SHAPE 2010

Methodology

May 6, 2011
HSPHD Assessment Team
What is SHAPE?

Public health surveillance effort used to collect local data on health status and factors that affect resident’s health and well-being.

Used for public health policy planning and assessment.

The SHAPE surveys have been conducted every four years in Hennepin County:

1998 – Adult Survey
2002 – Adult Survey
2006 – Adult Survey & Child Survey
2010 – Adult Survey & Child Survey
SHAPE 2010 is a project of the Hennepin County Human Services and Public Health Department.

SHAPE 2010 was funded in part by a grant from the Minnesota Statewide Health Improvement Program.
What will be covered

- Designing the Sample
- Designing the Survey Instrument
- Marketing
- Mailing the Survey
- Processing the Returned Surveys
- Response Rate
- Preparing Data for Analysis
- Cost
What will be covered

- **Designing the Sample**
  - Designing the Survey Instrument
  - Marketing
  - Mailing the Survey
  - Processing the Returned Surveys
  - Response Rate
  - Preparing Data for Analysis
  - Cost
Delivery Sequence File
Sample Stratification

- Child Indicator Strata (2 groups)
- Geographic Strata (6 areas)
- Oversampled Strata (6 sub-areas)
Child Indicator Strata

% of addresses with a child flag

- 33% - 40%
- 41% - 50%
- 51% - 60%
- 61% - 65%
Geographic and over-sample strata
Adult sampling proportions with child flag

Phase 1 & 2 Adult: Sampling proportion for those with a child flag

- Light blue: 4.0% - 5.0%
- Lighter blue: 9.0% - 12.1%
- Darker blue: 17.5% - 21.0%
- Dark blue: 37.7%
Adult sampling proportions without child flag

Phase 1 & 2 Adult: Sampling proportion for those without a child flag

- 2.0%
- 4.0% - 7.0%
- 9.3% - 14.0%
- 30.8%
Child sampling proportions with child flag

Phase 2 Child: Sampling proportion for those with a child flag

- 2.0%
- 6.0%
- 8.0%
- 22.0%
What will be covered

- Designing the Sample
- **Designing the Survey Instrument**
- Marketing
- Mailing the Survey
- Processing the Returned Surveys
- Response Rate
- Preparing Data for Analysis
- Cost
Survey Content

- Because of time restriction, process needed to be expedited
- Reduced total number of questions
- Add a small number of questions specific to SHIP focus areas
Physical Design Concerns

- Scannability
- Color of paper and ink
- Bar code for tracking
Survey Needed to be Designed Scannable

A10 Have you ever been told by a doctor or other health care professional that you had ...?  
MARK ALL THAT APPLY  
□ Heart attack, also called a myocardial infarction  
□ Angina or coronary heart disease  
□ Stroke  
□ None of the above

A11 Have you ever been told by a doctor or other health care professional that you have hypertension, also called high blood pressure?  
□ Yes  
□ Yes, but only during pregnancy  
□ Borderline high or pre-hypertensive  
□ No

A12 Have you ever been told by a doctor or other health care professional that your blood cholesterol is high?  
□ Yes  
□ No

A13 How tall are you without shoes?  
□ Feet □ Inches

A14 How much do you weigh without shoes? If you are a female and are currently pregnant, please provide your weight before you were pregnant.  
□ Pounds □ Kilograms

A15 Has a doctor or other health care professional ever told you that you should lose weight?  
□ Yes, within the past year  
□ Yes, more than one year ago  
□ No

A16 Have you ever been told by a doctor or other health care professional that you have arthritis or rheumatism?  
□ Yes  
□ No

A17 Are you limited in any activities because of physical, mental or emotional problems?  
□ Yes  
□ No

A18 Because of any impairment or health problem, do you have any difficulty in getting, keeping, or working at a job or business?  
□ Yes  
□ No

A19 Because of any impairment or health problem, do you need help from another person with personal care needs such as eating, bathing, dressing, or getting around your home?  
□ Yes  
□ No

A20 Because of any impairment or health problem, do you need help from another person in handling routine needs such as everyday household chores, doing necessary business, shopping, or getting around for other purposes?  
□ Yes  
□ No

SECTION G – ABOUT YOU

61 Are you ...?  
□ Male □ Female

62 What is your age?  
□ Years

63 What is the highest grade or year of school you have completed?  
□ Less than high school  
□ High school graduate or GED  
□ Some college, associate degree or vocational/technical business school  
□ Bachelor degree or higher

64 Are you currently ...?  
MARK ALL THAT APPLY  
□ Employed for wages  
□ Self-employed  
□ Out of work for more than 1 year  
□ Out of work for less than 1 year  
□ Homemaker  
□ Student  
□ Retired  
□ Unable to work

