

Stroke Awareness Campaign Background Information and Resources

The Stroke Awareness Campaign is a social marketing campaign developed by the Maine Cardiovascular Health Program – Maine Department of Health and Human Services, in collaboration with the Stop Stroke Committee, and CD&M Communications. The focus of the campaign is two-fold: The first step is for people to recognize the warning signs of stroke, and the second step is to get them to call 9-1-1 immediately if they see these signs in themselves or someone else. This is a statewide, public awareness campaign, including two radio spots, magnets, information cards, and handouts that are being distributed through hospitals and providers, Emergency Medical Services, local Healthy Maine Partnerships and other partners across the state. The results of both focus groups and communications checks were integral in the development of the campaign messages, as was research around the need to educate the public, reasons for 9-1-1 call delays and the general efficacy of media campaigns. The efforts of other states were also studied.

The campaign was launched in July, 2005 as part of a collaborative effort with statewide partners to increase awareness around the signs and symptoms of stroke, and to promote calling 9-1-1 to expedite effective treatment for stroke. Increasing signs and symptoms awareness and the use of 9-1-1 to increase survival and decrease disability associated with stroke are priority prevention opportunities, as designated by the Centers for Disease Control and Prevention. This campaign is directly linked with additional program efforts to improve or enhance the capacity and structure of stroke care systems for the State of Maine.

This document summarizes the prevalence and burden of stroke in the United States and Maine, as well as the results of the focus groups and communications checks utilized to develop the Stroke Awareness Campaign. References regarding the need for public education, 9-1-1 call delays, and the efficacy of media campaigns are also included.

Stroke, also known as cerebrovascular disease, is a type of cardiovascular disease that affects the arteries leading to and within the brain. A stroke occurs when a blood vessel leading to the brain is blocked by a clot, or bursts. When this happens, part of the brain cannot get the blood and oxygen it needs, and it begins to die.⁽¹⁾ If emergency medical help is not sought immediately, death or severe disability are more often than not the unfortunate end results.

Stroke is the third leading cause of death and a leading cause of long-term disability in Maine and the United States. Every 45 seconds, someone in America suffers a stroke, and someone dies of a stroke approximately every three minutes. That adds up to about 700,000 strokes occurring in the U.S. every year, nearly 163,000 stroke deaths nationwide, and about \$57 billion for stroke-related medical costs and disability projected for 2005.⁽²⁾ Sadly, approximately half of all stroke deaths occur before the person reaches the hospital, which is a strong indicator of the need to raise public awareness around stroke signs and symptoms, and what to do if they are witnessed.

In Maine, over 800 people die from strokes each year, with many more left disabled. There were nearly 3,900 hospitalizations due to stroke in Maine in 2002, and the cost burden for the associated hospital charges was \$53 million. This accounted for 11% of all cardiovascular-related hospital charges, and 3% of all hospital charges in Maine for that year. More stroke deaths occurred in Maine women (518) than men (309) during 2000, however the age-adjusted stroke death rate among Maine women (54.7 per 100,000 population) was lower than that of Maine men (58.8 per 100,000 population).⁽³⁾

Stroke Awareness Campaign Focus Groups, 2005

The purpose of the focus groups was to aid in strategic and marketing guidance for further developing communications efforts to increase levels of awareness for stroke prevention and treatment in Maine. During April, 2005, CD&M Communications and Critical Insights, both of Portland, collaborated to conduct two focus groups for the Stroke Awareness Campaign. Participants were randomly recruited via telephone, based on the following criteria in order to qualify for inclusion: Being between 45 and 64 years of age, and with a total annual household income that reflects low to moderate household income levels for both urban and rural residents. Potential participants who had recent previous focus group experience, as well as anyone with any close affiliations with advertising, market research or the media, were excluded.

One focus group was held in Portland, which is considered an urban area, and the other was held in South Paris, which is considered a rural area. A total of 23 participants took part in the two sessions. During the focus groups, the issues of stroke awareness were discussed, and draft campaign materials were disseminated for participant feedback.

