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Assessing Stroke Awareness, Preparedness, and Preferred Communication Modalities

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Assessing Stroke Awareness, Preparedness, and Preferred Communication Modalities

Dana Allison

Family Medicine May - June 21

Michelle Cangiano, MD



Overview

- I. Problem
- II. Methodology
- III. Results
- IV. Analysis
- V. Discussion
- VI. Future Directions



Ia. Problem Identification: Rationale

- I. In **2002**, Stroke was cited as **Vermont's third leading cause of death**. [12]
- II. Concerted efforts between the Vermont Department of Health (VDH), American Heart Association, several state hospitals, and regional community agencies, between the years of 2007-2010, led to a substantial decline in the state's mortality rate, which lowered stroke to **Vermont's sixth leading cause of death**. [6][9]
- III. According to Vermont's Vital Statistics, the current crude death rate from Cerebrovascular disease is estimated at **42.0 death per 100,000 Vermonters (2018)**, with an average of **1,434 deaths annually**. [10][8]
- IV. Stroke morbidity and mortality prevention continues to be an objective by the Vermont Department of Health. In the "Healthy Vermonters 2020" campaign, the state hopes to further reduce the crude death rate to **23.4 deaths for every 100,000 persons**. [6].



Ib. Problem Identification: National Impact

- I. In the United States, stroke is currently the **5th leading cause of Death**. [1]
- II. Annually more than **137,000 lives are lost** to stroke, with a death occurring **every four minutes**. [3]
- III. Of the several subtypes, **83% are ischemic strokes**, caused by cerebrovascular blockage and under-perfusion, [1]
- IV. Among those most vulnerable to long-term morbidity are Americans aged **65 years or older**, accounting for more than **77% of all cerebrovascular hospitalizations and deaths**. [2]
- V. Stroke is recognized as **one of the most expensive chronic diseases in the United States**, generating **\$30 billion** annually in medical costs and lost earnings. [2][4][13]





Community Perspectives

“Stroke awareness education is important in primary care for patients with risk factors for stroke. It is important to provide information in a way that helps patients feel prepared without inducing unnecessary anxiety about the potential for stroke. I try to provide patients with a risk assessment for stroke and then focus on the risk factors that we can intervene on, improve, and reduce, so that folks are empowered to make changes and reduce their risk.”

- Elizabeth Landell, MD, UVMMC Hinesburg

“As a provider, you want to do as much as you can to give your patient’s the care that they deserve. Secondly, in primary care each association provides their every own guidelines, ex. a health association will recommend you follow a specific set of guidelines for implementation. Whereas a different organization for genetics will strongly encourage the use of a specific type of genetic screening recommend you conduct specific screenings. How do you best prioritize this into a visit?”

- James Ulager, MD, UVMMC Hinesburg



IIa. Methodology: Survey

- I. Content – anonymous, open-ended, and multiple-choice questionnaire asking volunteers:

Were you diagnosed with stroke or any of the following chronic conditions?

Do you have knowledge of F.A.S.T?

Can you identify any features and risk factors of stroke?

