

Research Compilation

Public Education and Awareness Issues

Issues Around Public Knowledge/Awareness and Patient Delay

Lack of knowledge of signs and symptoms, lack of knowledge of appropriate action required, lack of knowledge that it is an emergency, denial, cognitive and emotional issues.

Acute Myocardial Infarction/Chest Pain

Dracup K, Moser DK 1997. **Beyond sociodemographics: factors influencing the decision to seek treatment for symptoms of acute myocardial infarction.** *National Heart, Lung and Blood Institute.*

Patient appraisal of seriousness of symptoms is related to delay. Cognitive and emotional responses affect patients' decisions to seek treatment.

McKinley S, Moser DK, Dracup K 2000. **Treatment-seeking behavior for acute myocardial infarction symptoms in North America and Australia.** *National Heart, Lung and Blood Institute*

Programs to reduce delay in response to acute myocardial infarction symptoms must take account of cognitive and emotional processes and differences in response in the particular cultures of patients.

Meischke H, Ho MT, Eisenberg MS, Schaeffer SM, Larsen MP. 1995. **Reasons patients with chest pain delay or do not call 911.** *Annals of Emergency Medicine*

The main reason for delay were because the patient thought that the symptoms would go away, because the symptoms were not severe enough, and because the patient thought that the symptoms were caused by another illness. The main reasons for not calling 911 were because the symptoms were not severe enough, and because the patient did not think of calling 911, or because the patient thought that self-transport would be faster because of his or her close location to the hospital.

Johnson JA, King KB. 1995. **Influence of expectations about symptoms on delay in seeking treatment during myocardial infarction.** *American Journal of Critical Care.*

Patients have expectations about heart disease symptoms that may cause their delay in seeking treatment. Patients reported that their expectations focused on location, intensity, and quality of symptoms that did not match the actual symptoms they experienced during myocardial infarction.

Bleeker JK, Lamers LM, Leenders IM, Kruyssen DC, Simoons ML, Trijsburg RW, Erdman RA. 1995. **Psychological and knowledge factors related to delay of help-seeking by patients with acute myocardial infarction.** *Psychotherapy Psychosomatic.*

Patients who seek less distraction and more social support during the acute phase of an acute myocardial infarction seek help more quickly. Future education campaigns should therefore not only address cardiovascular knowledge, but also coping and defense mechanisms.

Hackett TP, Cassem MD. 1969. **Factors Contributing to Delay in responding to the Signs and Symptoms of Acute Myocardial Infarction.** *American Journal of Cardiology.*

Patients who recognized their heart as causing symptoms sought help sooner. For the largest number of patients, a family member made the decision. Physicians caused or contributed to the delay in 12 % of the cases, calling it angina. Denial was found to be significantly related to symptom displacement. Those patients who denied minimally recognized the heart as the source of trouble.

Dracup K, Alonzo AA, Atkins JM, et al. **The physician's role in minimizing prehospital delay in patients at high risk for acute myocardial infarction: recommendations from the National Heart Attack Alert Program. Working Group on Educational Strategies to Prevent Prehospital Delay in Patients at High Risk for Acute Myocardial Infarction.** *Ann Intern Med.* 1997; 126: 645–651

The working group's recommendations target specific groups of patients: those who are known to have coronary heart disease, atherosclerotic disease of the aorta or peripheral arteries, or cerebrovascular disease.

Rosenfeld AG. **Treatment-seeking delay among women with acute myocardial infarction: decision trajectories and their predictors.** *Nurs Res.* 2004; 53: 225–236.

Women delay longer than men before seeking help for symptoms of AMI, yet few studies have analyzed decision delay by gender. Factors studied to date do not adequately explain the differences in decision delay among women or between women and men with AMI. Additional research is needed to guide interventions to limit decision delay in women at risk for AMI. Until then, clinicians should use existing general guidelines to assist women at risk of AMI to avoid decision delay.

Zapka JG, Oakes JM, Simons-Morton DG, Mann NC, Goldberg R, Sellers DE, Estabrook B, Gilliland J, Linares AC, Benjamin-Garner R, McGovern P. **Missed opportunities to impact fast response to AMI symptoms.** *Patient Educ Couns.* 2000; 40: 67–82

The potential for reducing cardiovascular disease mortality rates lies both in prevention and treatment. The earlier treatment is administered, the greater the benefit. This paper examines the relationship of several factors with regard to intentions to seek care promptly for symptoms of AMI.