65 Do you consider yourself to be Hispanic or Latino?  
□ Yes, Hispanic or Latino  
□ No, not Hispanic or Latino

66 Which of the following do you consider yourself?  
MARK ALL THAT APPLY  
□ Asian or Asian American  
□ Black or African American  
□ White  
□ American Indian or Alaskan Native  
□ Native Hawaiian or other Pacific Islander  
□ Other

67 If Asian, are you Southeast Asian, such as Hmong, Laotian, Vietnamese, Cambodian or Thai?  
□ Yes  
□ No, other Asian:

68 If Black or African American, were you born in Africa?  
□ Yes  
□ No, other place:

69 If you have selected more than one race in question 60, which do you identify with most?  
CHOOSE ONLY ONE  
□ Asian or Asian American  
□ Black or African American  
□ White  
□ American Indian or Alaskan Native  
□ Native Hawaiian or other Pacific Islander  
□ Other:

SHAPE 2010
What will be covered

- Designing the Sample
- Designing the Survey Instrument
- **Marketing**
- Mailing the Survey
- Processing the Returned Surveys
- Response Rate
- Preparing Data for Analysis
- Cost
Marketing Focus Areas

- Aimed at population in general
- Aimed at households that received a survey
Sample SHAPE 2010 Posters

SHAPE 2010
The health of your community!

You may be getting a survey in the mail from Hennepin County.
The survey is called SHAPE 2010, and asks questions about the health of adults and children. Your answers will help improve health programs for you, your family, and your community.

If you receive a SHAPE survey, please complete and return it.

SHAPE 2010

¡AYUDE A MEJORAR
los programas de salud en su comunidad!

Su salud nos importa. Sus respuestas nos importan.

Es posible que reciba una encuesta en su correo de parte del condado de Hennepin.

La encuesta se llama SHAPE 2010 y realiza preguntas acerca de la salud de adultos y niños. Sus respuestas ayudarán a mejorar los programas de salud para usted, su familia y su comunidad.

Si recibe una encuesta SHAPE, complétela y devuélvala.

SHAPE 2010
Poster Distribution

- County libraries
- HC Service Centers/ HSPHD Sites
- HC Health Departments
- HCMC and clinics
- North Point Health & Wellness Center
- Community clinics
- Community organizations
- Greater Minneapolis Council of Churches
- Minneapolis Public Housing Authority
Farmers Market

SHAPE 2010
You may get the SHAPE 2010 survey in the mail.
Please complete and return it.

Service Center Displays
Video endorsements by community leaders

"The First Lady greatly values the important work being done all across the country, and she wishes you continued success with your efforts."

Barack Obama
June 29, 2010
Mailing Protocol Used

- Pre-notification post card
- 1ˢᵗ mailing 3 days later
- Thank you/reminder post card 10-14 days later
- 2ⁿᵈ mailing 10-14 days later
Dear Hennepin County resident:

I am writing to ask for your help with an important project that Hennepin County is conducting called the Survey of the Health of Adults in the Environment (SHAPE). SHAPE has been tracking health trends since 1995. This project provides vital information about the health trends and issues of adults and children who live in Hennepin County.

Your household is one of only a small number of households in Hennepin County randomly selected to participate in this project. Your response is completely voluntary. The information you provide is strictly confidential. Your answers are very important.

The information you provide will be combined with responses from others in your local area to participate in the survey. Together, the information will be used to help decision makers better understand the health and well-being of our residents and determine how best to support and improve community health.

Enclosed you will find two survey booklets:
- Adult Survey — This should be completed by an adult living in the home who will have the most birthday.
- Child Survey — Please complete the Child Survey if there are children living in this home. The Child Survey should be filled out by the adult in the home who knows the exact age of each child. If there is more than one child in the home, please report on the child who will have the next birthday.

The survey will ask you questions about your health status, diet, exercise, health insurance, tobacco and alcohol use, and about your community. Completing each survey should take about 20 minutes.

Additional information about the survey is enclosed or can be found on our website: www.healthyhennepin.org/SHAPE. If you have any questions about this project, feel free to contact us at 612-543-2000 or by e-mail at SHAPE@hennepin. County.

Thank you for taking the time to participate in this important project.

Sincerely,

Todd Monroe
Director of Public Health
Hennepin County

[Logo: Vision 2010]
Attention. If you want free help translating this information, call (612) 543-2499.

Ceeb toom. Yog koj xav tau kev pab txhais cov xov no rau koj dawb, hu (612) 543-2499.

Ogow. Haddii aad dooneys o in lagaa kaalmeeyo tarjamadda macluumaadkani oo lacag la’aan ah, wac (612) 543-2499.

Atención. Si desea recibir asistencia gratuita para traducir esta información, llame al (612) 543-2499.

