



American Heart Association | **American Stroke Association**

Learn and Live.

Evaluating the effectiveness of a community education radio campaign on stroke warning signs and symptoms

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Radio Campaign Schedule

Time of Day
Traffic Reports air Monday through Friday
6am – 7pm on WHJJ – AM
Traffic Reports air Monday through Friday
6am – 9am and 3pm – 6:30pm on
WHJY – FM, WSNE – FM, WWBB – FM.

Weeks
Pre-Media Campaign April 6 to May 2
Media Campaign May 3 to May 30
Post-Media Campaign May 31 to June 26

Grand Totals of Air Time

Station	Spots	Rate	CPP	Frequency	Net Reach	Investment
WHJJ-AM	36	\$32.00	\$106.67	4.0	20,500	\$1,152.00
WHJY-FM	15	\$32.00	\$16.00	2.1	97,100	\$480.00
WSNE-FM	18	\$32.00	\$35.56	1.7	63,900	\$576.00
WWBB-FM	24	\$33.00	\$30.00	2.3	77,500	\$792.00
Total	93	\$32.26	\$35.97	2.3	250,400	\$3,000.00

Radio Stations



Contact Information

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Purpose/Background

More than three thousand people will fall victim to a potentially treatable stroke and more than six hundred people will die from stroke-related complications annually in Rhode Island.

Despite numerous efforts to increase awareness, overall knowledge among the public remains poor with regard to stroke risk factors, the signs and symptoms of stroke, and the availability of a time-sensitive therapy, especially among groups at the highest risk for stroke.

Mass media and television campaigns have been credited with increasing public awareness and knowledge of stroke risk factors and warning signs.

Objective

To evaluate the effectiveness of a community education radio campaign on stroke warning signs and symptoms and activation of 911.

Design/Methods

The radio campaign ran a total of 93 spots from May 3, 2010 to May 30, 2010, a total of 27 days. The net reach of the campaign was 250,400 individuals. Grant support was provided by the Rhode Island Department of Health Heart Disease and Stroke Prevention program for a total investment of \$3,000. The radio campaign aired during the traffic reports Monday through Friday from 6am to 7pm on the AM station and 6am to 9am and 3pm to 6:30pm on the FM station.

Get-With-The-Guidelines (GWTG) data was analyzed from participating Rhode Island hospitals who had been collecting data for at least one year prior to the radio campaign. The data elements analyzed included, mode of arrival and last known well to arrival time. Data was reviewed from the 27 days prior to the campaign, the 27 days during the campaign, and the 27 days following the campaign.

Results

Table 1. 2010 Distribution of Modes of Arrival:

All Stroke Patients*

(Source: Get With The Guidelines Data from participating Rhode Island hospitals)

	0-90 min.	91-180 min.	>180 min.	Total Strokes**
Pre-Media Campaign	17.9% (22/123)	4.9% (6/123)	14.6% (18/123)	123
Media Campaign	13.3% (19/143)	4.2% (6/143)	19.6% (28/143)	143
Post-Media Campaign	16.4% (22/134)	6.0% (8/134)	20.9% (28/134)	134

*Patients with missing mode of arrival information are still represented in the total number of stroke patients.
**Ischemic, TIA & Hemorrhagic Stroke

Table 2. 2010 Last Known Well to ED Arrival: Ischemic Stroke, TIA and Hemorrhagic Patients*

(Source: Get With The Guidelines Data from participating Rhode Island hospitals)

	EMS from scene	Private transport/walk – in	EMS/hospital transfer	Total Strokes**
Pre-Media Campaign	53.7% (66/123)	19.5% (24/123)	21.1% (26/123)	123*
Media Campaign	51.0% (73/143)	23.8% (34/143)	16.8% (24/143)	143*
Post-Media Campaign	55.2% (74/134)	18.7% (25/134)	17.2% (23/134)	134*

*Patients with negative time values or missing information were excluded from the numerator, but were included in the denominator. (Total stroke patients).
**Ischemic, TIA & Hemorrhagic Stroke

Conclusions

In the period after media campaign, the number of patients arriving by EMS increased slightly as did the number of patients whose last time known well was less than 180 minutes.

At this point, it cannot be determined if the paid radio advertising campaign increased the awareness of common warning signs of stroke and reinforced the importance of activating 911 upon experiencing these symptoms. More research is required to determine if the increases in mode of arrival and last time known well is a direct impact of the radio advertising.

Implications for Practice

In future studies, it would be appropriate to use a larger sample that is more representative of the general population. Further analysis of demographics could be used to create targeted education programs for specific populations. It may be useful to have a follow up survey to determine effectiveness in addition to reviewing hospital data.

Radio Campaign

STROKE IS THE NUMBER ONE CAUSE OF DISABILITY IN THE U.S. IF YOU EXPERIENCE SUDDEN NUMBNESS OF THE FACE, ARM, OR LEG SLURRED SPEECH OR BLURRED VISION CALL NINE ONE ONE IMMEDIATELY. TO LEARN MORE VISIT STROKE ASSOCIATION DOT ORG.

References

Task Force Members, Lee H. Schwamm, et, al. **Recommendations for the Establishment of Stroke Systems of Care: Recommendations From the American Stroke Association's Task Force on the Development of Stroke Systems**
Stroke 36: 690-703; published online before print as doi:10.1161/01.STR.0000158165.42884.4F