Increasing Colorectal Cancer Screening among Asian Americans

Sunmin Lee, ScD, MPH
Professor
Department of Epidemiology and Biostatistics
University of Maryland School of Public Health

Director, Community Outreach and Engagement
University of Maryland Greenebaum Comprehensive Cancer Center
Who are Asian Americans?
Asian Americans

- Asian American: person of Asian ancestry who was born in or immigrated to the United States

- 95% of total AAPI

- From the Far East, Southeast Asia, and Indian Subcontinent
- 31 distinct groups
- >100 languages and dialects
  - Aggregated Asian data may mask subgroup difference

- 70% foreign born; >65% speak native language; 35% linguistically isolated

- Historically understudied population
U.S. Population Distribution (%)

<table>
<thead>
<tr>
<th>Group</th>
<th>2010</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>64</td>
<td>53</td>
</tr>
<tr>
<td>African American</td>
<td>13</td>
<td>15</td>
</tr>
<tr>
<td>Hispanic</td>
<td>16</td>
<td>21</td>
</tr>
<tr>
<td>AAPI</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>American Indians</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

2010 US Census
Limited English Proficiency

Estimated Percentages of Limited English Proficiency (LEP)

Percentage: 0.0% 10.0% 20.0% 30.0% 40.0% 50.0% 60.0%

- U.S. (overall): 8.6%
- Asian (overall): 32.4%
  - Vietnamese: 50.5%
  - Japanese: 17.9%
  - Chinese: 41.5%
  - Japanese: 17.9%
  - Filipino: 18.5%
  - Asian Indian: 21.9%
  - Korean: 41.3%
  - Vietnamese: 50.5%

APIAHF (2011)
Cancer Statistics for Asian Americans
## Cancer Is Leading Cause of Death among Asians

<table>
<thead>
<tr>
<th></th>
<th>Whites</th>
<th>Blacks</th>
<th>Asian/Pacific Islander</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Heart Disease</td>
<td>Heart Disease</td>
<td>Cancer</td>
</tr>
<tr>
<td>2</td>
<td>Cancer</td>
<td>Cancer</td>
<td>Heart Disease</td>
</tr>
<tr>
<td>3</td>
<td>Chronic lower respiratory disease</td>
<td>Cerebrovascular Disease</td>
<td>Cerebrovascular Disease</td>
</tr>
<tr>
<td>4</td>
<td>Accidents</td>
<td>Diabetes Mellitus</td>
<td>Accidents</td>
</tr>
<tr>
<td>5</td>
<td>Cerebrovascular Disease</td>
<td>Accidents</td>
<td>Diabetes Mellitus</td>
</tr>
</tbody>
</table>

### Top 5 Cancer Incidence among Asian American, 2004-2008

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>White</td>
<td>Chinese</td>
</tr>
<tr>
<td>Prostate</td>
<td>Prostate</td>
<td>Prostate</td>
</tr>
<tr>
<td>Lung</td>
<td>Lung</td>
<td>CRC</td>
</tr>
<tr>
<td>CRC</td>
<td>CRC</td>
<td>Lung</td>
</tr>
<tr>
<td>Bladder</td>
<td>Liver</td>
<td>Stomach</td>
</tr>
<tr>
<td>Melanoma</td>
<td>Stomach</td>
<td>Liver</td>
</tr>
</tbody>
</table>
CRC Incidence on the Rise for Korean Americans

Age-adjusted U.S. CRC Incidence, Male (SEER, 1990-2008)

Age-adjusted U.S. CRC Incidence, Female (SEER, 1990-2008)

Gomez, J Nat Cancer Inst., 2013
## Top 5 Cancer Mortality among Asian American, 2003-2011

