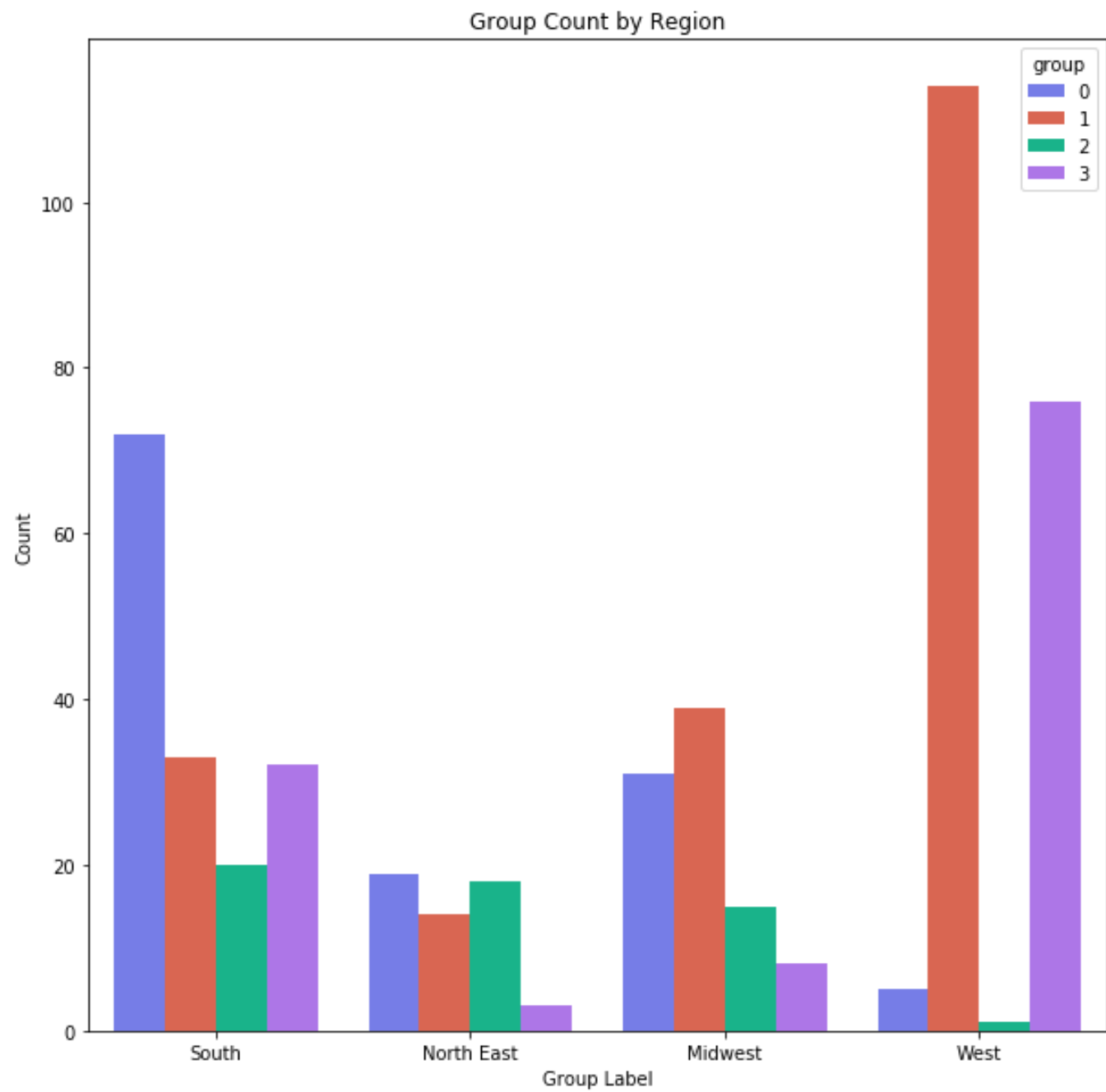


Group 3 – Uninsured



Healthy Group Dominates





Geographic Distribution of Groups



Geographic Distribution of Groups