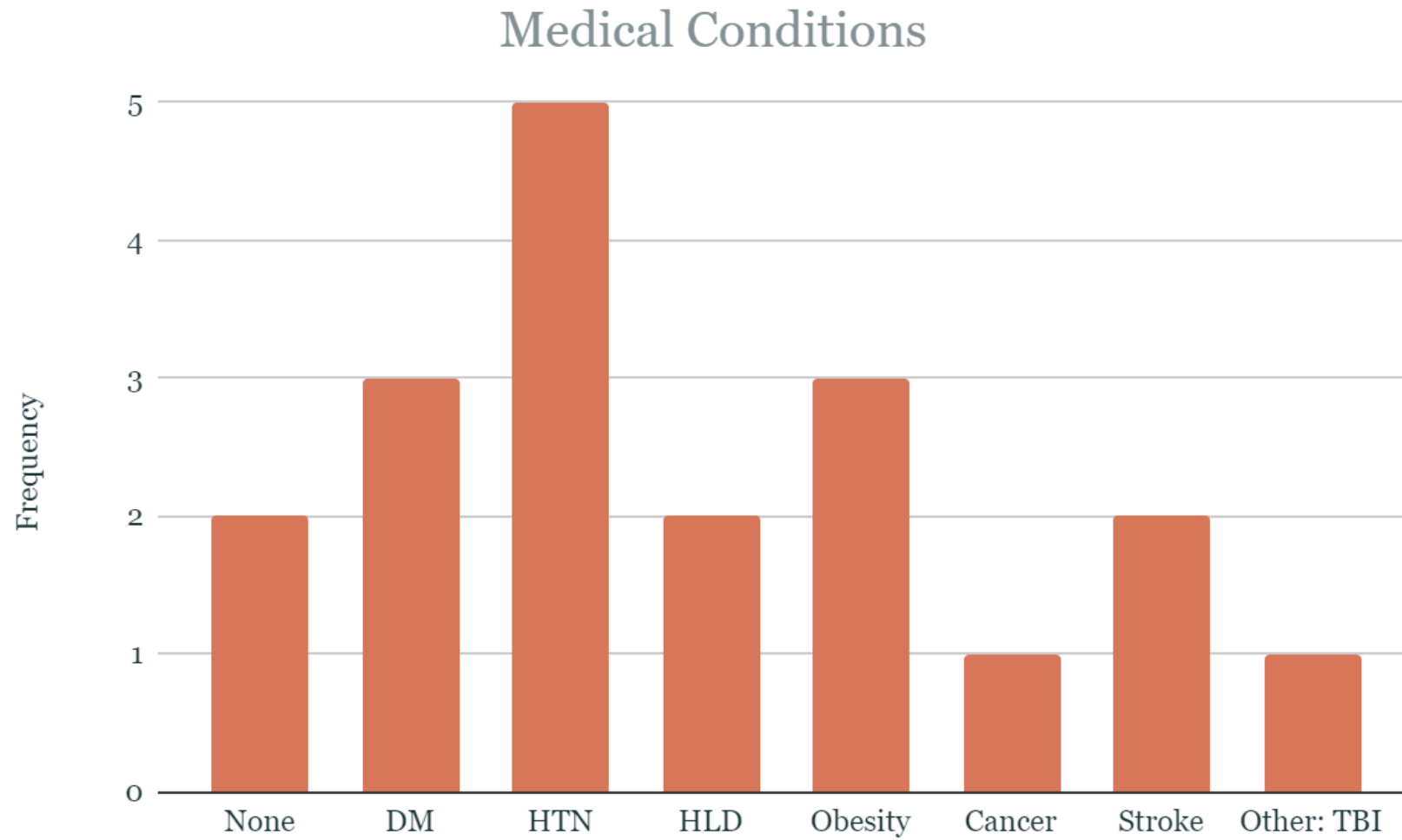
Where (source) did you learn about stroke?

Where would you prefer to learn more about stroke?

- I. Distribution – Interval between 6/7/21 and 6/17/21, during outpatient patient interviews.
- II. Respondents –10 subjects, reflective of the Hinesburg, Vermont population demographic.