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>White</strong></td>
<td>Lung</td>
<td>Lung</td>
</tr>
<tr>
<td><strong>Chinese</strong></td>
<td>Lung</td>
<td>Lung</td>
</tr>
<tr>
<td><strong>Korean</strong></td>
<td>Lung</td>
<td>Lung</td>
</tr>
<tr>
<td><strong>Lung</strong></td>
<td>Lung</td>
<td>Lung</td>
</tr>
<tr>
<td><strong>Prostate</strong></td>
<td>Liver</td>
<td>Breast</td>
</tr>
<tr>
<td></td>
<td>Stomach</td>
<td>Stomach</td>
</tr>
<tr>
<td><strong>CRC</strong></td>
<td>CRC</td>
<td>CRC</td>
</tr>
<tr>
<td><strong>CRC</strong></td>
<td>Liver</td>
<td>CRC</td>
</tr>
<tr>
<td><strong>Pancreas</strong></td>
<td>Stomach</td>
<td>Pancreas</td>
</tr>
<tr>
<td></td>
<td>CRC</td>
<td>Pancreas</td>
</tr>
<tr>
<td><strong>Leukemia</strong></td>
<td>Leukemia</td>
<td>Ovary</td>
</tr>
<tr>
<td></td>
<td>Pancreas</td>
<td>Stomach</td>
</tr>
</tbody>
</table>

Thompson et al., Cancer Epidemiol Biomarkers Prev, 2016
CRC Mortality Is High among Koreans, 2003-2011

Thompson et al., Cancer Epidemiol Biomarkers Prev, 2016
Statistics for Colorectal Cancer Screening among Asian Americans
CRC Screening Guidelines

- U.S. Preventive Services Task Force (USPSTF) Recommendations for adults aged 50-75 years:

  - **Fecal Immunochemical Test (FIT)**
    - Every Year
  - **Flexible Sigmoidoscopy**
    - Every 5 Years combined with FIT every 3 Years
  - **Colonoscopy**
    - Every 10 Years
## CRC Screening Disparities (1)

### Maryland BRFSS CRC screening data by racial/ethnic groups, % (2010)

<table>
<thead>
<tr>
<th></th>
<th>Ever had FOBT</th>
<th>Ever had Sigmoidoscopy or colonoscopy</th>
<th>Had FOBT in last 2 years</th>
<th>Had Sigmoidoscopy or colonoscopy in last 2 years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Asian</strong></td>
<td>24.0</td>
<td>56.7</td>
<td>11.0</td>
<td>30.4</td>
</tr>
<tr>
<td><strong>White, Non-Hispanic</strong></td>
<td>43.8</td>
<td>72.8</td>
<td>23.2</td>
<td>33.3</td>
</tr>
<tr>
<td><strong>Black, Non-Hispanic</strong></td>
<td>44.1</td>
<td>73.2</td>
<td>28.8</td>
<td>38.5</td>
</tr>
<tr>
<td><strong>Hispanic</strong></td>
<td>29.7</td>
<td>68.7</td>
<td>14.3</td>
<td>37.4</td>
</tr>
</tbody>
</table>

CDC, BRFSS, 2010
## CRC Screening Disparities (2)

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2003</th>
<th>2005</th>
<th>Change 2001-2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Latino Whites</td>
<td>56</td>
<td>55</td>
<td>59</td>
<td>3</td>
</tr>
<tr>
<td>AAPIs</td>
<td>46</td>
<td>45</td>
<td>49</td>
<td>3</td>
</tr>
<tr>
<td>Chinese</td>
<td>47</td>
<td>51</td>
<td>53</td>
<td>6</td>
</tr>
<tr>
<td>Korean</td>
<td>39</td>
<td>34</td>
<td>29</td>
<td>-10</td>
</tr>
</tbody>
</table>

*Includes any one of the following CRC screening tests within the past 5 years: sigmoidoscopy, colonoscopy, and FOBT.

Maxwell & Crespi, *Cancer Epidemiol Biomarkers Prev*, 2009
Up-to-date CRC screening among California adults, 2003-2009

Figure 1.

Fedewa et al., Cancer Epidemiol Biomarkers Prev, 2016
Up-to-date CRC Screening in Sequential Multivariable Regression Modeling (BRFSS, 2010)

Model 1: Unadjusted
Model 2: Model 1 + Education, Income
Model 3: Model 2 + Insurance, Usual Care, Checkup in past year

None of the Asian vs. White disparity was explained by SES or access to care.

