

Fact Sheet Paper

(Paper, 5-minute Twitter Brief, Online Tweet)

Twitter Brief Date: 4/5/21

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Topic: Stroke in Young People

CATEGORY	POINTS	SCORE
Handbook Compliant Grammar Clarity of Thought Punctuation Used Template Coherence in organization Spelling 6+ pages	6	
<ul style="list-style-type: none"> • Introduction (1/2 page) [1 point] • Background/Problem Statement section – 3 sites (1.5 pages) (include Healthy People 2030) [7 points] • Research section – 2 sites (1 page) [4 points] • Statistics section – 2 sites (1 page) [4 points] • Consumer Information section - 2 sites (1 page) [4 points] • Solutions to the Problem – 2 sites (1 page) [4 points] • Conclusions (1/2 page) [1 point] • Summary of your paper that is posted on Blackboard [2] 	26	
TOTAL POINTS FOR FACT SHEET	32	
Post a summary of your paper on Black Board’s Class Blog by 5 PM the day before	2	
Post one factual tweet on PCH201wellness by 5 PM the day before and include a screenshot of it in your paper	1	
Submit hard copy with grid on date due for Twitter brief	1	
5-minute Twitter Brief	4	
PROJECT COMPLETION POINTS	8	
SUBTOTAL PAPER + PROJECT COMPONENTS		
LATE/INCOMPLETE	(-20%)	
Missing Grading Grid	(-3)	
FINAL TOTAL POINTS	40	

Strokes in Young People

Introduction

I chose the topic, strokes in young people, for my fact sheet paper because I was terrified as I watched my dad have a stroke on Thanksgiving in 2013, at the age of 52. Another reason why I chose this topic is because I had Bell's Palsy this past December, and when I first noticed that I could not feel the left side of my face, I was petrified that I was having a stroke; thankfully I was not, but this made me curious about strokes and their connection to the brain. Through researching and gathering information for this paper, I hope to learn more about the most common ages among those who are considered young and have strokes, why they have strokes, the neurological elements involved in strokes, what typical recovery looks like, whether or not there are any preventative measures that can be taken to avoid having a stroke, and why strokes in young people are not only a health problem but can also be considered a public health concern. My dad's vision in one of his eyes was impacted as a result of his second stroke, which he had after undergoing open-heart surgery in January of 2014, and he still has trouble seeing out of his eye to this day, to the point where he avoids driving at night. I am so grateful for the fact that my dad's strokes were not more severe than they were, as his eyesight was really the only thing affected, and if he did not have his first stroke, doctors would have never known that he was in urgent need of a valve replacement through open-heart surgery until it was too late. While my dad is healthy, happy, and takes his health very seriously today, I acknowledge the fact that some young people are not as lucky after having a stroke.

Section 1: Background and Problem Statement

- **Web site #1 Name:** Stanford Health Care
- **Web address:** <https://stanfordhealthcare.org/medical-conditions/brain-and-nerves/stroke/stroke-in-young-people.html>
- **Background Information:**

Stanford HealthCare defines a stroke as “damage to the brain that occurs when a blood vessel in the brain is blocked or bursts”, ultimately preventing “the part of the body controlled by the damaged area of the brain” from working accordingly due to the lack of blood and oxygen, and for this reason strokes are considered a cerebrovascular disease. While strokes tend to be more common in individuals who are above the age of sixty-five, nearly ten percent of those living in the United States will have a stroke at an age younger than forty-five. The different types of strokes consist of ischemic strokes, hemorrhagic strokes, aneurysms and AVMs, and their classification depends on what disrupted the blood supply to the brain, whether that be a blocked blood vessel or hemorrhage. Younger stroke survivors are very likely to experience symptoms of speech loss, facial droop, and a weakness on one side of the body, and are less likely to lose their vision, have double vision, become dizzy, slur their speech or struggle walking. Society tends to forget that younger individuals can have strokes, which often results in a delayed diagnosis for younger people. Individuals can be diagnosed with a stroke through CT scans, MRIs, EKGs, blood tests, angiograms, or even an echocardiogram.

The main cause of stroke in young people is atherosclerosis which can form from diabetes, high blood pressure, high cholesterol and smoking, and other causes can be from drugs,

inflammatory conditions, infections, and genetics. The majority of strokes that affect younger individuals are ischemic strokes, which are often treated with a medicine called tissue plasminogen activator that breaks down the clot. Placing catheters at the location of the clot is another common treatment method for stroke survivors. Aspirin also helps to reduce the blood clot which caused the stroke. If the individual has a hemorrhagic stroke, they will likely be treated with a plasma transfusion or medicine through an IV, surgery for an aneurysm. Treatment for strokes must be taken very seriously, as rehabilitation may be required to become fully functioning again, and new medicines may have to be taken daily in order to manage underlying conditions that caused the stroke to occur. Without treatment, young individuals risk serious brain damage, lifetime disability, and in some cases, death. If younger individuals do not have any underlying health conditions, they are likely to have a long but smooth recovery (Stanford HealthCare).