Responses, comments and observations elicited from focus group participants generated the following common themes:

- The barriers to controlling hypertension and high cholesterol are staying committed to lifestyle changes and managing stress. Five participants in the first group and five in the second, indicated that they have been diagnosed with high blood pressure. (Time and stress)
- Participants would prefer to make lifestyle changes to taking medications
- Participants were uncertain about the specific difference between heart disease and stroke
- Higher levels of awareness were exhibited for the risk factors and warning signs associated with having a stroke.
- Calling 9-1-1 would be participants' first response to someone exhibiting stroke-related symptoms
- The stroke brochures and magnets were received positively, and participants offered feedback on how to make each of the three drafts more effective. Participants felt that the radio spots were a bit less effective, and they preferred the "real life scenario" version over the others.
- Many participants access health information via their doctor, and/or the Internet. Local resources were not cited as a common way of accessing health info, and using the workplace for information was a sensitive topic, citing confidentiality as a major concern.

Participants indicated the following as the major risk factors associated with stroke:

- Cigarette smoking (most commonly mentioned)
- High fat diets (most commonly mentioned)
- Alcohol, legal and illegal drugs
- Family predisposition
- High Blood Pressure
- High Cholesterol
- Lack of Exercise
- No one mentioned heart disease, which presents us with an important opportunity to raise awareness

On an unaided basis, participants indicated headache, numbness, blurry vision, personality changes, swollen legs, confusion, nausea and over exertion as the major warning signs associated with stroke. When the moderator presented a list of warning signs, each was seen as a warning sign associated with stroke.

While they indicated an awareness for the warning signs, participants were less sure about whether an individual must show one, or multiple signs in order to be having a stroke. A majority were not confident about the precise constellation of symptoms which should warrant an immediate call to 9-1-1.

The strong majority of participants said that their first response to someone showing stroke-like symptoms would be to **dial 9-1-1**. When asked whether they would consider alternative decisions, like contacting a family doctor or calling a spouse or family member, participants remained adamant about dialing 9-1-1. Many emphasized that it would be better to over-react vs. not take enough action, and that hesitating to dial 9-1-1 would put a person's life in unnecessary jeopardy.

Some participants in the Oxford region did report concerns that in some locations, it takes as long as 45 minutes for an ambulance to arrive. In this case, they would consider driving themselves or someone else to the hospital to get emergency attention.

Campaign Material Feedback

The following are brief synopses of the reception/feedback for each different media piece, including the card, magnet and radio spots:

Awareness card:

- The cards were positively received in regards to content, color, sponsorship and organization.
- Participants were not aware that stroke is the third leading cause of death, so this fact really grabbed their attention and drew them into the message.
- Of the two tag lines, "Time Lost is Brain Lost" was chosen as the most graphic and effective.
- Participants found the diversity of multi-generational and multi-ethnic representation to be very important.
- A majority of participants did not feel comfortable with the screening items on the third card, saying that they would feel like they were making a diagnosis for stroke. While they felt the symptoms were important to know, they would still call 9-1-1 before screening someone.

Magnet:

- The magnet was positively received regarding general appearance, and participants offered several suggestions to reorganize items to better display and convey the message, such as making “Time Lost is Brain Lost” more prominent.
- Participants were not comfortable with “Stop a Stroke” headline, saying that it was misleading because they felt strokes could not be stopped. “Signs of a Stroke” was thought to be more accurate.
- Many recommended that the word “sudden” which precedes the list of warning signs, should be deleted. It was described as vague.

Radio Spots:

Certain features of each radio spot were positively received, and in general, participants indicated that the scenarios are effective marketing tools to advertise stroke-related information. Overall, the second spot, which described a real life scenario, garnered the highest level of appeal, and was considered the most effective message. The HMP and AHA sponsorship and taglines were well received.

- **One is “gloom and doom”:** Perceived to effectively grab attention with urgency, and they liked that it said “don’t hesitate to call 9-1-1”
- **Two is “riveting”:** Conveyed the idea that having a stroke could happen to anyone, and that it happens suddenly.
- **Three is a “softer” version of the first:** Some felt the friendlier version was a positive approach, however others felt that it would not be enough to pull listeners in

Resonance of pieces:

After looking at campaign pieces, participants were asked to indicate what piece(s) of information stuck out most in their mind. “Call 9-1-1” and the specific warning signs associated with having a stroke were cited as leaving the strongest impressions. They were also surprised about new information (i.e. stroke is the third leading cause of death, children can have strokes, etc.)

Also, the message to dial 9-1-1 immediately resonated. Several participants described past feelings of “foolishness” and “worry” about dialing 9-1-1, because they were unsure if their situation was a legitimate emergency. “It’s important to say don’t worry about calling 9-1-1. Don’t worry about feeling foolish,” noted one participant.