What is driving the disparity?
STOP CRC

Screening TO Prevent ColoRectal Cancer

Funded by Centers for Disease Control and Prevention

PI: Lee (3U48DP001929 SIP 13-067), 2013-2015
Study Objective and Design

- **Study Objective:**
  - To examine facilitators and barriers to CRC screening among Chinese and Korean Americans by **triangulating quantitative and qualitative data**

- **Study Design: Mixed-Methods Study**
  - Quantitative method: self-administered surveys (n=120)
  - Qualitative methods (two-stage): key informant interviews (n=17) and focus groups (n=120)
Quantitative Findings: Key General Facilitators and Barriers

Adjusted for age, years of US residency, income, and marital status

Jung et al., Ethn Health, 2017
Quantitative Findings: Key Colonoscopy Facilitators and Barriers

- **Crude ORs**
  - No Time: 0.14
  - Not needed since no symptoms: 0.06
  - Painful: 0.33
  - Embarrassing: 0.26

- **Adjusted ORs**
  - No Time: 0.15
  - Not needed since no symptoms: 0.02
  - Painful: 0.44
  - Embarrassing: 0.37

Adjusted for age, years of US residency, income, and marital status.

Jung et al., *Ethn Health*, 2017
Qualitative Findings: Cultural Barriers (1)

- **Less emphasis on preventive care**
  
  “If I have no symptoms for CRC now, I am not going spend my time and money to get screening.”

- **Strong stigma towards cancer**
  
  “Cancer is a fatal disease anyway. There is a view that it is better not to know about things to happen later. There are people who think that if it is cancer it will be too difficult, so they do not get screening.”

- **Heavy Emphasis on Self-care**
  
  “I do not actively take the tests, I just do exercise and maintain a good mood. I eat well and sleep well.”
Qualitative Findings: Cultural Barriers (2)

- **Misconception of perceived susceptibility**
  “CRC is something that White people get often.”
  “In my case I don’t really like meat. Since my diet is mostly vegetable-based, I don’t think that I will get CRC.”

- **Less exposure to American media**
  “It’s not like they’re watching TV to see Katie Couric tell them that you should get colonoscopy because it can save your life. They’re more shielded from NBC news talking about screening.” (by a physician)

- **Burden to family members**
  “They see themselves as a burden [to their children]” and that “it’s hard for them to reach out to them [their children] to [say] ‘oh okay, I need to go see a doctor. Can you not go to work and come and help me see a doctor?’” (by a physician)
Qualitative Findings: Language and Navigating American Health Care System

- **Language**
  “We always went to see Chinese speaking doctors so we could express our concerns”.
  “We have to go to a doctor, but due to communication issues we seek Korean offices.”

- **Complexity of navigating health care system**
  “I don’t really understand the U.S. healthcare system,” noting finding a doctor, making an appointment, and going through a primary care physician to see a specialist as specific challenges.

- **Need for patient navigation**
  Highlighted the need to assist patients with finding a doctor, making the appointments, and explaining procedures stating, “I mean with the language problem, if without our help, they cannot manage.” (by a patient navigator)
Culturally Adapted Decision Support Navigation Trial to Reduce Colorectal Cancer Disparity among Asian American Primary Care Patients

Funded by National Institute of Minority Health and Health Disparities
PI: Lee (1R01 012778), 2017-2022
**Key Features of This Program**

- Built on the key findings from the STOP CRC study
  - Physician’s recommendation is the strongest facilitator – involve PCPs as main players
  - Numerous psychological, cultural, and healthcare system barriers to CRC screening are addressed

- To date, a small number of community-based studies have used community education outreach intervention
  - Some of above mentioned barriers are difficult to overcome by one-way delivery of information
  - Knowledge itself is not adequate to address emotional concerns or affective factors

- Linguistically and culturally adapted evidence-based interactive decision aids (Decision Counseling Program (DCP), an online software program)
  - Provide information and engage participants in shared decision making with a provider

- Navigators act as an agent of PCPs to do shared decision making, in coordination with PCPs and office managers

- Participants choose one of the two screening methods (stool test or colonoscopy)
Feasibility & Acceptability Test for CA-DSNI
- Refine and finalize study materials and protocols
- 10 Chinese and Koreans

Enroll 400 Participants through 20 PCPs
10 Chinese PCPs recruit 20 CA participants each
10 Korean PCPs recruit 20 CKA participants each

Cluster Randomization by PCP
10 PCPs (5 Chinese PCPs & 5 Korean PCPs) to CA-DSNI
10 PCPs (5 Chinese PCPs & 5 Korean PCPs) to AC