Stroke

Parahoo K, Thompson K, Cooper M, Stringer M, Ennis E, McCollam P. 2003. **Stroke awareness of the signs, symptoms and risk factors—a population-based survey.** *Cerebrovascular Disease*

In general, the results indicate that respondents appeared knowledgeable about the risk factors of stroke but their recognition of the warning signs was poor. In addition, half of those surveyed would not contact the ambulance service in the case of a suspected stroke but instead would make initial contact with their general practitioner or family/relatives.

Williams LS, Bruno A, Rouch D, Marriott DJ. 1997. **Stroke patients' knowledge of stroke. Influence on time to presentation.** *Stroke.*

Approximately one quarter of stroke patients correctly interpret their symptoms as representing a stroke. This knowledge is not associated with early presentation to the emergency department. Even when patients know that they are having a stroke, most present late because they perceive their symptoms as not serious.

Per Wester, MD, PhD; Johan Rådberg, MD; Bo Lundgren, PhD; Markku Peltonen, BSc;

Factors Associated With Delayed Admission to Hospital and In-Hospital Delays in Acute Stroke and TIA - A Prospective, Multicenter Study. *Stroke* 1999;30:40-48

Early admission to hospital followed by correct diagnosis with minimum delay is a prerequisite for successful intervention in acute stroke. This study is aimed at clarifying in detail the factors related to these delays.

Giuseppe Azzimondi, MD; Leona Bassein, CSTAT; Laila Fiorani, MD; Francesco Nonino, MD; Ubaldo Montaguti, MD; Daniela Celin, MD; Giuseppe Re, MD; ; Roberto D'Alessandro, MD

Variables Associated With Hospital Arrival Time After Stroke - Effect of Delay on the Clinical Efficiency of Early Treatment. *Stroke.* 1997;28:537-542

The aims of this study were to estimate hospital arrival time in an unselected sample of stroke patients, to assess the association with some clinical and demographic variables, and to evaluate the effects of the delay on the clinical efficiency of an effective treatment.

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.

A Healthy People 2010 objective includes increasing public awareness of the warning signs of stroke, yet few data exist about the level of awareness. Recognition of stroke symptoms and awareness of the need to call 911 for acute stroke events were examined among the general population.

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.

One of the national health objectives for 2010 is to increase the proportion of persons who are aware of the early warning symptoms and signs of stroke. To assess public awareness and knowledge of the proper emergency response, CDC analyzed 2001 data from the Behavioral Risk Factor Surveillance System (BRFSS) in 17 states and the U.S. Virgin Islands

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.

Poor public knowledge of stroke warning signs and risk factors limits effective stroke intervention and prevention. This study looks at temporal trends in public knowledge of stroke warning signs and risk factors, among 2,173 participants in a random digit phone survey in the Cincinnati, Ohio region.

Blades LL, Oser CS, Dietrich DW, Okon NJ, Rodriguez DV, Burnett AM, Russell JA, Allen MJ, Fogle CC, Helgerson SD, Gohdes D, Harwell TS. **Rural community knowledge of stroke warning signs and risk factors.** *Prev Chronic Dis.* 2005 Apr;2(2):A14.

Rapid identification and treatment of ischemic stroke can lead to improved patient outcomes. Public education campaigns in selected communities have helped to increase knowledge about stroke, but most data represent large metropolitan centers working with academic institutions. Much less is known about knowledge of stroke among residents in rural communities.

Public Awareness Campaigns - What does the evidence say?

A mass media campaign can work well for changing public awareness of signs and symptoms of heart attack/stroke, and causing behavior change if targeted to high risk populations, if it addresses problems of denial, if it educates public on self evaluation and the correct steps to take (call 9-1-1) and if the campaign is of lengthy duration.

General Health Awareness Campaign Research

Schooler C, Chaffee SH, Flora JA, Roser C. 1998. **Health campaign channels: tradeoffs among reach, specificity, and impact.** *Human and Community Resources.*

Reach is measured as the number of messages intervention community residents remembered, specificity was assessed by examining whether the campaign differentially reached people who were already knowledgeable and practicing cardiovascular disease risk reduction, and impact is defined as the amount of knowledge gained during the course of the campaign. Reach was highest for tip sheets, while specificity was highest for booklets and TV Ads, PSA's tip sheets and TV programs. No channel was optimal for all 3 of the outcome measures.

Randolph w, Viswanath K. 2004. **Lessons learned from public health mass media campaigns: marketing health in a crowded media world.** *Annual Review Public Health.*

Mass media campaigns, because of their wide reach, appeal, and cost-effectiveness, have been major tools in health promotion and disease prevention. They are uniformly considered to be powerful tools capable of promoting health social change.