- **Web site #2 Name:** Healthy People 2020
- **Web address:** <https://www.healthypeople.gov/2020/topics-objectives/topic/heart-disease-and-stroke>
- **Background Information:**

Healthy People 2020 aims to address strokes as a current and growing public health issue that needs to be taken very seriously in order to be prevented. As strokes are a main contributor to substantial financial loss, death, illness, disability, and a decreased quality of life, there is no question that they are of great concern to public health. Some of the goals from Healthy People 2020 consist of improving individuals' heart health and quality of life by preventing, detecting, and treating any stroke risk factors, as well as identifying strokes, treating them early on, and preventing strokes from repeating themselves. Some of Healthy People 2020's various objectives meant to fix this public health issue include enhancing the overall cardiovascular health of the individuals in the United States, lowering the number of deaths from strokes, increasing the number of adults who get frequent blood pressure and blood cholesterol measurements, etc. Healthy People 2020 has included various interventions and resources regarding strokes, such as disease risk screenings and risk assessments. The data that is incorporated on this website was made possible via surveys, trend analyses, censuses, etc. However, not much data could be found pertaining to younger stroke survivors as opposed to older individuals, which reflects the fact that more research needs to be done on this topic (Healthy People 2020).

- **Web site #3 Name:** NCBI (National Center for Biotechnology Information)
- **Web address:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4348138/> ;
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3795593/>
- **Background Information:**

This journal emphasizes the fact that strokes in younger individuals are a major public health concern, especially since the prevalence is increasing. Since many young individuals who experience strokes unfortunately do become disabled as a result of their strokes and therefore are often left unable to work, this plays a crucial role on the country's economy in a negative sense. As more and more young people are having strokes, they have a much higher risk of dying than people who have not had strokes and are not at risk of having them. NCBI urges policymakers everywhere, including in developing countries, to alter their laws and legislation so that smoking is completely prohibited, as this would serve as a huge preventative measure for strokes. Young adults currently are missing a specific set of guidelines that would help them to manage the

development of strokes and prevent them from occurring, which is another public health matter that needs to be changed for the better as soon as possible (NCBI 1).

Section 2: Research

Web site #1 Name: Newsroom

- **Web address:** <https://newsroom.heart.org/news/nearly-one-in-three-young-adults-in-the-u-s-does-not-know-common-stroke-symptoms>
- **Summary of the research:**

Researchers conducted a survey for 9,844 adults below the age of forty-five in which they were asked questions about common symptoms of a stroke, in order to determine whether or not Americans have a solid understanding of the most common stroke characteristics. Nearly one in three young adults who completed the survey did not have knowledge of the five most common stroke symptoms, and three percent of the total survey participants had no knowledge of any stroke symptoms, which is very worrisome. Young adults who graduated high school were three times more likely to be aware of the various symptoms associated with strokes in comparison to those with less education. The results from the survey taught researchers that there is a concerning number of young adults who do not know enough about strokes but definitely should, as those who smoke and have underlying health conditions are particularly vulnerable and at risk of experiencing strokes. The President of the American Heart Association commented on the results of this survey and referred to the finding that three percent of young adults would not be able to ascertain someone having a stroke, by saying, “that finding is a matter of life and death” (Elkind, M.D, M.S., FAHA, FAAN & Newsroom).

- **Web site #2 Name:** Science Direct
- **Web address:**
<https://www.sciencedirect.com/science/article/abs/pii/S1052305720303207>
- **Summary of the research:**

The purpose of this study was to evaluate the various risk factors that young adults have in terms of experiencing an ischemic stroke, see whether or not time has caused these risk factors to change, take note of the defining characteristics of young adults who have had an ischemic stroke, and determine successful prevention strategies. The study used data from stroke survivors between the ages of eighteen to fifty during the year 2008, as well as those from 2018, ultimately making up the Youth 2008 and Youth 2018 groups, respectively. The third group used in this research consisted of a Senior 2018 group, made up of data from individuals who survived ischemic strokes between the ages of fifty-one to ninety. This study found that time was associated with an increase in the prevalence of risk factors, as the Youth 2018 group’s risk factors were higher than those of the group from 2008. The risk factors of smoking, hypercholesterolemia, and hypertrophic cardiomyopathy had a higher prevalence in the Youth 2018 group than the Senior 2018 group. However, the Senior 2018 group was more likely to display risk factors of carotid plaques, hypertension, and atrial fibrillation. The only major changes among the risk factors associated with ischemic stroke were that smoking and hypertrophic cardiomyopathy became much more common, while carotid plaques, atrial fibrillation and hypertension experienced the latter. Overall, the younger and older stroke ischemic stroke survivors had the same characteristics, aside from pulmonary infection (Science Direct).