Culturally Adapted Decision Support Navigation Intervention (CA-DSNI)
Participants: n=200 (100 CAs & 100 KAs)
each PCP recruits 20 participants
- Face-to-face Baseline Survey, Informational booklet, body measurements
- Online Decision Counseling Program by PNs
- SBT kit & colonoscopy instructions mailed
- Share Individualized Screening Plan with PCP
- Reminder letter from PCP (45 days)

Advanced Control (AC)
Participants: n=200 (100 CAs & 100 KAs)
each PCP recruits 20 participants
- Face-to-face Baseline Survey, body measurements

6-month Survey, 6-month Medical Record Review
- CRC Screening Status Report shared with PCP & follow-up actions by PCP recorded

12 month Medical Record Review & Self-report

6-month Survey, 6-month Medical Record Review
- Informational booklet, SBT kit, and colonoscopy instructions
- Reminder mail from PCP (45 days after 6-month survey)

12 month Medical Record Review & Self-report
Happier and Healthier Life
Starts with Colorectal Cancer Screening

대장암 검진,
선택이 아닌 필수입니다

关爱健康
从结直肠癌筛查开始
Why Screen For Colorectal Cancer?

6 Important Facts

Colorectal cancer is the only cancer that can be prevented by identifying and removing precancerous polyps.

9 out of 10 deaths from colorectal cancer can be prevented with screening and early detection.

People between age 50 and 75 should be screened for colorectal cancer. 90% of new colorectal cancer cases occur in people 50 or older.

<table>
<thead>
<tr>
<th>Stool Blood Test</th>
<th>Frequency</th>
<th>Colonoscopy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Every year</td>
<td></td>
<td>Every 10 years if results are normal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Every 3-5 years if 1-2 polyps are found</td>
</tr>
</tbody>
</table>

|- No bowel cleansing
|- No dietary restriction
|- Can do it at home
|- Low cost
|- Not invasive
|- No side effects

Benefits

| Examines entire colon
| Can remove polyps as well as find colon cancers
| Can find other gastrointestinal-related diseases

Limitations

| Can miss polyps and cancers
| Can produce false-positive result
| Colonoscopy is necessary if results are positive

Myths about Colorectal Cancer Screening

Myth 1: Colonoscopy is unpleasant and uncomfortable.

Truth 1: Sedatives induce sleep. You will not be unpleasant and uncomfortable.

Myth 2: Colonoscopy is the only way to screen.

Truth 2: Colonoscopy is the most accurate test, but other screening options, such as stool blood test, are available.

Myth 3: If I do not have symptoms, colorectal cancer screening is unnecessary.

Truth 3: You can have colorectal cancer without any symptoms. Only screening can detect early signs and prevent colorectal cancer.

Myth 4: Colonoscopy screening is unnecessary because I eat healthy, exercise regularly, and do not have a family history of colorectal cancer.

Truth 4: Colonoscopy is still possible even if you eat healthy, exercise regularly, and do not have a family history.
Decision Counseling Program
Factors That Favor Option 2 (Not to do a stool blood test at home)

This section is read-only. Changes to answers will not be recorded.

Favor Option 1: To do a stool blood test at home

- My family doctor suggested me to do it.
- The cost is free.
- My family doctor suggested me to do it.

Favor Option 2: Not to do a stool blood test at home

- I am worried about the cost. I did not know how much it would cost to me. I am not sure if my insurance covers it.
- I am worried about the cost. I did not know how much it would cost to me. I am not sure if my insurance covers it.

Factors Favoring Option 1

Factors Favoring Option 2

A. Results of this section indicate that you are not likely to do a stool blood test at home.

The bar graph below shows how you feel about Option 1 (To do a stool blood test at home) and Option 2 (Not to do a stool blood test at home). If your option has a longer bar (1,316 - 3,000), that option is preferred over the option with the shorter bar (3,000 - 1,950). Otherwise, preference for the options is equal.

B. Top Factors and Direction of Influence:

- Factors Favoring Option 1
  - The cost is free.
  - My family doctor suggested me to do it.