Acute Myocardial Infarction/Chest Pain

Caldwell MA, Miaskowski C. 2002. **Mass media interventions to reduce help-seeking delay in people with symptoms of acute myocardial infarction: a time for a new approach?** *Patient Education Counseling*.

To reduce delay, media messages need to do more than create awareness. Future interventions should target high risk populations, promote dialogue between previous AMI patients and high risk patients, address problems of denial, provide gender specific education, and emphasize symptom evaluation, problem solving, and decision-making skills.

Herlitz J, Hartford M, Blohm M, Karlson BW, Ekstrom L, Risenfors M, Wennerblom B, Luepker RV, Holmberg S. 1989. **Effect of a media campaign on delay times and ambulance use in suspected acute myocardial infarction.** *American Journal of Cardiology*.

The media campaign used motivational techniques in mass and specialized media to reduce denial to teach self-evaluation of symptoms and the correct steps to follow to obtain help. The general population as well as patients were instructed., mainly by way of printed material, an intense 3 week media campaign, followed by a maintenance campaign. In all 60% of the patients reported seeing the campaign and 25% of them stated that the message had persuaded them to act sooner. In conclusion, delay times of AMI can be reduced by an intense public information campaign, although at the relative cost of a temporary increase in the number of patients with noncardiac chest pain in the emergency room. Ambulance use seems to be more difficult to influence.

Chevalier V, Alauze C, Soland V, Cuny J, Goldstein P. 2003. **Impact of a public-directed media campaign on emergency call to a mobile intensive care units center for acute chest pain.** *Annals of Cardiology*

The 2 aims of this campaign are to encourage people to call centre 15 (similar to 9-1-1) directly and as quickly as possible after noticing the first coronary symptoms, and to encourage general practitioners to “prescribe calling centre 15. The analysis provides a wealth of arguments in favour of the effectiveness of the campaign. On one hand this is due to the quality of its contents... and on the other hand it is due to its lengthy duration.

Ho MT, Eisenberg MS, Litwin PE, Schaeffer SM, Damon SK. 1989. **Delay between onset of chest pain and seeking medical care: the effect of public education.** *Annals of Emergency Medicine*

We conclude that a short-duration education campaign may increase AMI knowledge but does not seem to significantly alter patient behavior.

Kainth A, Hewitt A, Sowden A, Duffy S, Pattenden J, Lewin R, Watt I, Thompson D. **Systematic review of interventions to reduce delay in patients with suspected heart attack.** *Emerg Med J*. 2004; 21: 506–508

Eleven media/public education intervention studies met the inclusion criteria. Five (one controlled and four before and after studies) reported the intervention to have a statistically positive effect on delay time and six (two RCTs and four before and after studies) reported no statistically significant effect. Three (one RCT and two before and after studies) of five studies evaluating the effect of the intervention on emergency department visits reported an increase in this outcome as a result of the intervention, and both studies (one RCT and one before and after study) examining calls made to emergency switchboards reported an increase in this outcome after the intervention.

Stroke

Moser D, Kimble L, Alberts M, Alonzo A, Croft J, Dracup K, Evenson K, Go A, Hand M, Kothari R, Mensah G, Morris D, Pancioli A, Riegel B, Zerwic J. **Reducing Delay in Seeking Treatment by Patients with Acute Coronary Syndrome and Stroke: A Scientific Statement from the American Heart Association Council on Cardiovascular Nursing and Stroke Council.** *Circulation* 2006; 114:168-182

Patient delay in seeking treatment for acute coronary syndrome and stroke symptoms is the major factor limiting delivery of definitive treatment in these conditions. Despite decades of research and public education campaigns aimed at decreasing patient delay times, most patients still do not seek treatment in a timely manner. In this scientific statement, we summarize the evidence that (1) demonstrates the benefits of early treatment, (2) describes the extent of the problem of patient delay, (3) identifies the factors related to patient delay in seeking timely treatment, and (4) reveals the inadequacies of our current approaches to decreasing patient delay.

Silver FL, Rubini F, Black D, Hodgson CS. **Advertising strategies to increase public knowledge of the warning signs of stroke.** *Stroke*.

In communities exposed to television advertising, ability to name the warning signs of stroke increased significantly. There was no significant change in the community receiving print (newspaper) advertising. Television increased the knowledge of both men and women and of people with less than a secondary school education but not of those > or =65 years of age. Intermittent, low-level television advertising was as effective as continuous high-level television advertising.