Additional Issues

For information on heart disease, high blood pressure and high cholesterol, participants indicated that they would ask their doctor. The Internet was also cited as a popular destination for information regarding health disorders; recommending Google, American Cancer Society, American Heart Association and Foodnet as useful websites.

Participants of these focus groups do not typically use local resources, such as churches, recreational centers, schools, etc. to get health information. Using the workplace for health related information was a sensitive topic, citing confidentiality as a major concern, especially with the sharing of personal health information among corporate databases.

Final drafts of each Stroke Awareness Campaign piece are included in the appendices of this document.

Communications Checks - Stroke and Heart Disease Related Issues

Waves IV and V - June, 2002 and February, 2005

In order to gauge reach and awareness of recent Healthy Maine Partnership media education campaigns, Communications Checks were conducted by the research firm, Critical Insights, on behalf of the Healthy Maine Partnerships and their communications partner, CD&M Communications. Unlike earlier waves, this Communications Check focuses on awareness, attitudes and behaviors relating to the efforts of the Maine Cardiovascular Health Program. This document highlights those pieces pertaining to heart attack and stroke for both Wave IV and Wave V.

Data collection was conducted via telephone interviews in two waves:

- | | |
|--|----------------------------|
| -Wave IV: May 17 – June 11, 2002 | Number of respondents: 602 |
| -Wave V: January 18 – February 2, 2005 | Number of respondents: 400 |

Respondents were chosen randomly via computer dialing method. They had to be over 18 years of age, and could not have an affiliation with any research firm or advertising agencies. The average length of the survey interview was 28 minutes for Wave IV, and 23 minutes for Wave V. For quality control, 15% of all interviews were verified with callbacks within 24 hours of the actual interview. Refusal rates were 14% overall, indicating that the sample was not tainted by non-response error. The margin of error for Waves IV and V respectively, were +/- 4.0, and +/- 4.9 percentage points at the 95% confidence level, indicating a statistically reliable sample.

The primary goals of the communications checks were to:

- Evaluate the level of awareness and perceptions of HMPs
- Determine awareness of health-related advertising on both unaided and aided basis
- Determine where people are seeing health-related advertising
- Evaluate key opinions, attitudes and behaviors concerning physical activity and nutrition
- Measure any changes in attitudes or behavior over time

The Findings:

When 400 interviewees in Wave V were asked to think about health issues in Maine, lack of physical activity, poor dietary habits and overweight or obesity were the top three responses. Respondents under age 35 were more likely to list obesity as a health concern, at 44%. Surprisingly, only about eight percent listed heart disease as a major concern.

General Awareness: Unaided - Wave Comparisons:

Respondents were asked what health and wellness issues they may have seen or heard messages about. Cigarettes/Tobacco use topped the list for both waves, however there was a 23-point drop between Wave IV (44%) and Wave V (21%). Healthcare issues remained a consistent concern (16% in Wave IV, and 17% in Wave V) and were the second most mentioned. Obesity was of considerable concern, at 17% and 11% for Waves IV and V respectively, and Heart disease was cited as a concern in 15% and 7% respectively. Not surprisingly, smokers (35%) were more likely to report an awareness of advertising for tobacco issues.

General Awareness: Aided – Wave V:

Respondents who did not recall messages unaided were then asked – on a prompted basis – whether they had seen advertising efforts addressing specific themes on TV/radio or in print media. The following are the results for each theme, based on respondents who did not recall messages unaided:

- 72% responded that they recalled seeing or hearing messages around guidelines for good nutrition.
- 77% recalled seeing or hearing messages regarding guidelines for physical activity.
- 84% remembered seeing or hearing messages about maintaining a healthy lifestyle.
- 86% recalled messages around obesity and/or weight gain.
- 80% responded that they had seen or heard messages around heart disease.
- 58% reported hearing or seeing messages about stroke.

Female respondents expressed a higher rate of awareness of advertising for all of the health issues under investigation.

Heart Disease and Stroke Awareness:

Those respondents who indicated that they had seen or heard messages about heart disease or stroke, were then asked where they had seen or heard these messages. Nearly three-quarters of respondents (74%) listed TV. One-third of respondents indicated that they had observed advertising messages around heart disease or stroke in magazines, while fewer listed newspapers (20%), radio (12%) or flyers/brochures (10%). Most respondents (94%) with a high school education or less, listed TV as a source for messages about heart disease and stroke.