- Factors Favoring Option 2
  - I am worried about the cost. I did not know how much it would cost to me. I am not sure if my insurance covers it.
Eligibility Criteria

- **Inclusion Criteria**
  - Male and female Chinese or Korean patients aged 50-75
  - Not up-to-date for CRC screening
    - Have not done colonoscopy in last 10 years
    - Have not done stool blood test (FOBT or FIT) in last one year

- **Exclusion Criteria**
  - Family history of CRC 1st degree relatives
  - Previous history of removing polyps
  - Those who have inflammatory bowel disease
  - Those who have previous diagnosis of colorectal cancer
Study Schema

Feasibility & Acceptability Test for CA-DSNI
- Refine and finalize study materials and protocols
- 10 Chinese and Koreans

Enroll 400 Participants through 20 PCPs
- 10 Chinese PCPs recruit 20 CA participants each
- 10 Korean PCPs recruit 20 CKA participants each

Cluster Randomization by PCP
- 10 PCPs (5 Chinese PCPs & 5 Korean PCPs) to CA-DSNI
- 10 PCPs (5 Chinese PCPs & 5 Korean PCPs) to AC

Culturally Adapted Decision Support Navigation Intervention (CA-DSNI)
Participants: n=200 (100 CAs & 100 KAs)
- each PCP recruits 20 participants
- Face-to-face Baseline Survey
- Informational booklet, colonoscopy instructions, SBT kit, reminder by mail
- Online Decision Counseling Program by PNs
- Share Individualized Screening Plan with PCP

Advanced Control (AC)
Participants: n=200 (100 CAs & 100 KAs)
- each PCP recruits 20 participants
- Face-to-face Baseline Survey
- Informational booklet, colonoscopy instructions, SBT kit, reminder by mail

6-month Survey, 6-month Medical Record Review
- CRC Screening Status Report shared with PCP & follow-up actions by PCP recorded

12 month Medical Record Review & Self-report

6-month Survey, 6-month Medical Record Review

12 month Medical Record Review & Self-report
Korean PCPs Participating in the Study (KAMA)

Dr. Oki Kwon

Dr. Ji Yon Hwang-Ki

Dr. Daniel Kim

Dr. Wonsock Shin

Dr. James Suh

Dr. Hwang Junn

Dr. Victor Kim

Dr. Su Yi

Dr. Kenneth Lee

Dr. Yeong H. Oh
Korean PCPs
Chinese PCPs Participating in the Study

Dr. Rong Zhang  Dr. Moping Chow  Dr. Qiufang Cheng  Dr. Harry Li  Dr. Hing-Chung Lee

Dr. Mark Li  Dr. Sharon Yang  Dr. Nan Ni  Dr. Cathy Gao  Dr. Benson Yu
Additional Services at the Baseline Meeting

- Weight & Height – BMI calculated
- Waist and Hip circumference measured
- Blood Pressure
- Glucose
- Cholesterol

We let them know if their measurements are out of range, and recommend them to consult with their PCPs.
During the Decision Counseling Program...

Patient Navigator will:

- Review CRC screening materials and verify participant’s preferred screening test
- Identify major factors that would influence participant to or not to screen (pros and cons), determine the level of influence the patient assigns to each factor (not important to overwhelmingly important), enter reported factors and factor weights into DCP, and compute a screening likelihood score (low to high)
- Review this with participants, and develop a screening plan to reinforce facilitators and overcome barriers. Then share this with PCP and participant, and help arranging screening
- Will send a provider endorsement and encouragement for screening
- During any time of the study period (1 year), if PCP meets with patients, this will be reinforced
SCHOOL OF PUBLIC HEALTH

Decision Counseling Report:

A. Results of this session indicate that you are likely to do a stool blood test at home.

The bar graph below shows how you feel about Option 1 (To do a stool blood test at home) and Option 2 (Not to do a stool blood test at home). If one option has a longer bar (0.546-1.000), that option is preferred over the option with the shorter bar (0.000-0.454). Otherwise, preference for the options is about equal.

<table>
<thead>
<tr>
<th>Option</th>
<th>Preference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option 1</td>
<td>0.583</td>
</tr>
<tr>
<td>Option 2</td>
<td>0.417</td>
</tr>
</tbody>
</table>

B. Top Factors and Direction of Influence:

The following factors are likely to have an effect on your preference.