Alberts MJ, Perry A, Dawson DV, et al. **Effects of public and professional education on reducing the delay in presentation and referral of stroke patients.** *Stroke* 1992;23: pp.352-356

Several emerging stroke therapies require patients to be treated within several hours of symptom onset. Past studies have documented a significant delay between symptom onset and hospital presentation. As part of an experimental treatment study using tissue-type plasminogen activator, we began a multifaceted program of public and professional education to reduce the delay in presentation and referral of acute stroke patients

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.

Public awareness of the warning signs of stroke is important. As part of an educational campaign using mass media, the Heart and Stroke Foundation of Ontario conducted public opinion polling in 4 communities to track the level of awareness of the warning signs of stroke and to determine the impact of different media strategies.

National Resources – Cardiovascular and Stroke Campaigns:

National Heart, Lung and Blood Institute (NHLBI)

The Heart Truth - The NHLBI partnered with the United States Department of Health and Human Services' Office of Women's Health, to develop "The Heart Truth", a national campaign designed to assist healthcare providers and communities in educating women in how to improve their heart health. Materials are designed to be used in a variety of settings, including healthcare facilities, businesses, non-profit organizations, community groups, government agencies, etc. The campaign includes many types of materials, including PSAs for print, TV and radio, fact sheet, brochure, pin, poster, cookbook, DVD, a speakers' kit and more.

Campaign materials are available at: <http://www.nhlbi.nih.gov/health/hearttruth/material/index.htm>

American Heart/Stroke Association (AHA/ASA)

Public Service Announcements - The American Heart/Stroke Association has worked with the Ad Council to create and disseminate several Public Service Announcements about stroke, women and heart disease, blood pressure, healthy lifestyle, and heart attack in different types of media such as print, television, radio, outdoor, theatre slides and now Web banner campaigns. These Public Service Announcement campaigns help educate the public about the American Heart/Stroke Association's priority issues.

PSAs are available at: http://psa.americanheart.org/video.html#heart_english

National Stroke Association (NSA)

Ask Your Doctor - In May 2003, the NSA launched the "Ask Your Doctor" campaign.

Stroke is the third most common cause of death in the United States and the leading cause of adult disability. To improve dialogue between patients and physicians about stroke risk factors and what patients can do reduce their risk (e.g., lower high blood pressure, improve their cholesterol profiles, stop smoking), the National Stroke Association is launching a multi-year "Ask Your Doctor" campaign during National Stroke Awareness Month in May. The campaign's key component is to get people to ask their doctors "Am I at risk for stroke?"

Women in Your Life - Twice as many women die of stroke than breast cancer every year. Despite this startling statistic, women are more worried about their risk of getting breast cancer than their stroke risk. What's more, women think stroke is a men's disease. But the truth is more women than men will die from

stroke. These are some of the reasons why National Stroke Association (NSA) developed “Women in Your Life”, a program to teach both men and women about stroke prevention and the importance of recognizing stroke symptoms in each other.

The booklet can be downloaded at: <http://www.stroke.org/site/DocServer/women05.pdf?docID=881>

National Institute of Neurological Disorders and Stroke/National Institute of Health (NINDS/NIH)

Know Stroke. Know the Signs. Act in Time. – The NINDS is working to educate people about stroke through a public awareness campaign, “Know Stroke. Know the Signs. Act in Time.” They also want people to know that getting to a hospital quickly for treatment can dramatically decrease disability. Campaign strategies include: community education, national and local media outreach, TV and radio PSAs, priority populations outreach, professional education and policy and environmental change.

Materials can be downloaded at: <http://www.ninds.nih.gov/disorders/stroke/stroke.htm>

State-Specific Public Awareness Initiatives:

Several states that receive funding from the National Centers for Disease Control and Prevention’s Cardiovascular Disease Division have implemented public awareness campaigns around the signs and symptoms of heart attack and/or stroke, and the importance of calling 9-1-1. Examples of these initiatives can be viewed on the following website: http://www.chronicdisease.org/Success_Stories/storiesmain.htm.

Legislation and Policy:

State Stroke Awareness Resolutions:

- At least 7 states in the nation (California, Rhode Island, Pennsylvania, Georgia, South Carolina, Louisiana, and Florida) have passed Stroke Awareness Resolutions.
- The purpose of these resolutions is to raise awareness of warning signs, symptoms, and risk factors of stroke. Fiscal notes do not accompany these resolutions, i.e., they do not allocate state funding for the effort. Instead, the aim is to raise awareness of leadership on the issue.