In order to gauge message recall, these same respondents were then asked what they specifically recalled about the messages concerning heart disease or stroke. The specific content that respondents were able to recall from the advertising focused on areas such as improving diet in general (31%), lack of exercise (26%), ads for medications (14%) and avoiding tobacco usage (13%). The contributing factors of obesity and high cholesterol were also mentioned, both at 9%.

When asked who sponsored the messages that they had seen or heard about heart disease or stroke, nearly half of the respondents (45%) were unable to list a sponsor, and drug companies were the second leading response, at 21%. The American Heart Association (15%), Doctors/Hospitals (9%), Radio/TV (3%), and Healthy Maine Partnerships (2%) made up the remainder of responses. A larger percentage of respondents (59%) with a high school education or less, were unable to list a sponsor.

Stroke Specific Awareness:

When respondents were asked to list three “risk factors” that would make it more likely for someone to have a stroke, based on what they had heard or read, obesity (49%), smoking (40%), and high blood pressure (33%) were listed as the three primary contributors. Not surprisingly, smokers (55%) were substantially more likely to list smoking as a contributing risk factor for stroke.

When asked to list three warning signs or symptoms people may experience when having a stroke, based on what they had heard or read, respondents listed numbness on side of body or face (46%), dizziness (34%) and slurred speech (32%) as the key indicators or symptoms of a stroke.

Respondents were then asked: “If you thought someone was having a stroke, what is the first thing you would do?” Nearly 9-in-10 respondents (86%) stated that they would call 911 if they thought someone was having a stroke. Other responses included: take them to the hospital, give them aspirin, tell them to call their doctor, call their spouse or family member, and other, each at very small percentages.

Attitude change around heart disease and stroke was not addressed in these communications checks.

Appendix I: References and Resources

References:

- (1) Selenick, R, MD, Dougherty K. *Living with Stroke – a Guide for Families*, Third Edition. Birmingham, Alabama: HealthSouth Press; 2001
- (2) American Heart Association. *Heart and Stroke Statistics? 2005 Update*. Available at www.americanheart.org* CDC. *Health, United States 2004*. Available at www.cdc.gov/nchs/hus.htm
- (3) Maine Department of Human Services, Bureau of Health, Division of Community Health. *Stroke in Maine*, March, 2004. Available at www.healthymainepartnerships.org/mcvhp2.html

Resources:

a) Need to Educate

- (1) Greenlund, K. PhD; Neff, L. PhD; Zheng, Z. MD; Keenan, N. PhD; Giles, W. MD; Ayala, C. PhD; Croft, J. PhD; Mensah, G. MD. *Low Public Recognition of Major Stroke Symptoms*. American Journal of Preventive Medicine. 2003; 25 (4):315-319.
- (2) Morbidity and Mortality Weekly Report. *Awareness of Stroke Warning Signs – 17 States and the U.S. Virgin Islands, 2001*. MMWR. May, 2004; 7;53(17):359-62.
- (3) Schneider, AT.; Pancioli, AM.; Khoury, JC.; Rademacher, E.; Tuchfarber, A.; Miller R.; Woo, D.; Kissela, B.; Broderick, JP. *Trends in Community Knowledge of the Warning Signs and Risk Factors for Stroke*. JAMA. January 15, 2003. 289(3):343-6.

b) 9-1-1 Call Delays

- (1) Parahoo, K. Thompson, K. Cooper, M. Stringer, M. Ennis, E. McCollam, P. *Stroke Awareness of the Signs, Symptoms and Risk Factors – a Population Based Survey*. Cerebrovascular Disease. 2003; 16(2):134-40.
- (2) Williams, LS. Bruno, A. Rouch, D. Marriott, DJ. *Stroke Patients' Knowledge of Stroke. Influence on Time to Presentation*. Stroke. May, 1997;28(5):912-5.

c) Efficacy of Media Campaigns

- (1) Silver, FL. Rubini, F. Black, D. Hodgson, CS. *Advertising Strategies to Increase Public Knowledge of the Warning Signs of Stroke*. Stroke. August, 2003; 34(8):1968-9.
- (2) Schooler, C. Chaffee, SH. Flora, JA. Roser, C. *Health Campaign Channels: Tradeoffs Among Reach, Specificity, and Impact*. Hum Commun Res. March, 1998;24(3):410-32.
- (3) Whitney, R. Viswanath, K. *Lessons Learned from Public Health Mass Media Campaigns: Marketing Health in a Crowded Media World*. Annu. Rev. Public Health. 2004; 25:419-37.