Chú Ý. Nếu quý vị cần dịch thông tin này miễn phí, xin gọi (612) 543-2499.
FAQ: Back of Insert

Frequently Asked Questions about SHAPE

Below we answer some common questions about this survey. If you have additional questions please call the SHAPE Survey Help Line at: (612) 543-2499. Information about the SHAPE survey is also available online at: www.hennepin.us/SHAPE.

Who is conducting this survey? Hennepin County’s Department of Human Services and Public Health is conducting the SHAPE survey. The survey is conducted every four years as a part of Hennepin County’s community health assessment activities.

Who is being asked to participate? There are over half a million households in Hennepin County. We are asking about 5 percent (overall) to participate in SHAPE. If selected, it is very important that you respond to the SHAPE survey because you may be the only one on your block or in your local area that receives it.

How was our household chosen for the survey? Participants for the SHAPE survey are selected at random from all Hennepin County residences. By selecting households randomly, we will have a better understanding of the health status of adults and children in our communities.

Do I have to answer your questions? Participation in the SHAPE survey is completely voluntary. You can refuse to answer any question for any reason – however, more complete information will provide a better understanding of the health of all the people in our communities.

How will my answers be used? The information will be used to help decision-makers better understand and assess the health and well-being of our residents and to help determine how best to improve community health.

Is my information secure? YES. The information collected in the survey is private. It is not shared with neighbors or others in the community. Your name is not known to the researchers and any other identifying information is removed and kept separate when the data are analyzed. Information about you is not shared with any other government agencies or programs (including your health plan). Your answers will be combined with responses from others in your local area or community and reported as a group total or percentage.

How long will it take? It should take about 20 minutes to complete each survey. The length of the Child Survey is based on the child’s age. Fewer questions are asked about younger children.
Survey Instruments

**SHAPE 2010 – ADULT SURVEY**
for an adult aged 18 or over

- Please have the adult, who will have the next birthday, answer the questions in this survey booklet, based on his or her own health.
- Please answer all of the questions in order, unless you are told to skip ahead.
- For more instructions, please see the inside cover.

**SHAPE 2010 – CHILD SURVEY**
for a child aged 17 or under

- Please select the child who will have the next birthday as the subject for this survey. If there are two or more children who have the same birthday (twins or other), please randomly select one of them as the subject for this survey.
- Please have the adult who knows the most about the selected child's health answer the questions in this survey booklet.
- For more instructions, please see the inside cover.
Reminder Postcard

SHAPE - the health of your community!

Thank you for completing and returning your SHAPE 2010 health survey.

If you have not yet participated, please complete and return your survey soon.

SHAPE 2010

Your health matters. Your answer matters.

Recently we sent you a copy of the SHAPE 2010 survey. If you completed it and returned it to us already, thank you very much.

If you haven't done so, there's still time to participate. Your response is important for planning health services for your family, neighbors, and community. Please complete and return the survey today. Thank you!

Learn more about SHAPE 2014 at www.hennepin.us/SHAPE.
What will be covered

- Designing the Sample
- Designing the Survey Instrument
- Marketing
- Mailing the Survey
- Processing the Returned Surveys
- Response Rate
- Preparing Data for Analysis
- Cost
Printing and Mailing Process

Printing Contract – Wallace Carlson

- Posters
- Post cards, letters, inserts, envelopes
- Surveys
Printing and Mailing Process

Sub-contract for mailing service

- Bar code printing
- Matching process
- Envelope stuffing
- Sorting
- Delivery to post office
- Phase 1 mailings: 25,000 / 20,000
- Phase 2 mailings: 20,000 / 20,000
# Timeline of mailings

<table>
<thead>
<tr>
<th>Phase 1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>June 11 – pre-notice postcard</td>
<td></td>
</tr>
<tr>
<td>June 15 – first mailing</td>
<td></td>
</tr>
<tr>
<td>June 28 – reminder postcard</td>
<td></td>
</tr>
<tr>
<td>July 13 – second mailing</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Phase 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>September 3 – pre-notice postcard</td>
<td></td>
</tr>
<tr>
<td>September 8 – first mailing</td>
<td></td>
</tr>
<tr>
<td>September 15 – reminder postcard</td>
<td></td>
</tr>
<tr>
<td>September 22 – second mailing</td>
<td></td>
</tr>
</tbody>
</table>
What will be covered

- Designing the Sample
- Designing the Survey Instrument
- Marketing
- Mailing the Survey
- Processing the Returned Surveys
- Response Rate
- Preparing Data for Analysis
- Cost
Tools Used to Process Surveys

- Two Panasonic KV-S1025C scanners
- Barcode Scanners
- Autodata Scannable Office
- Excel spreadsheets with macros
Key Steps in Processing Returned Surveys