Sources: Robbins, Leslie, “Stroke-related Legislative Actions – A Current Analysis,” National Conference of State Legislatures, <http://www.ncsl.org/programs/health/Lrpres/sld001.htm>

- Some states enacted legislation in 2003, to designate February “American Heart Month” – this could be a possible method to raise awareness of signs and symptoms and calling 911 – a possible way to get media attention and raise awareness of leadership to launch a more comprehensive campaign.
- Similarly, some states enacted legislation in 2003, to designate May “American Stroke Month”

National level:

- The American Heart Association has been advocating that the U.S. Congress pass the Stroke Treatment and Ongoing Prevention Act (STOP Stroke Act). The act passed the Senate unanimously on February 6, 2002, and, in the House, the legislation received overwhelming support from 214 sponsors and co-sponsors. However, Congress did not complete action on the Act before adjourning for the year. In November 2003, the STOP Stroke Act (S.1909) was reintroduced in the Senate and in December 2003, the House version of the legislation (H.R. 3658) was introduced. On June 14, 2003, the House version was passed by unanimous consent. The Senate bill was referred to the Committee on Health, Education, Labor, and Pensions.

Functions of the STOP Stroke Act:

- Authorize a national public awareness campaign to educate the public about stroke warning signs and how stroke can be prevented
- Establish a grant program to help states ensure patients have access to quality stroke prevention, treatment, and rehabilitation services
- Establish the Coverdell Stroke Registry and Clearinghouse to collect data and share best practices

- o Establish a grant program to educate medical professionals in newly developed diagnostic approaches, technologies, and therapies

Update on the STOP Stroke Act: The STOP Stroke Act will be reintroduced to the 109th Congress in 2006, with the opportunity to be enacted into law. The bill currently has 162 co-sponsors; 23 in the Senate, and 139 in the House.

(Senate: S1064) (House of Representatives: HR898)

Maine:

Resources and Capacity

Emergency Medical Dispatch (EMD) - In 2005, there were approximately 587,000 9-1-1 calls received by Public Safety Answering Points (PSAPs) in the state of Maine. Many of these calls were requests for emergency medical assistance. Over 700 public safety telecommunicators provide service to our state by receiving, processing, and dispatching such calls. Until recently, however, 9-1-1 telecommunicators were the only public safety professionals in the state without minimum training standards. Thankfully, now there is a “basic training” course for new 9-1-1 telecommunicators, as well as this new initiative to implement Emergency Medical Dispatch (EMD) at all PSAPs in the state. An estimated 38% of PSAPs in Maine were not providing Emergency Medical Dispatch at the outset of this project.

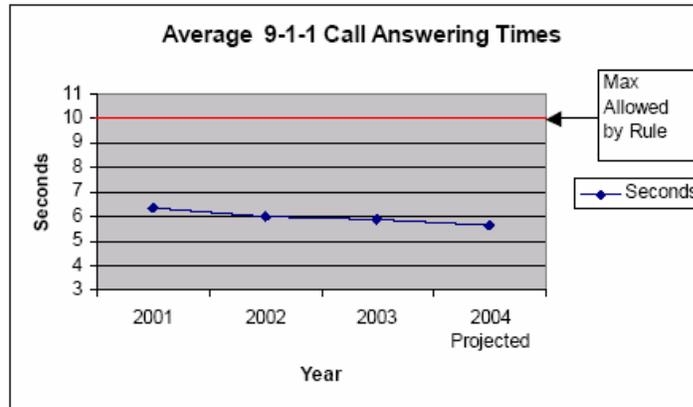
To address this gap in Maine, the Emergency Services Communications Bureau (ESCB), along with Maine Emergency Medical Services, the Maine chapter of the American Heart Association, and other collaborators, put forward legislation that was enacted in the 2005 state legislative session. The law mandates, with funding support, the statewide implementation and ongoing evaluation of Emergency Medical Dispatch, commencing on January 1st, 2007. Although the ESCB remains a critical partner, the oversight for EMD is coordinated by the Maine Emergency Medical Services bureau, capitalizing on its experience with Emergency Medical Services training, licensing, and quality assurance. In 2006, a full-time state EMD Coordinator was hired as a result of the EMD legislative mandate.

The law can be viewed at: <http://www.mainelegislature.org/legis/bills/chapters/PUBLIC303-1.asp>

Enhanced 911 - Enhanced 9-1-1 (E9-1-1) gives the public the ability to call one emergency number for all emergencies that would involve the need for police, fire, and/or medical services. Enhanced 9-1-1 also offers automatic caller location information, critical to speeding up the dispatch of emergency services. 99.6% of Maine's population now has Enhanced 9-1-1, even if the community has not finished addressing. Only the town of Lincoln and other towns with the 794 phone exchange do not have the service.