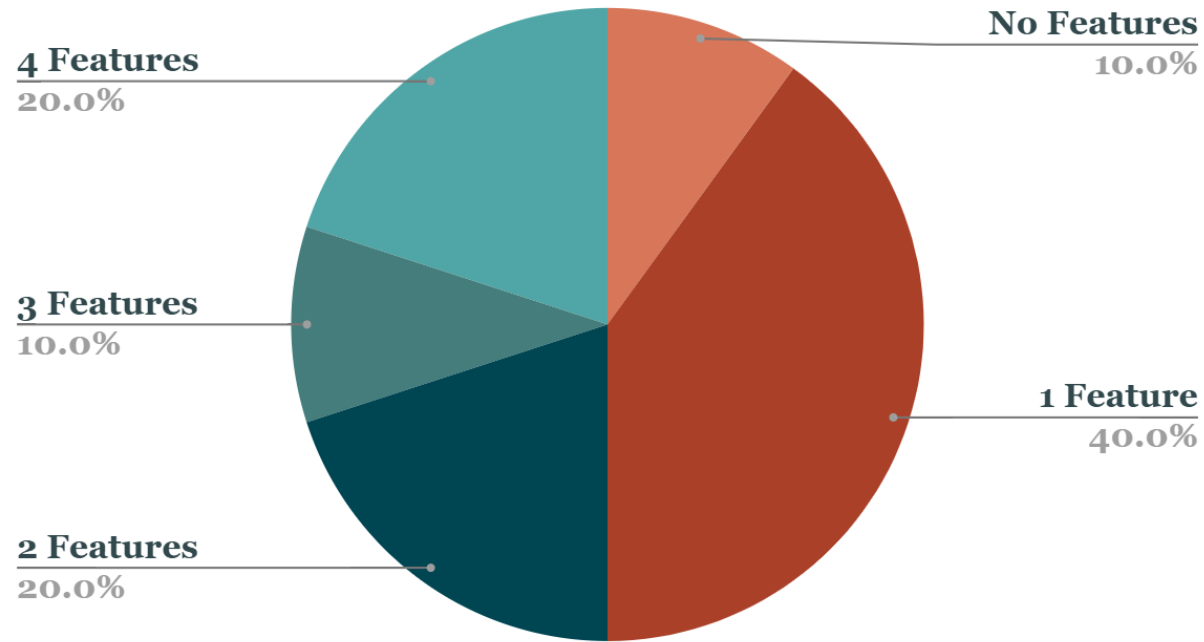


IIIa. Results

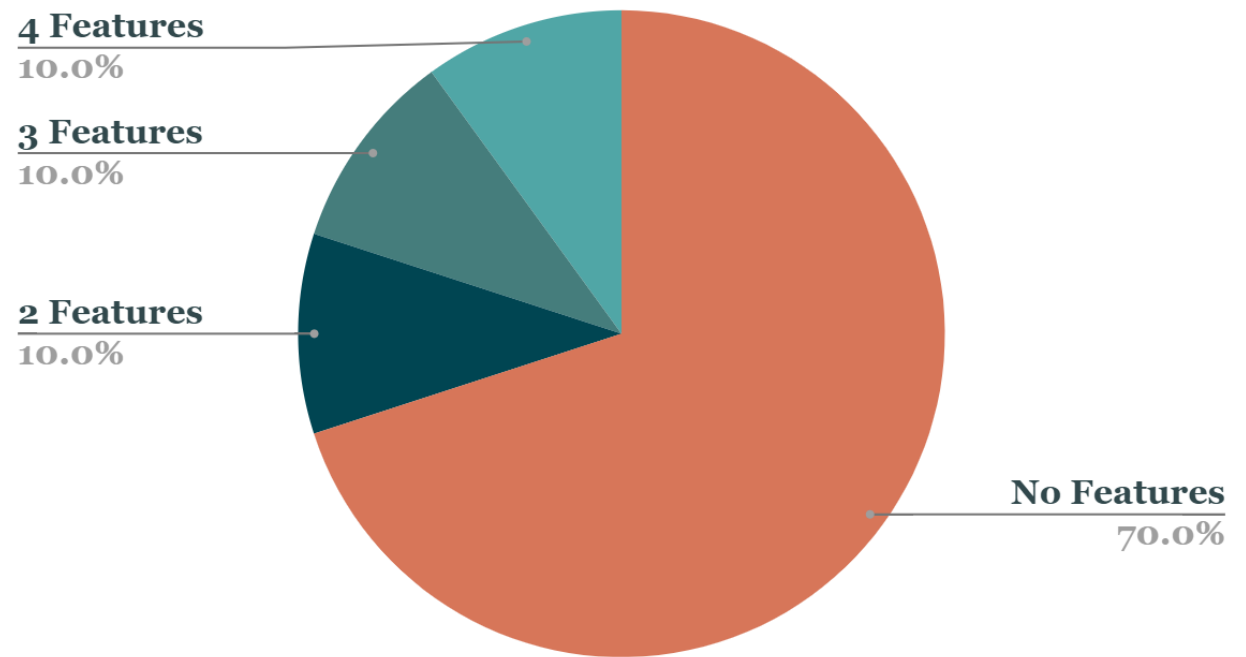


IIIb. Results

Stroke Features Identified

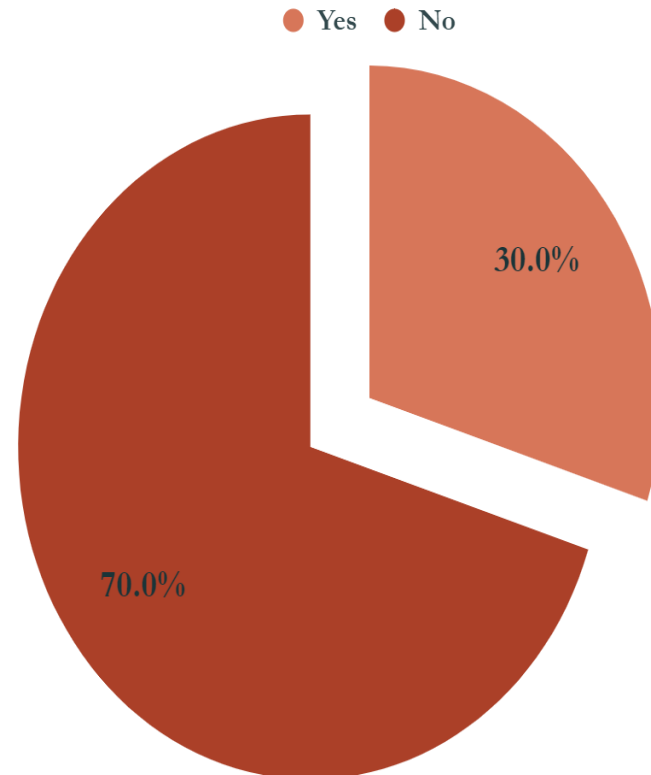


Stroke Risk Factors Identified



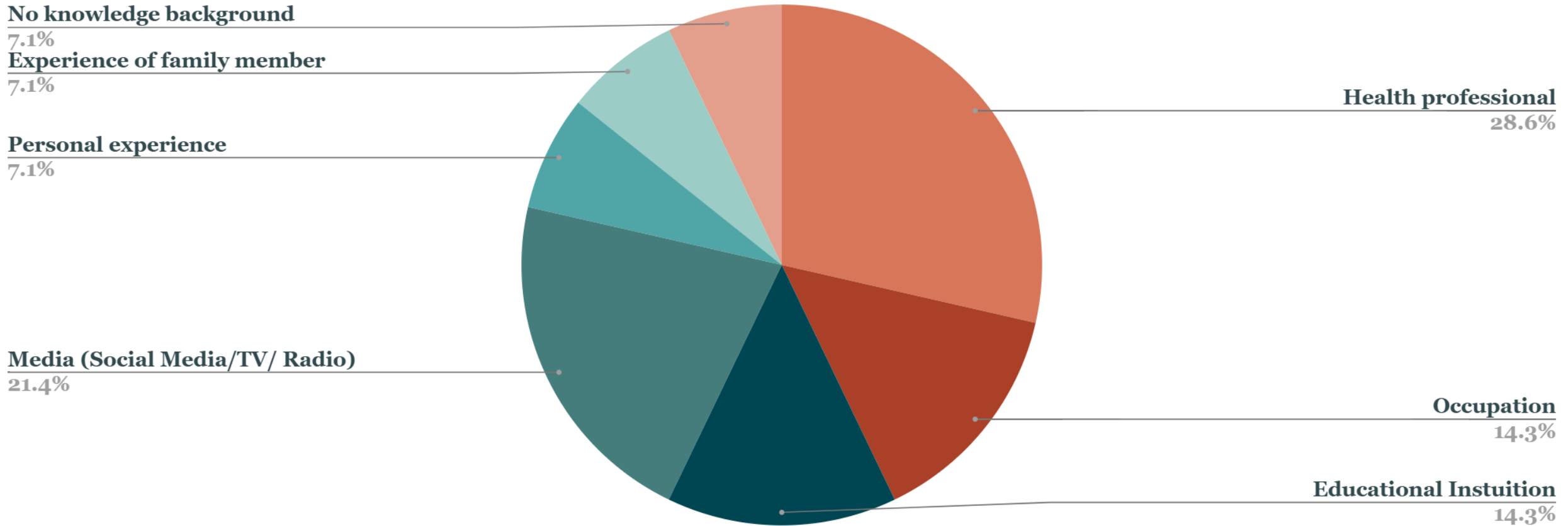
IIIc. Results

Knowledge of FAST OR BEFAST acronym ?



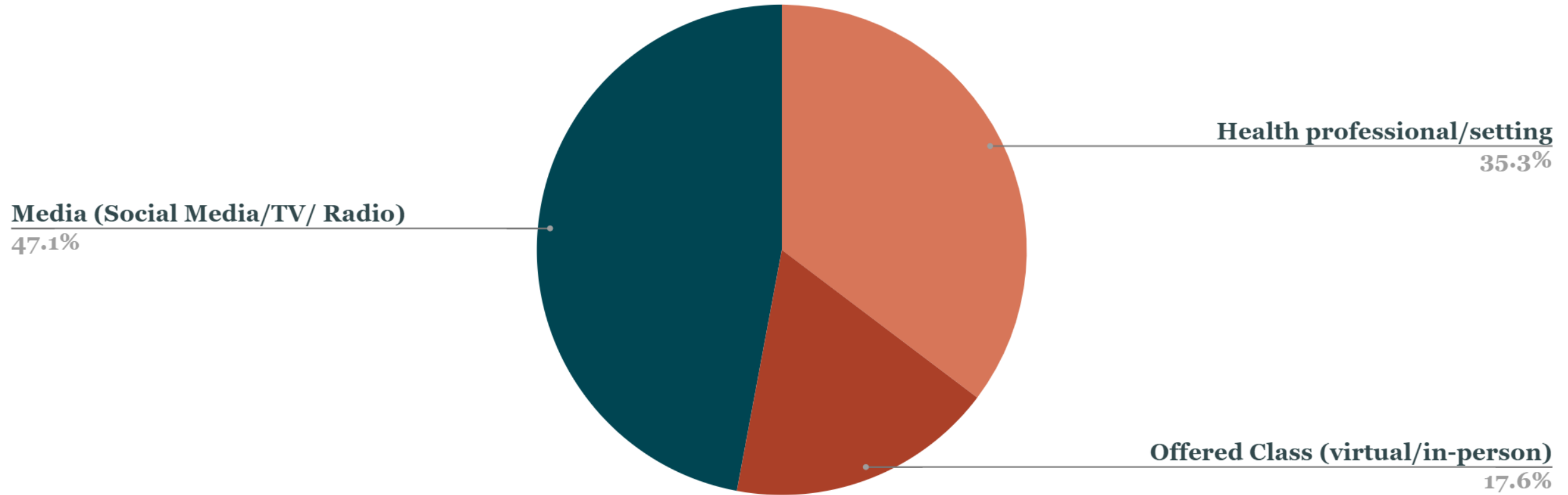
IIId. Results

Stroke Educational Background



IIIe. Results

Stroke Education Preference



Analysis

I. Medical Disease:

- a. **89.47 % of respondents were diagnosed with conditions considered to be major risk factors for stroke or secondary stroke.**
- b. **10.526% respondents were diagnosed with unrelated conditions.**

II. Knowledge of stroke features and risk factors:

- a. **30% of respondents were able to identify risk factors for stroke.**
- b. **70% of respondents were unable to identify any risk factors for stroke.**

III. Stroke Education Background:

- a. **61.5% of respondents attributed their background stroke knowledge to external sources (non- healthcare provider).**
- b. **30% of respondents attributed their background stroke knowledge to their healthcare provider.**