- Log that survey was returned
- Capture key demographic data
- Cluster surveys into batches
- Scan full survey
- Re-scan full survey
- Reconcile two scanned versions of survey
SHAPE 2010 Survey Processing

1. Scan the Barcode
2. Mark in Age, Race/Ethnicity Groups and Income Level
3. Put survey in Adult-Pre-Scan bin

Set Parameter in Adult Short Tally spreadsheet to today’s date.
Take survey from Adult-Ready-to-be-Tallied bin and look through survey. Take out blank surveys and place in Blank-Adult-Survey bin

Scan Barcodes into Intake Scanning spreadsheet. Separate Adult and Child surveys and place in Adult-Ready-to-be-Tallied and Child-Ready-to-be-Tallied bins

Deactivate Blank Surveys
1. Open Blank Survey spreadsheet
2. Take surveys from Blank-Adult-Survey bin and Blank-Child-Survey bin
3. Scan Barcodes
4. Put Survey in Deactivated-Survey bin

Count returned surveys and document

Open surveys and make sure Adult and Child barcodes match

Set Parameter in Child Short Tally spreadsheet to today’s date.
Take survey from Child-Ready-To-Be-Tallied bin and look through survey. Take out blank surveys and place in Blank-Child-Survey bin

1. Scan the Barcode
2. Mark in Year Child Was Born and Race/Ethnicity Groups
3. Put survey in Child-Pre-Scan bin
## Sample Excel Spreadsheets

### Returned Mail Counting Daily Log.xls

#### SHAPE 2010 Mailing Processing Center

**Returned Survey Daily Counting Log**

<table>
<thead>
<tr>
<th>Date</th>
<th># of Envelopes count provided by HC Central Mail Room</th>
<th>Notes</th>
<th># of envelopes counted by SHAPE mail processing center</th>
<th>Cumulative counts (don't fill out this section)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6/21/2010</td>
<td>688</td>
<td>From mailroom</td>
<td>688</td>
<td>686</td>
</tr>
<tr>
<td>6/21/2010</td>
<td></td>
<td></td>
<td>686</td>
<td>686</td>
</tr>
<tr>
<td>6/22/2010</td>
<td>10</td>
<td>In Urban's mailbox</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>6/22/2010</td>
<td></td>
<td></td>
<td>696</td>
<td>696</td>
</tr>
<tr>
<td>6/23/2010</td>
<td>753</td>
<td>From mailroom</td>
<td>751</td>
<td>1446</td>
</tr>
<tr>
<td>6/23/2010</td>
<td></td>
<td></td>
<td>1446</td>
<td>1446</td>
</tr>
<tr>
<td>6/24/2010</td>
<td>382</td>
<td>From mailroom</td>
<td>382</td>
<td>1838</td>
</tr>
<tr>
<td>6/24/2010</td>
<td></td>
<td></td>
<td>1838</td>
<td>1838</td>
</tr>
<tr>
<td>6/25/2010</td>
<td>264</td>
<td>From mailroom</td>
<td>265</td>
<td>2935</td>
</tr>
<tr>
<td>6/25/2010</td>
<td></td>
<td></td>
<td>2935</td>
<td>2935</td>
</tr>
</tbody>
</table>

### Survey Intake.xls

<table>
<thead>
<tr>
<th>Survey ID</th>
<th>Date Surveys Arrived</th>
<th>Date Processed</th>
<th>Time Processed</th>
<th>Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>11610832</td>
<td>2010/06/21</td>
<td>13:47</td>
<td>CM</td>
</tr>
<tr>
<td>16</td>
<td>11420772</td>
<td>2010/06/21</td>
<td>13:47</td>
<td>CM</td>
</tr>
<tr>
<td>17</td>
<td>11211146</td>
<td>2010/06/21</td>
<td>13:47</td>
<td>CM</td>
</tr>
<tr>
<td>18</td>
<td>12211146</td>
<td>2010/06/21</td>
<td>13:48</td>
<td>CM</td>
</tr>
<tr>
<td>19</td>
<td>12410896</td>
<td>2010/06/21</td>
<td>13:48</td>
<td>CM</td>
</tr>
<tr>
<td>20</td>
<td>11410896</td>
<td>2010/06/21</td>
<td>13:48</td>
<td>CM</td>
</tr>
<tr>
<td>21</td>
<td>12623092</td>
<td>2010/06/21</td>
<td>13:48</td>
<td>CM</td>
</tr>
<tr>
<td>22</td>
<td>11623092</td>
<td>2010/06/21</td>
<td>13:48</td>
<td>CM</td>
</tr>
<tr>
<td>23</td>
<td>11520783</td>
<td>2010/06/21</td>
<td>13:48</td>
<td>CM</td>
</tr>
<tr>
<td>24</td>
<td>12520783</td>
<td>2010/06/21</td>
<td>13:48</td>
<td>CM</td>
</tr>
<tr>
<td>25</td>
<td>11520247</td>
<td>2010/06/21</td>
<td>13:49</td>
<td>CM</td>
</tr>
<tr>
<td>26</td>
<td>12520247</td>
<td>2010/06/21</td>
<td>13:48</td>
<td>CM</td>
</tr>
</tbody>
</table>