All cell phone companies doing business in Maine now have activated 9-1-1 dialing. Phase I 9-1-1 service is a requirement of the Federal Communications Commission for wireless phone companies to provide the address of the cell tower that processes a 9-1-1 call and the call back number of the cell phone to the Public Safety Answering Point (PSAP). All carriers in Maine now provide this information. Phase II 9-1-1 service is a requirement of the Federal Communications Commission for wireless phone companies to provide an approximation of the 9-1-1 caller's location in the form of latitude and longitude. Seven of the eight carriers in Maine have implemented this technology to date.

Emergency call answering times have continued to improve. In 2003, call takers answered calls on average in 5.7 seconds. This is significantly better than the 10-second average required by the Bureau's rules.



Emergency Medical Services - The Maine EMS System consists of hospital and pre-hospital patient care providers, system planners and system coordinators. It is their mission to provide emergency patient care, enforce minimum baseline standards and encourage optimum standards.

There are six EMS Regions in Maine, covering the state as follows:

- **Region 1:** Southern Maine EMS - York, Cumberland and Sagadahoc Counties
 - **Region 2:** Tri County EMS - Androscoggin, Franklin and Oxford Counties
 - **Region 3:** Kennebec Valley EMS - Kennebec and Somerset Counties
 - **Region 4:** Northeast EMS- Hancock, Penobscot, Piscataquis, Washington Counties
 - **Region 5:** Aroostook EMS - Aroostook County
 - **Region 6:** Mid Coast EMS - Lincoln, Waldo and Knox Counties
- There are approximately 200 ambulance/transport units throughout these regions, and 90 non-transport units.
 - About 75% of EMS providers are volunteers, or a mix of paid and volunteer.
 - Maine EMS providers have been trained to recognize the signs and symptoms of stroke and heart attack, and specific state-wide protocols exist to guide identification and treatment of these events. There is also a tracking system that enables the collection of data specific to heart attack and stroke.

A map of the Maine EMS Regions and local EMS services is attached as **Appendix A**.

Information Environment – AMI and Stroke Awareness Initiatives in Maine

Maine Quality Forum – In the Spring of 2006, the Maine Quality Forum launched a comprehensive project, called “In a Heartbeat” to reduce mortality and morbidity that result from acute myocardial infarction. The project will be implemented over a multiple-year process, and involves stakeholders from pre-hospital, hospital, physician office, business, payer, public health, government and legislative settings. Dynamic workgroups, including Medical Response and Treatment, Metrics and Data, and Community Engagement, have been formed to assess Maine’s needs around AMI, and develop strategies to address them. As part of this project, a publication highlighting the signs and symptoms of AMI, necessity to call 9-1-1, and treatment available for AMI, was developed and disseminated as an insert in state-wide newspapers.

Maine Health Systems – MaineHealth Systems, which includes seven affiliate hospitals in Southern and Central Maine, has developed a report, focusing on issues surrounding public education and awareness pertaining to heart attack warning signs and the use of 9-1-1. The report includes data and background information that support the need for a public education initiative, as well as a proposed initiative that could be collaboratively implemented among stakeholders throughout the state of Maine. A complete list of references utilized in the MaineHealth Public Education Initiative report are included as **Appendix B**.

Maine Cardiovascular Health Program

State-wide Stroke Awareness Campaign – In the summer of 2005, the Maine Center for Disease Control and Prevention’s Cardiovascular Health Program launched a state-wide Stroke Awareness Campaign, focused on increasing public knowledge/awareness of the signs and symptoms of stroke, and the need to call 9-1-1 immediately should those signs be witnessed. The campaign includes print materials, as well as radio and television PSAs, and have been disseminated and utilized in community, worksite and healthcare settings throughout the state. A copy of the background document, which discusses the research behind the campaign, is attached as **Appendix C**. Stroke Awareness Campaign materials are available at: http://www.healthymainepartnerships.org/MCVHP/resource_library.aspx#1

Healthy Maine Partnership Signs and Symptoms mini-grants – Mini-grants from the MCVHP were awarded to five Healthy Maine Partnerships to implement various signs and symptoms/call 9-1-1 initiatives from January 1 – December 31, 2005. Increases in knowledge around several risk factors, signs and symptoms were documented for both heart attack and stroke, with slightly better results for stroke awareness. A vast majority of survey respondents indicated that they would call 9-1-1 for both signs and symptoms of heart attack and stroke, both pre and post intervention. (Heart Attack: 94% pre vs. 97% post) (Stroke: 93% pre vs. 96% post)