Appendix II: Stroke Awareness Campaign Materials

Information Card - front



Stroke affects the brain. It's the third leading cause of death and a leading cause of disability. Get medical help quickly – there are lifesaving treatments that can help stop a stroke.

Information Card - back

Know the Warning Signs of Stroke

Any **one** of the warning signs is a reason to call 9-1-1. The faster you call for help, the better chances for a full recovery.

Sudden...

- **Numbness in the face, arm or leg**
- **Slurred speech**
- **Blurred vision**
- **Dizziness or loss of balance**
- **Severe headache**

**At the first sign of stroke,
call 9-1-1 immediately!
Time lost is brain lost!**



www.healthymainepartnerships.org/signs.html

Magnet

Signs of Stroke

Any **one** of the warning signs is a reason to call 9-1-1.

Sudden...

- **Numbness in the face, arm or leg**
- **Slurred speech**
- **Blurred vision**
- **Dizziness or loss of balance**
- **Severe headache**

**At the first sign of stroke,
call 9-1-1 immediately!
Time lost is brain lost!**



www.healthymainepartnerships.org/signs.html

MCVHP
Stroke Campaign
226-015-05

Radio

WARNING SIGNS

:60

Could you recognize the symptoms of stroke? Many people can't. That's why stroke is the third leading cause of death and a leading cause of disability. What can you do? Know the warning signs of stroke. Each one happens suddenly, and any one of them is a reason to call for help. They are... numbness in the face, arm or leg... slurred speech... blurred vision... dizziness or loss of balance... severe headache... If you have any one of these symptoms, or see them in someone else, call 911. Immediately. Every second counts. Even if you're not sure you should call for help, do it anyway. Time lost is brain lost. This message is brought to you by the Healthy Maine Partnerships, Bureau of Health, Maine Department of Health and Human Services.

REAL-LIFE SCENARIO

:60

(husband... telling story)

A stroke happens very fast. It just... happens. It was June, last year—our usual kind of morning. The radio's on, my wife Sue and I having coffee, looking at the newspaper. I asked her a question about something I was reading, and she started to answer, and... she couldn't. I looked over at her, and she finally got some words out, but they were slurred. She knew something was wrong, and looking at her, I knew, but we didn't know what. It was a stroke. One minute she was fine. And then she wasn't.

(announcer)

Know the signs of a stroke: Numbness in the face, arm or leg, slurred speech, blurred vision, dizziness or loss of balance, severe headache. Each one happens suddenly, and any one of them is a reason to call 911. Immediately. Even if you're not sure you should call for help, do it anyway. Time lost is brain lost. Healthy Maine Partnerships, Bureau of Health, Maine Department of Health and Human Services.

Handout



FACE STROKE BEFORE IT FACES YOU.



This year 700,000 Americans of all ages will suffer stroke. It's the third leading cause of death in the country and a leading cause of disability. In Maine, 827 people died of stroke in 2000.

WHAT ARE YOUR RISKS?

To reduce your risk, you need to be aware of stroke risk factors. Some can't be controlled: family history, increasing age, ethnicity and having had a TIA (mini-stroke). But other risk factors can be prevented or controlled.

These include:

- **Being overweight or obese**
- **Smoking**
- **Not being physically active**
- **Diabetes**
- **High cholesterol**
- **Carotid artery disease**
(Hardening of arteries in the neck)
- **Atrial fibrillation**
- **High blood pressure**
(140/90 or higher. Optimal is less than 120/80)

Remember, just because you have risk factors, stroke doesn't have to happen. Pay special attention to risk factors that you can control.

TAKE ACTION AGAINST STROKE

The following simple actions can help reduce your risk:

- Get your blood pressure checked. If it's 140/90 or higher, control it. If you have diabetes, your goal is to stay below 130/80.
- Eat healthy.
- If you smoke, stop!
- Start physical activity. Try to accumulate at least 30 minutes most or all days of the week.
- Visit your doctor regularly. Ask about medications that can help reduce your stroke risk, and be sure to take them as prescribed.
- And most important, learn the stroke warning signs:

Sudden...

- **Numbness in the face, arm or leg**
- **Slurred speech**
- **Blurred vision**
- **Dizziness or loss of balance**
- **Severe headache**

**At the first sign of stroke,
call 9-1-1 immediately!
Time lost is brain lost!**



Bureau of Health, Maine Department of Health and Human Services

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www.healthymainepartnerships.org/mcvhp2.html