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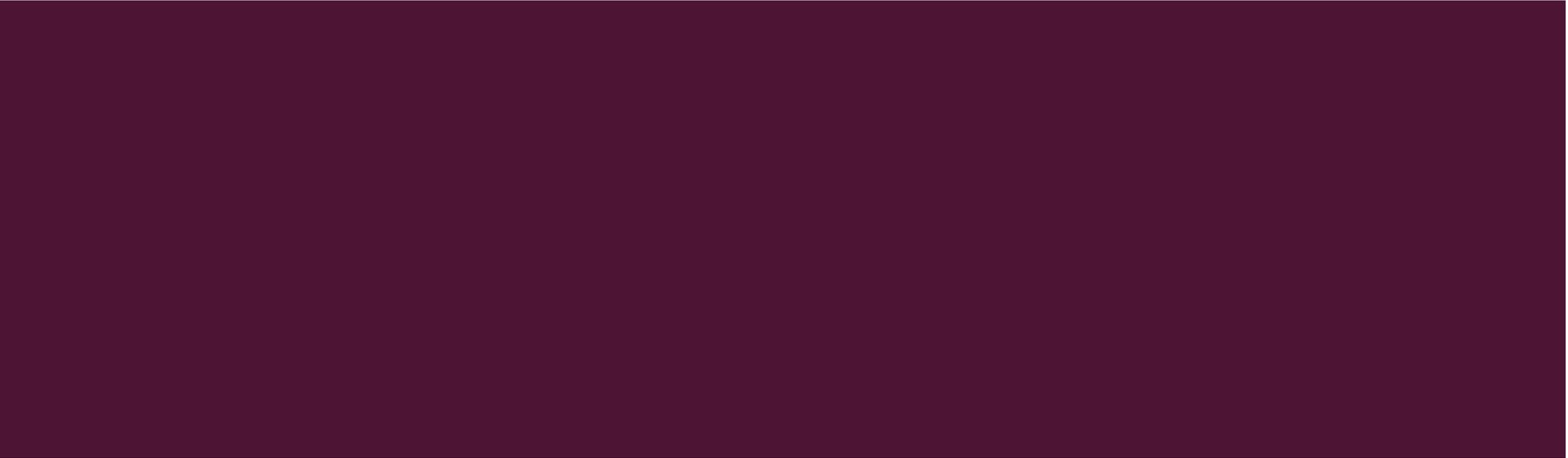
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PROMOTING TIA AWARENESS: DECREASING STROKE MORTALITY IN VERMONT

NICOLE BECHER - FAMILY MEDICINE CLERKSHIP - JANUARY 2019 - BERLIN,VT

FACULTY MENTORS DR. DALE STAFFORD



PROBLEM IDENTIFICATION

- In Washington County VT, rate of death from stroke was 61 per 100,000 compared to the state of Vermont as a whole where the rate of death from stroke was 31.3 per 100,000 in 2015 [3]
 - Family Medicine physicians practicing in Washington County hypothesized this may be due to the general attitude of this population to not seek care unless they feel they are in acute danger, coupled with lack of general knowledge about stroke and TIA
- There were 6.3 million cerebrovascular deaths worldwide in 2015, making it the second leading global cause of death. [3]
- Approximately 15% of all strokes are heralded by a TIA, and 7-40% of patients who are treated for an ischemic stroke report experiencing a TIA first. [2]
- Research suggests that fewer than 10% of ischemic strokes are treated due to arrival to the hospital outside of appropriate treatment window for tPA, which can greatly improve outcomes of ischemic stroke. [2]

PUBLIC HEALTH COST

- In Vermont, costs of chronic disease (including cerebrovascular disease) are projected to cost over \$2 billion in 2019 [4]
- According to the American Heart Association, the direct and indirect cost of stroke between 2013-2014 (average annual) was \$40.1 billion, and the mean expense per patient for direct care for any type of service related to cerebrovascular disease was estimated to be \$6574 [3]

COMMUNITY PERSPECTIVE

- “People often try to discount the symptoms or blame something else, and ignore the symptoms until it’s too late to actually do something about it.” – Brian Rodriguez, MD (Family Medicine Physician)
- Keith Taylor, paramedic at Montpelier Fire Department:
 - “By the time we get there, patients are often unresponsive. We’re usually called for altered mental status, slurred speech, or facial droop.”
 - Keith felt that the most important point of intervention to prevent death from stroke would be educating patients on “deciding to act,” as well as the routine encouragement of healthier lifestyle and generally being informed about their health.
 - He also felt that one of the largest barriers to stroke prevention in this community is the lack of education about health issues.

INTERVENTION AND METHODOLOGY

- A brief brochure was developed, with simple and bulleted descriptions of symptoms of stroke. The brochure also highlights the importance of seeking immediate care even for temporary symptoms.
- The brochure is aimed to intervene on the time between true “last known well” and seeking medical care.
- Brochure was laminated and placed in exam rooms in an easily visible location
- Methodology was not implemented due to the short length of the rotation, but would include a pre-and-post visit survey on knowledge surrounding stroke symptoms and when to seek medical attention.

RESPONSE

- Brochure was distributed to a handful of patients after asking them what they already knew about stroke. Each of these patients felt they had learned something new about stroke and when to seek emergency medical care for stroke-like symptoms
- Physicians at the practice were asked about the flyer and whether they felt it would achieve the target intervention:
 - Response was very positive for the flyer and it was felt to be an appropriate amount of information
 - Concerns were raised as to whether it would reach some of the target population, namely patients who don't frequently seek medical care

EVALUATION OF EFFECTIVENESS AND LIMITATIONS

Limitations:

- Limited time during rotation to implement intervention
- Brochure visibility limited to those who attend visits at their primary care office, which does not fully encompass the target audience
- According to the American Heart Association, “Further research is required to identify interventions aimed at improving stroke literacy, as well as whether these interventions translate to improved risk factor control and earlier arrival to the hospital for acute stroke care.” [3]

Evaluation of effectiveness:

- Pre and post visit survey of knowledge surrounding stroke symptoms, TIA, and when to seek medical care

RECOMMENDATIONS FOR FUTURE INTERVENTIONS

- Flyer could be condensed into a refrigerator magnet and mailed to patients of the practice that are not seen as regularly
- Copies of the brochure could be provided at fire stations, dentist offices, grocery stores, or other frequent points of contact for the community in order to achieve distribution to target audience
- Questions regarding prior knowledge of stroke could be incorporated into yearly wellness visits and med checks, potentially as a SmartPhrase in Epic
- Distribution of a patient-friendly checklist that can be used by patients or family members who need help determining if their symptoms merit medical attention

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