**SHAPE 2010**

**Hennepin**
Spreadsheets for collecting key demographic information

### Adult Short Tally.xlsx

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey ID</td>
<td>Age (G2)</td>
<td>Race/Ethnicity (G5 and G6)</td>
<td>Income Level (G17)</td>
<td>Date Processed</td>
<td>Time Processed</td>
<td>Operator</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>36</td>
<td></td>
<td>2</td>
<td>1</td>
<td>2010/06/21</td>
<td>13:58 MD</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>66</td>
<td></td>
<td>3</td>
<td>4</td>
<td>2010/06/21</td>
<td>14:02 MD</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>41</td>
<td></td>
<td>4</td>
<td>1</td>
<td>2010/06/21</td>
<td>14:02 MD</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>28</td>
<td></td>
<td>3</td>
<td>6</td>
<td>2010/06/21</td>
<td>14:03 MD</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>84</td>
<td></td>
<td>3</td>
<td>5</td>
<td>2010/06/21</td>
<td>14:04 MD</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>60</td>
<td></td>
<td>3</td>
<td>2</td>
<td>2010/06/21</td>
<td>14:05 MD</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>41</td>
<td></td>
<td>3</td>
<td>7</td>
<td>2010/06/21</td>
<td>14:05 MD</td>
<td></td>
</tr>
</tbody>
</table>

### Child Short Tally.xlsx

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey ID</td>
<td>Year Child W</td>
<td>Race/Ethnicity (A15)</td>
<td>Date Processed</td>
<td>Time Processed</td>
<td>Operator</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1995</td>
<td></td>
<td>2</td>
<td>15:00</td>
<td>MB</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>2001</td>
<td></td>
<td>3</td>
<td>15:00</td>
<td>MB</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>2006</td>
<td></td>
<td>3</td>
<td>15:01</td>
<td>MB</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>2010</td>
<td></td>
<td>6</td>
<td>15:03</td>
<td>MB</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>1992</td>
<td></td>
<td>3</td>
<td>15:03</td>
<td>MB</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>2001</td>
<td></td>
<td>3</td>
<td>15:03</td>
<td>MB</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>1995</td>
<td></td>
<td>2</td>
<td>15:04</td>
<td>MB</td>
<td></td>
</tr>
</tbody>
</table>
### SHAPE 2010 Adult Survey Respondents

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Mailing 1</th>
<th>Mailing 2</th>
<th>Mailing 3</th>
<th>Mailing 4</th>
<th>Total</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-29</td>
<td>11</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>15</td>
<td>0.2%</td>
</tr>
<tr>
<td>30-39</td>
<td>506</td>
<td>173</td>
<td>133</td>
<td>40</td>
<td>882</td>
<td>12.9%</td>
</tr>
<tr>
<td>40-49</td>
<td>464</td>
<td>246</td>
<td>174</td>
<td>33</td>
<td>1,194</td>
<td>16.9%</td>
</tr>
<tr>
<td>50-59</td>
<td>620</td>
<td>260</td>
<td>196</td>
<td>71</td>
<td>1,147</td>
<td>16.0%</td>
</tr>
<tr>
<td>60-69</td>
<td>782</td>
<td>271</td>
<td>265</td>
<td>90</td>
<td>1,108</td>
<td>16.0%</td>
</tr>
<tr>
<td>70-79</td>
<td>374</td>
<td>110</td>
<td>141</td>
<td>47</td>
<td>672</td>
<td>9.7%</td>
</tr>
<tr>
<td>80+</td>
<td>70</td>
<td>70</td>
<td>105</td>
<td>36</td>
<td>241</td>
<td>3.4%</td>
</tr>
<tr>
<td>Missing</td>
<td>42</td>
<td>10</td>
<td>23</td>
<td>7</td>
<td>72</td>
<td>1.1%</td>
</tr>
<tr>
<td>Total</td>
<td>3,942</td>
<td>1,371</td>
<td>1,297</td>
<td>433</td>
<td>7,803</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