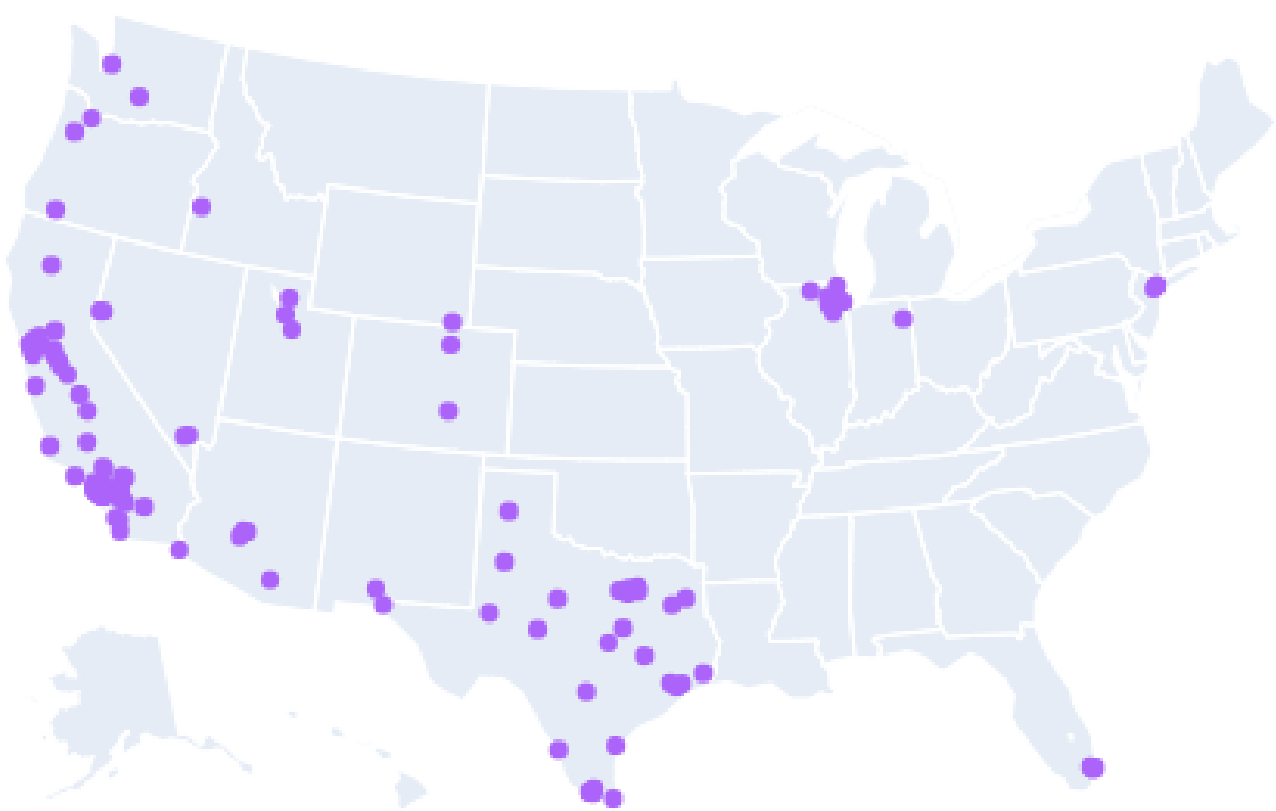
Geographic Distribution of Groups



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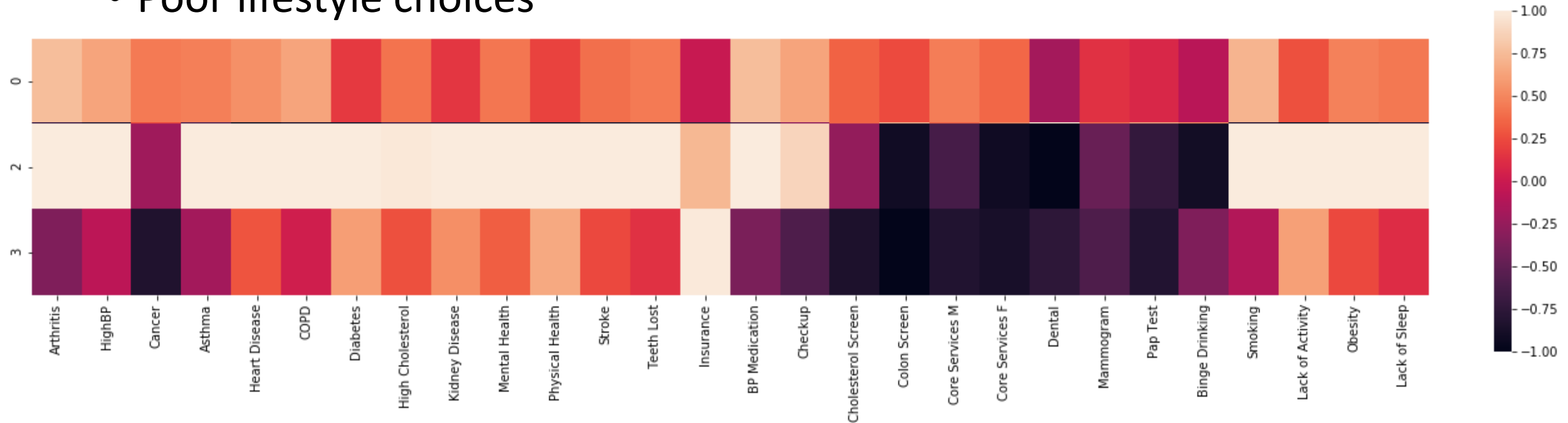
Geographic Distribution of Groups