Maine HeartSafe Communities – During late Fall of 2005, the MCVHP partnered with Maine EMS to launch Maine HeartSafe Communities, an ongoing project designed to improve community cardiovascular health via increasing public education and awareness around cardiovascular events, and enhancing EMD and EMS capacity to identify and respond to these events. Local EMS services work with community partners to obtain and maintain program criteria. Over 60 Maine communities have been designated HeartSafe since November, 2005. For a list of designated HeartSafe Communities, or to access HeartSafe resources, visit the following link: http://www.healthymainepartnerships.org/mcvhp/heart_safe.aspx

American Heart/Stroke Association – Northeast Affiliate – awaiting info from Maine representatives.

Maine EMS Regions and EMS Ambulance and Rescue Units

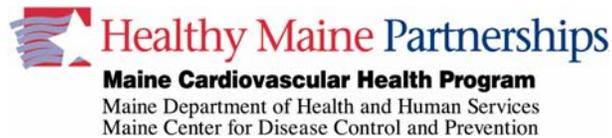


Appendix B

MaineHealth Systems
AMI Public Education Initiative Report – List of References/Resources

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University of Michigan Health System February, 11 2004.
<http://www.med.umich.edu/opm/newspage/2004/hmheartattack.htm>
14. **Developing Interventions to Reduce Treatment-Seeking Delay.** (2004 Apr 29).
http://depts.washington.edu/hservdoc/HSERV507/Interpersonal_communication_intervention_lecture.doc
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Journal of Cardiovascular Nursing 1999 Apr;13(3):21-32.
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Prehosp Emerg Care. 2002 Apr-Jun;6(2):175-85.
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Appendix C
MCVHP 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 and evaluate the Stroke Awareness Campaign. It also describes the content and initial evaluation of television public service announcements that were added to the campaign in Spring 2006. 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.

May 2006 - WGME TV 13 “Signs of Stroke” Public Service Announcements

In the Spring of 2006, the Maine Cardiovascular Health Program, and media contractor, CD&M Communications, were presented with a unique opportunity to increase the reach of the state-wide stroke awareness campaign. During February 2006, Doug Rafferty, local news anchor for WGME 13 - Portland, suffered a stroke while broadcasting on-air. Several viewers and co-workers recognized that Mr. Rafferty was experiencing stroke symptoms, and he was taken to the Emergency Department immediately. A few weeks later, Mr. Rafferty was back on the air, with minimal lasting effects, thanks to the immediate identification and treatment of his stroke. Recognizing the opportunity to share Mr. Rafferty’s experience to increase awareness of stroke signs and symptoms/call 9-1-1 throughout Maine, CD&M Communications approached WGME 13 to discuss the possibility of collaborating to produce and air public service announcements during May 2006 - National Stroke Awareness Month.

Fortunately, WGME and Mr. Rafferty also acknowledged his experience as an opportunity to increase public awareness of early identification and treatment for stroke, and collaborated with CD&M Communications to produce three public service announcements (PSAs) for television. In order to spread messaging consistent with the original campaign pieces, each of the PSAs highlighted the signs and symptoms of stroke, as well as the need to call 9-1-1 immediately, should symptoms be witnessed. Mr. Rafferty was featured in two of the PSAs, and the third featured photos of people of different age, gender, race, ethnicity, etc. to highlight the fact that stroke can happen to anyone. The Doug Rafferty PSAs were aired on WGME 13 during the entire month of May, as well as the first week of June 2006. All three PSAs were then made available on the Maine Cardiovascular website to facilitate state-wide access and local use:

http://www.healthymainepartnerships.org/MCVHP/resource_library.aspx#1.

Following the WGME campaign, CD&M commissioned Critical Insights, a Portland-based market research firm, to conduct a primary market research effort on behalf of MCVHP to gauge the relative “impact” of the effort, specifically:

1. Measuring levels of awareness of the WGME (and other) stroke-related messages; and
2. Impact on residents’ knowledge of warning signs of stroke.

Southern Maine Resident Poll “Signs of Stroke” Campaign – Overview of Findings

Method and Approach: A seven-minute telephonic questionnaire was developed collaboratively with the MCVHP and CD&M Communications, in order to address the evaluation objectives mentioned above. The intended audience was both men and women, age 45 or older. Survey interviews were conducted in early June of 2006. Refusal rates were less than 8% overall, indicating that the results were not tainted by non-response error. Respondents were randomly selected from telephone lists of households in WGME’s coverage area, including York, Cumberland, Androscoggin, Sagadahoc, Oxford, Franklin, Kennebec, Knox and Lincoln Counties.