### SHAPE 2010 Child Survey Respondents

<table>
<thead>
<tr>
<th>Birth Year</th>
<th>1</th>
<th>2</th>
<th>5</th>
<th>6</th>
<th>Total</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>19</td>
<td>10</td>
<td>20</td>
<td>16</td>
<td>66</td>
<td>3.0%</td>
</tr>
<tr>
<td>2009</td>
<td>26</td>
<td>27</td>
<td>52</td>
<td>17</td>
<td>156</td>
<td>7.3%</td>
</tr>
<tr>
<td>2008</td>
<td>25</td>
<td>26</td>
<td>68</td>
<td>17</td>
<td>136</td>
<td>6.7%</td>
</tr>
<tr>
<td>2007</td>
<td>40</td>
<td>29</td>
<td>49</td>
<td>16</td>
<td>114</td>
<td>5.6%</td>
</tr>
<tr>
<td>2006</td>
<td>48</td>
<td>17</td>
<td>39</td>
<td>20</td>
<td>122</td>
<td>5.7%</td>
</tr>
<tr>
<td>2005</td>
<td>60</td>
<td>16</td>
<td>43</td>
<td>17</td>
<td>133</td>
<td>5.5%</td>
</tr>
<tr>
<td>2004</td>
<td>62</td>
<td>16</td>
<td>45</td>
<td>20</td>
<td>133</td>
<td>5.5%</td>
</tr>
<tr>
<td>Total</td>
<td>2,160</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Mailing

<table>
<thead>
<tr>
<th>Race</th>
<th>1</th>
<th>2</th>
<th>5</th>
<th>6</th>
<th>Total</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian</td>
<td>45</td>
<td>16</td>
<td>44</td>
<td>13</td>
<td>118</td>
<td>5.5%</td>
</tr>
<tr>
<td>Black/African American</td>
<td>35</td>
<td>17</td>
<td>47</td>
<td>4</td>
<td>106</td>
<td>5.0%</td>
</tr>
<tr>
<td>White</td>
<td>47</td>
<td>17</td>
<td>34</td>
<td>16</td>
<td>94</td>
<td>4.4%</td>
</tr>
<tr>
<td>Amer Indian/Amer Native</td>
<td>44</td>
<td>19</td>
<td>25</td>
<td>7</td>
<td>86</td>
<td>4.4%</td>
</tr>
<tr>
<td>Native Hawaiian</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>0.2%</td>
</tr>
<tr>
<td>Other</td>
<td>46</td>
<td>24</td>
<td>21</td>
<td>11</td>
<td>100</td>
<td>1.5%</td>
</tr>
<tr>
<td>Missing</td>
<td>36</td>
<td>20</td>
<td>24</td>
<td>1</td>
<td>81</td>
<td>0.5%</td>
</tr>
<tr>
<td>Total</td>
<td>947</td>
<td>374</td>
<td>700</td>
<td>239</td>
<td>2,150</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

### Strata

<table>
<thead>
<tr>
<th>Income</th>
<th>1</th>
<th>2</th>
<th>5</th>
<th>6</th>
<th>Total</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>$&lt;15,000</td>
<td>410</td>
<td>178</td>
<td>144</td>
<td>57</td>
<td>732</td>
<td>11.8%</td>
</tr>
<tr>
<td>$15,001 to $20,000</td>
<td>211</td>
<td>75</td>
<td>78</td>
<td>35</td>
<td>367</td>
<td>6.0%</td>
</tr>
<tr>
<td>$20,001 to $25,000</td>
<td>212</td>
<td>75</td>
<td>90</td>
<td>37</td>
<td>418</td>
<td>6.8%</td>
</tr>
<tr>
<td>$25,001 to $35,000</td>
<td>378</td>
<td>130</td>
<td>120</td>
<td>50</td>
<td>678</td>
<td>10.4%</td>
</tr>
<tr>
<td>$35,001 to $45,000</td>
<td>392</td>
<td>116</td>
<td>146</td>
<td>38</td>
<td>865</td>
<td>14.0%</td>
</tr>
<tr>
<td>$45,001 to $65,000</td>
<td>621</td>
<td>187</td>
<td>206</td>
<td>55</td>
<td>1,021</td>
<td>16.1%</td>
</tr>
<tr>
<td>$&gt;65,000</td>
<td>1,231</td>
<td>546</td>
<td>450</td>
<td>123</td>
<td>2,238</td>
<td>34.9%</td>
</tr>
<tr>
<td>Missing</td>
<td>166</td>
<td>64</td>
<td>90</td>
<td>57</td>
<td>387</td>
<td>6.2%</td>
</tr>
<tr>
<td>Total</td>
<td>5,542</td>
<td>1,371</td>
<td>1,297</td>
<td>433</td>
<td>7,803</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