<table>
<thead>
<tr>
<th>Factors Favoring Option 1</th>
<th>Factors Favoring Option 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>(To do a stool blood test at home)</td>
<td>(Not to do a stool blood test at home)</td>
</tr>
<tr>
<td>Afraid of colonoscopy and prefer to do stool blood test</td>
<td>Feel very uncomfortable when participant needs to collect sample</td>
</tr>
<tr>
<td>The schedule is very flexible (compared with colonoscopy, doesn't need to take one day off)</td>
<td></td>
</tr>
</tbody>
</table>

C. Comments:

No comment

Decision Counselor: Yan Qiao
Feasibility & Acceptability Test for CA-DSNI
- Refine and finalize study materials and protocols
- 10 Chinese and Koreans

Enroll 400 Participants through 20 PCPs
10 Chinese PCPs recruit 20 CA participants each
10 Korean PCPs recruit 20 CKA participants each

Cluster Randomization by PCP
10 PCPs (5 Chinese PCPs & 5 Korean PCPs) to CA-DSNI
10 PCPs (5 Chinese PCPs & 5 Korean PCPs) to AC

Culturally Adapted Decision Support Navigation Intervention (CA-DSNI)
Participants: n=200 (100 CAs & 100 KAs)
each PCP recruits 20 participants
- Face-to-face Baseline Survey, Informational booklet, body measurements
- Online Decision Counselling Program by PNs
- SBT kit & colonoscopy instructions mailed
- Share Individualized Screening Plan with PCP
- Reminder letter from PCP (45 days)

Advanced Control (AC)
Participants: n=200 (100 CAs & 100 KAs)
each PCP recruits 20 participants
- Face-to-face Baseline Survey, body measurements
- 6-month Survey, 6-month Medical Record Review
  - Informational booklet, SBT kit, and colonoscopy instructions
  - Reminder mail from PCP (45 days after 6-month survey)

6-month Survey, 6-month Medical Record Review & Self-report

12 month Medical Record Review & Self-report
After 6-month Review

- CRC screening status report will be shared with PCP
- PCP will follow-up with participants
  - Non-adherent participants: providers will contact participants and encourage screening
  - Those who require follow-up of abnormal Stool Blood Test (SBT): providers will arrange diagnostic colonoscopy
  - Those who had normal SBT result: providers will contact patients in one year to offer screening
Feasibility & Acceptability Test for CA-DSNI
- Refine and finalize study materials and protocols
- 10 Chinese and Koreans

Enroll 400 Participants through 20 PCPs
10 Chinese PCPs recruit 20 CA participants each
10 Korean PCPs recruit 20 CKA participants each

Cluster Randomization by PCP
10 PCPs (5 Chinese PCPs & 5 Korean PCPs) to CA-DSNI
10 PCPs (5 Chinese PCPs & 5 Korean PCPs) to AC

Culturally Adapted Decision Support Navigation Intervention (CA-DSNI)
Participants: n=200 (100 CAs & 100 KAs)
each PCP recruits 20 participants
- Face-to-face Baseline Survey, Informational booklet, body measurements
- Online Decision Counseling Program by PNs
- SBT kit & colonoscopy instructions mailed
- Share Individualized Screening Plan with PCP
- Reminder letter from PCP (45 days)

6-month Survey, 6-month Medical Record Review
- CRC Screening Status Report shared with PCP & follow-up actions by PCP recorded

Advanced Control (AC)
Participants: n=200 (100 CAs & 100 KAs)
each PCP recruits 20 participants
- Face-to-face Baseline Survey, body measurements

6-month Survey, 6-month Medical Record Review
- Informational booklet, SBT kit, and colonoscopy instructions
- Reminder mail from PCP (45 days after 6-month survey)

12-month Medical Record Review & Self-report
Community-engaged research is crucial for success of health disparities research

- More than 50 Asian-serving community-based organizations (CBO) and faith-based organizations (FBO)
- More than 30 physicians who serve Asian population
- Korean American Medical Association’s Washington DC Chapter & Chinese American Doctor’s Association
- Health Department of Local Government
- Have maintained Community Advisory Board for last 10 years

BUILD TRUST! (Takes time and effort)

- Offer assistance for growth of CBO/FBO
- Train community health workers
- Bi-directional community learning
- Long-term relationship