The following inclusion criteria were utilized:

- Be at least 45 years of age;
- Live in a community in WGME’s coverage area; and
- Not be employed or have any affiliation with a market research firm, advertising agency or Maine CDC-related entity.

A total of 303 interviews with qualified respondents were conducted, resulting in an associated margin of error +/-5.7 percentage points at the 95% confidence level for the total sample.

Key Findings:**Health Profiling**

Half of all residents polled in the WGME coverage area view themselves as very healthy, are younger and more highly educated residents. They tend to have a more favorable view of their own health than do older and less well-educated residents. While a strong majority of residents – a full three-quarters, in fact – have had both a blood pressure and a cholesterol reading in the past year, not all of these residents report knowing their numbers from these tests (73% blood pressure, and 62% cholesterol). A much smaller proportion, only 2-in-10, have either obtained information on or taken classes on nutrition.

Awareness of Signs of Stroke

Recall of message, both on a top-of-mind and total basis, show that numbness on the side of the body or face (44%), difficulty understanding or slurred speech (35%), dizziness (30%), and severe headache (23%) are the most prominently recalled signs of stroke. Trouble walking/loss of balance/trouble with coordination (16%) and problems with vision (16%) were least prominently recalled signs.

- It is notable that the most prominently noted symptom – numbness on the side of the body or face – can be identified on an unprompted basis by no more than 4-in-10 area residents.
- Other commonly-noted symptoms such as slurred speech, dizziness, and headache are cited by no more than 3-in-10 residents.

Generally, more highly educated residents, and those who have a more favorable view of their own personal health, tend to be more aware of the signs of stroke. Residents with lower levels of educational attainment and those who believe they are less healthy, tend to exhibit lower levels of awareness of different stroke symptoms.

On an unprompted basis, 1-in-10 area residents cannot name a single warning sign or symptom of stroke.

- Lack of any awareness of stroke symptoms is most common among men and less educated residents.

Response to Stroke

When provided with a list of possible responses, fully 9-in-10 area residents (91%) indicate that their first response in the event someone was having a stroke would be to call 911. Other responses included: take them to the hospital, something else, and don't know/refused.

- Interestingly, less-educated respondents are more likely than are college-educated residents polled to report that they would call 911.
- Conversely, while still low overall, significantly more college-educated residents (10%) than non-college residents (3%) state that they would take the victim to the hospital.

Messaging

Fully 7-in-10 area residents polled claim to have seen recent informational messaging about stroke, and over half report having seen the WGME public service announcements.

When asked to recall what they had seen and to describe the content of the stroke-themed messaging, the most commonly cited themes involve ad content, information on action to be taken, and information on symptoms of stroke, specifically:

- **Content:** *Doug Rafferty/Anchor who suffered stroke* (mentioned by 27% of these respondents) and *Channel 13/WGME* (11%);
- **Actions:** *Act immediately/do not hesitate in the case of a possible stroke* (20%) and *call 911* (14%);

- Symptoms: *Numbness on side of face or body* (17%), *difficulty understanding or slurred speech* (16%), and *dizziness* (11%).

Generally, those who claim to have seen the WGME announcements tend to be directionally more likely to be able to recall virtually all warning signs of stroke, especially dizziness. Also, while other stroke-themed messaging may have been present during the airing of the WGME effort, those who claim to have seen the announcements are more likely than are others to recall that the spots contained messaging about “calling 911,” which was a prominent directive in the WGME campaign.

Additionally, those who claim to have seen the WGME spots (vs. those who claim to have seen other stroke-related messages, but not the WGME effort) tend to be slightly more likely to recall seeing or hearing messaging containing the following topics, each of which were featured prominently in the WGME announcements:

- React immediately without hesitation;
- Symptom of numbness on side of face/body
- Symptom of difficulty understanding or slurred speech
- Symptom of dizziness

After being read a description of the WGME public service announcements, slightly more than half of residents (54%) in the station’s coverage area who were polled claim to have seen the spots. Awareness is highest among women and, not surprisingly, regular WGME news viewers.

Appendix I: References and Resources**References:**

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Resources:

a) Need to Educate

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b) 9-1-1 Call Delays

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State-wide 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.

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!**



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!**



MCVHP Television PSAs available at:

www.healthymainepartnerships.org/mcvhp/resource_library.aspx

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



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!**



www.healthymainepartnerships.org/mcvhp2.html