### Mailing

<table>
<thead>
<tr>
<th>Strata</th>
<th>1</th>
<th>2</th>
<th>5</th>
<th>6</th>
<th>Total</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>72</td>
<td>34</td>
<td>53</td>
<td>17</td>
<td>176</td>
<td>8.1%</td>
</tr>
<tr>
<td>2</td>
<td>73</td>
<td>38</td>
<td>112</td>
<td>41</td>
<td>216</td>
<td>12.0%</td>
</tr>
<tr>
<td>3</td>
<td>78</td>
<td>36</td>
<td>92</td>
<td>32</td>
<td>243</td>
<td>12.0%</td>
</tr>
<tr>
<td>4</td>
<td>125</td>
<td>53</td>
<td>175</td>
<td>60</td>
<td>414</td>
<td>19.2%</td>
</tr>
<tr>
<td>5</td>
<td>154</td>
<td>72</td>
<td>82</td>
<td>30</td>
<td>348</td>
<td>18.1%</td>
</tr>
<tr>
<td>6</td>
<td>222</td>
<td>141</td>
<td>181</td>
<td>86</td>
<td>539</td>
<td>28.4%</td>
</tr>
<tr>
<td>Total</td>
<td>847</td>
<td>374</td>
<td>700</td>
<td>239</td>
<td>2,150</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Scanning Process

- De-staple
- Batch
  - Review to improve scannability
  - Scan twice independently
- Re-staple
Spreadsheet with macros for reconciliation

<table>
<thead>
<tr>
<th>ID</th>
<th>A1</th>
<th>A2</th>
<th>A3</th>
<th>A4 yrs</th>
<th>A4_mths</th>
<th>A5</th>
<th>A6</th>
<th>A7</th>
</tr>
</thead>
<tbody>
<tr>
<td>12622212</td>
<td>4</td>
<td>0</td>
<td>2000</td>
<td>10</td>
<td>36</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>
Operators who Processed SHAPE surveys

- Assessment Unit staff
- Paid intern
- HSPHD staff member
- Six unpaid student interns
Phase 1

Number of Adult Surveys Returned by Date

Date

Number of Surveys
Phase 1

Number of Adult Surveys Returned by Date

Mailing 1: June 15th

Reminder postcard: June 28th

Pre-notice postcard: June 11th

Mailing 2: July 13th
Phase 1

Number of Child Surveys Returned by Date

Note: Adult and Child scales are not the same
Phase 1

Number of Child Surveys Returned by Date

- Pre-notice postcard: June 11th
- Reminder postcard: June 28th
- Mailing 1: June 15th
- Mailing 2: July 13th

Note: Adult and Child scales are not the same.
Phase 2

- Mid-course modifications based on monitoring
- Needed additional Adult responses from two strata
- Needed additional Child responses from all strata
- Reduce burden by including only one survey per packet
Phase 2

Number of Adult Surveys Returned by Date

Note: Scale has changed
Phase 2

Number of Adult Surveys Returned by Date

- Pre-notice postcard: September 3rd
- Mailing 3: Sept 8th
- Reminder postcard: Sept 15th
- Mailing 4: Sept 22nd
Phase 2

Number of Child Surveys Returned by Date

Note: Adult and Child scales are not the same
Phase 2

Number of Child Surveys Returned by Date

Note: Adult and Child scales are not the same
SHAPE 2010: Adult and Child Surveys Returned by Mailing
Hits to SHAPE Web pages
June to October, 2010

Content by Title

Jun 1, 2010 - Oct 30, 2010
What will be covered

- Designing the Sample
- Designing the Survey Instrument
- Marketing
- Mailing the Survey
- Processing the Returned Surveys
- Response Rate
- Preparing Data for Analysis
- Cost
Response Rate

\[
RR = \frac{\text{Completes} + \text{Partial Completes}}{[(\text{Completes} + \text{Partial Completes}) + (\text{Refused} + \text{Non-contact} + \text{Other}) + \text{Estimated \% eligible of Unknowns}]} 
\]
## Adult Response Rate: Phase 1 and 2

<table>
<thead>
<tr>
<th></th>
<th>Response Rate</th>
<th>Vacancy Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>23.3%</td>
<td>7.4%</td>
</tr>
<tr>
<td>Minneapolis</td>
<td>21.8%</td>
<td>8.9%</td>
</tr>
<tr>
<td>Suburban</td>
<td>24.7%</td>
<td>5.9%</td>
</tr>
</tbody>
</table>
Adult Response Rate-with child flag

Phase 1 & 2 Adult:
Response rate for those with a child flag

- 12.4% - 20.0%
- 20.1% - 25.0%
- 25.1% - 30.0%
- 30.1% or greater
Adult Response Rate- without child flag

Phase 1 & 2 Adult: Response rate for those without a child flag

- Light blue: 20.0% or less
- Light blue-brown: 20.1% - 25.0%
- Medium blue: 25.1% - 30.0%
- Dark blue: 30.1% - 35.5%
## Child Response Rate: Phase 2