- Group
- Catch-all
 - Healthy
 - Unhealthy
 - Uninsured

Prevention isn't the most effective strategy

- Lack of access to healthcare
- Poor lifestyle choices



How do we lower rates of heart disease?

- Focus on lifestyle changes
- Medications and screenings
- Incorporate into insurance

1. Cancer (if yes, location and type of cancer below) Location and type of cancer _____ Circle one: <u>Stage 1</u> / Stage 2 / Stage 3 / higher Date of remission (if applicable): / /	Yes <input type="checkbox"/>	No <input type="checkbox"/>
2. Cardiac or Heart Disease / Disorder if yes, check all that apply: ____ heart attack, ____ bypass surgery or angioplasty on single vessel, or ____ bypass surgery or angioplasty on multiple vessels; ____ other (list here): _____ such as: abnormal heart rhythms, aneurysm, aortic dissection, heart failure (congestive or otherwise), heart valve disorder, or peripheral arterial disease	Yes <input type="checkbox"/>	No <input type="checkbox"/>
3. Diabetes (if yes, list type 1 or 2) Type: _____ List 3 most recent HbA1c / fasting blood sugar levels: 1) _____ 2) _____ 3) _____	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4. High Cholesterol (if yes, list 3 most recent readings) 1) _____ 2) _____ 3) _____	Yes <input type="checkbox"/>	No <input type="checkbox"/>
5. High Blood Pressure (if yes, 3 most recent readings) 1) _____ 2) _____ 3) _____	Yes <input type="checkbox"/>	No <input type="checkbox"/>
6. AIDS or HIV+	Yes <input type="checkbox"/>	No <input type="checkbox"/>
7. Arthritis (i.e. rheumatoid, osteo, psoriatic, gout)	<input type="checkbox"/>	<input type="checkbox"/>
8. Back Disorder (i.e. degenerative disk disease, herniated disk, spinal fusion, spondylitis, strain)	<input type="checkbox"/>	<input type="checkbox"/>
9. Benign Growth (i.e. tumor, cyst)	<input type="checkbox"/>	<input type="checkbox"/>
10. Bowel (i.e. irritable bowel IBS, Crohn's ileitis)	<input type="checkbox"/>	<input type="checkbox"/>
11. Circulatory System Disease	<input type="checkbox"/>	<input type="checkbox"/>
12. Immune / Autoimmune Disease	<input type="checkbox"/>	<input type="checkbox"/>
13. Kidney Disorder (i.e. nephritis, renal failure)	<input type="checkbox"/>	<input type="checkbox"/>
14. Liver Disease (i.e. cirrhosis, hepatitis A, B, C, E)	<input type="checkbox"/>	<input type="checkbox"/>
15a. Mental Illness (i.e. mild or major depression, anxiety, bipolar disorder, or schizophrenia)	<input type="checkbox"/>	<input type="checkbox"/>
15b. Are you currently receiving counseling?	<input type="checkbox"/>	<input type="checkbox"/>
16. Muscular Disorder	<input type="checkbox"/>	<input type="checkbox"/>
17. Respiratory (i.e. asthma, allergies, pneumonia, COPD, emphysema, bronchitis)	<input type="checkbox"/>	<input type="checkbox"/>
18. Stomach (i.e. ulcer, acid reflux, GERD)	<input type="checkbox"/>	<input type="checkbox"/>
19. Substance dependency (i.e. alcohol, drug)	<input type="checkbox"/>	<input type="checkbox"/>
20. Transplants (if yes, list organ(s) below)	<input type="checkbox"/>	<input type="checkbox"/>

Further research could refine these groups

- Gender information
- Age ranges
- More cities surveyed

Geographic Distribution of Groups