IV. Stroke Education Preference:

- a. **68.75 % of responses indicate a preference for external stroke education (non- healthcare provider), specifically geared towards media outlets 50%.**
- b. **37.5% of responses indicate a preference for stroke education from their health care provider.**



Analysis: Evaluation of effectiveness and limitations

- I. Limited sample size
- II. Isolated demographic (regional)
- III. Limited time allotment to conduct research
- IV. Variable influence of outliers, e.g., occupational background



Discussion

Results from this brief assessment suggests a critical necessity for providers, to educate patients about the risk factors and acute signs to recognize in an acute emergency (stroke). With emphasis placed on patients with chronic conditions that place them at higher risk of experiencing acute medical emergencies.

Additionally, the insights gained from this survey invite future exploration into the best practices for optimal patient communication, specifically communication modalities.



Future Research Directions

- I. Systemic literature review investigating the best practices of disseminating health information using social media platforms in public health campaigns.

- II. Public Health Campaigns integrating traditional and social media outlets.



References

1. Centers for Disease Control and Prevention. “Stroke Facts.” *CDC*, 2019, www.cdc.gov/stroke/facts.htm. Accessed 26 June 2021.
2. Dobkin, B. “The Economic Impact of Stroke.” *Neurology*, vol. 45, no. 2 Suppl 1, 1 Feb. 1995, pp. S6-9, pubmed.ncbi.nlm.nih.gov/7885589/. Accessed 26 June 2021.
3. “Facts, Causes and Risks of Stroke.” *Www.heart.org*, 2021, www.heart.org/en/about-heart-disease-in-women/facts/facts-causes-risks-and-prevention-of-stroke. Accessed 26 June 2021.
4. HealthPayerIntelligence. “Top 10 Most Expensive Chronic Diseases for Healthcare Payers.” *HealthPayerIntelligence*, 19 July 2017, healthpayerintelligence.com/news/top-10-most-expensive-chronic-diseases-for-healthcare-payers. Accessed 26 June 2021.
5. Taylor, T N, et al. “Lifetime Cost of Stroke in the United States.” *Stroke*, vol. 27, no. 9, 1996, pp. 1459–66, www.ncbi.nlm.nih.gov/pubmed/8784113?dopt=Abstract, 10.1161/01.str.27.9.1459. Accessed 26 June 2021.
6. VDH Heart Disease Program. “Heart Disease & Stroke Scorecard.” *Vermont Department of Health*, 9 Dec. 2016, www.healthvermont.gov/scorecard-heart-disease-stroke. Accessed 26 June 2021.
7. “Vermont.” *Www.cdc.gov*, 7 June 2021, www.cdc.gov/nchs/pressroom/states/vermont/vt.htm. Accessed 26 June 2021.
8. “Vermont.” *Www.heart.org*, www.heart.org/en/affiliates/vermont/welcome-to-vermont. Accessed 26 June 2021.
9. Chronic Disease Surveillance Data Pages. Vermont Department of Health, May 2019, https://www.healthvermont.gov/sites/default/files/documents/pdf/HS_1305_Data_Pages_081816.pdf. Accessed 26 June 2021.
10. “Stroke.” *Www.healthwise.net*, <https://www.healthwise.net/uvmhealth/Content/StdDocument.aspx?DOCHWID=hw224638>. Accessed 26 June 2021.
11. Vital Statistics Bulletin 2018. Vermont Department of Health, <https://www.healthvermont.gov/sites/default/files/documents/pdf/Vital%20Statistics%20Bulletin%202018.pdf>. Accessed 26 June 2021.
12. Vital Statistics Bulletin 2002. Vermont Department of Health, <https://www.healthvermont.gov/sites/default/files/documents/pdf/2002.pdf>. Accessed 26 June 2021.
13. Lifetime Cost of Stroke in the United States. Thomas N. Taylor, Patricia H. Davis, James C. Torner, Julia Holmes, Jay W. Meyer, and Mark F. Jacobson. Originally published 1 Sep 1996 <https://doi.org/10.1161/01.STR.27.9.1459> *Stroke*. 1996;27:1459–1466





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