<table>
<thead>
<tr>
<th></th>
<th>Response Rate</th>
<th>Vacancy Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>23.5%</td>
<td>7.2%</td>
</tr>
<tr>
<td>Minneapolis</td>
<td>22.4%</td>
<td>7.8%</td>
</tr>
<tr>
<td>Suburban</td>
<td>26.3%</td>
<td>5.7%</td>
</tr>
</tbody>
</table>
Child Response Rate: Phase 2

Phase 2 Child: Response rate for those with a child flag

- 11.6% - 20.0%
- 20.1% - 25.0%
- 25.1% - 30.0%
- 30.1% - 37.3%
What will be covered

- Designing the Sample
- Designing the Survey Instrument
- Marketing
- Mailing the Survey
- Processing the Returned Surveys
- Response Rate
- **Preparing Data for Analysis**
- Cost
**SECTION 6 – ABOUT YOU**

<table>
<thead>
<tr>
<th>G1</th>
<th>Are you ... ?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
</tr>
<tr>
<td></td>
<td>Male</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>G2</th>
<th>What is your age?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Years</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>G3</th>
<th>What is the highest grade or year of school you have completed?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Less than high school</td>
</tr>
<tr>
<td></td>
<td>High school graduate or GED</td>
</tr>
<tr>
<td></td>
<td>Some college, associate degree or vocational/technical/business school</td>
</tr>
<tr>
<td></td>
<td>Bachelor degree or higher</td>
</tr>
</tbody>
</table>

**SECTION 6 – ABOUT YOU**

<table>
<thead>
<tr>
<th>G1</th>
<th>Are you ... ?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
</tr>
<tr>
<td></td>
<td>Male</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>G2</th>
<th>What is your age?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>58 Years</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>G3</th>
<th>What is the highest grade or year of school you have completed?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Less than high school</td>
</tr>
<tr>
<td></td>
<td>High school graduate or GED</td>
</tr>
<tr>
<td></td>
<td>Some college, associate degree or vocational/technical/business school</td>
</tr>
<tr>
<td></td>
<td>Bachelor degree or higher</td>
</tr>
</tbody>
</table>
Imputation strategy

Age
- On Medicare
- Lived in US > 64 years
- Everyone in household < 65 years old
- Etc.

Sex
- Had mammogram
- Had diabetes during pregnancy
- Gender-specific drinking questions
- Etc.
Weighting the data

- Probability of being selected
- Post-stratification adjustments to match the population
Probability of Being Selected

Random sample of households in geographic strata
Post-stratification adjustments to match the population

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Population Males</th>
<th>Population Females</th>
<th>Survey Respondents Males</th>
<th>Survey Respondents Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 to 44</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45 and older</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Factors used in post-stratification adjustments

- Age, Gender, Geography
- Race/Ethnicity
- US-born/Foreign-born Blacks
What will be covered

- Designing the Sample
- Designing the Survey Instrument
- Marketing
- Mailing the Survey
- Processing the Returned Surveys
- Response Rate
- Preparing Data for Analysis
- Cost
<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample File - DSF</td>
<td>$908</td>
</tr>
<tr>
<td>Hardware and Software</td>
<td>$10,997</td>
</tr>
<tr>
<td>Printing</td>
<td>$73,764</td>
</tr>
<tr>
<td>Postage</td>
<td>$60,830</td>
</tr>
<tr>
<td>Supplies</td>
<td>$638</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$147,137</strong></td>
</tr>
</tbody>
</table>
# Mailing cost per survey returned

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
<th>Cost/Survey Returned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample File - DSF</td>
<td>$908</td>
<td>$0.10</td>
</tr>
<tr>
<td>Hardware and Software</td>
<td>$10,997</td>
<td>$1.19</td>
</tr>
<tr>
<td>Printing</td>
<td>$73,764</td>
<td>$8.00</td>
</tr>
<tr>
<td>Postage</td>
<td>$60,830</td>
<td>$6.60</td>
</tr>
<tr>
<td>Supplies</td>
<td>$638</td>
<td>$0.07</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$147,137</strong></td>
<td><strong>$15.96</strong></td>
</tr>
</tbody>
</table>

SHAPE 2010
For more information

Visit the SHAPE website at
www.co.hennepin.mn.us/SHAPE

HSPHD Epidemiology Team

Sheldon.Swaney@co.hennepin.mn.us, Supervisor (612) 348-6150

Melissa.Barker@co.hennepin.mn.us (612) 348-7416
Mei.Ding@co.hennepin.mn.us (612) 348-6309
Urban.Landreman@co.hennepin.mn.us (612) 348-2283
Komal.Mehrotra@co.hennepin.mn.us (612) 596-9967
Christa.Meyer@co.hennepin.mn.us (612) 348-5111