Section 3: Statistics

- **Web site #1 Name:** CDC National Health Report Highlights
- **Web address:** <https://www.cdc.gov/healthreport/publications/compendium.pdf> page 3
- **Summary of the statistics:**

According to the statistics and highlights from the CDC 2012 National Health Report, stroke is the fifth leading cause of death in the United States, and this fact alone reflects the dire need for a solution to the public health issue that is, strokes. Twenty-nine percent of all deaths in the United States are a result of strokes, which amount to 730,000 deaths annually. Eighty-three Americans will die every hour in the United States as a result of a stroke or heart disease, and over twenty-five percent of these had the potential to be prevented, which is devastating. While progress has been made in terms of the stroke and death rate in accordance with the age-adjustment, as it has gone down from 48.0 to 36.9, the same cannot be said about that of risk factors for strokes such as control of blood pressure, cholesterol, and sodium intake, which have all either made insufficient progress or have had negative trends and reflects the fact that stroke risk has grown worse in recent years. Financially, strokes have made an unfortunate dent in the country's economy, as they sum up to three-hundred and twelve point six billion dollars a year in order to make up for productivity lost and healthcare expenses. If the majority of these individuals (those who did not have underlying conditions that attributed to their strokes) had made simple changes to their everyday habits, such as quitting smoking, eating healthier, or exercising more often, thirty-three percent of their deaths could have been avoided (CDC).

- **Web site #2 Name:** NCBI
- **Web address:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3795593/>
- **Summary of the statistics:**

According to the statistics presented on this journal, nearly fifteen percent of all strokes that are characterized as ischemic are experienced by adolescents and young adults, which demonstrates the need for a fix to this public health issue. Young adults are increasingly likely to have strokes as they age, which is another contributing factor to the explanation of why strokes must be considered a public health concern. Between five hundred and thirty-two thousand and eight hundred and fifty-two thousand people in the United States between the ages of eighteen and forty-four have had a stroke, which happens to be greater than two times the frequency of multiple sclerosis. According to a National Health and Nutrition Examination Survey from 1998-2002, women between the ages of forty-five and fifty-four had the highest prevalence of stroke in accordance with the factors of age and sex, at 2.1%. Men aged anywhere from forty-five to fifty-four had the second highest prevalence of strokes, followed by men aged thirty-five to forty-four, and then women of this same age range. Adults aged twenty to twenty-four had the lowest prevalence of stroke between the years of 1998 and 2002, with men at point four percent and women at point three percent. Another analysis from the year US Nationwide Sample from 1995-1996 through 2008 demonstrated a thirty percent jump in the increase of the prevalence of ischemic strokes in young people, which shows that the problem is getting worse over time (NCBI).

Section 4: Consumer Information

- **Web site #1 Name:** Health Central
- **Web address:** <https://www.healthcentral.com/article/strokes-in-younger-adults>
- **Summary of the information:**

According to this website, the prevalence of individuals being put in the hospital as a result of experiencing strokes is increasing in people who are between the ages of eighteen and forty-five, who make up ten to fifteen percent of all of the strokes that occur every year in the United States. Enrique C. Leira, M.D, reveals that “Strokes can happen to anyone”. The prevalence of strokes among young adults has almost doubled since 1995, which is remarkable and very worrisome. Heart disease is usually the main culprit for strokes among older individuals, but strokes among younger people tend to result from genetic defects, congenital heart disease, or heart problems that have formed due to drug use, as well as obesity, smoking, diabetes, and high blood pressure and cholesterol. Nearly eighty percent of strokes are preventable, which is why it is so important for young adults everywhere to be aware of and understand the changes they should make in their everyday lives. Dr. Pandya says that the three most important factors that influence whether or not one is at risk for having a stroke are eating habits, lack of physical activity, and consistent inability to cope with stress. If individuals are unaware of recognizing what classifies as a stroke, they will likely also be unable to realize that they or someone else requires immediate medical attention, and therefore could hinder their effects. The fourth fact taught by this website is related to symptoms of strokes and reveals that everyone will experience the same kinds of stroke symptoms, regardless of what their age may be. According to Dr. Pandya, thrombolytic medications or surgery can be applied in order to reverse the stroke within four to five hours after first experiencing symptoms, which is very hopeful and reiterates why it is so crucial to seek diagnosis and treatment as soon as possible (Health Central).

- **Web site #2 Name:** Everyday Health
- **Web address:** <https://www.everydayhealth.com/news/think-youre-too-young-stroke/>
- **Summary of the information:**

Individuals between the ages of eighteen and fifty account for ten to fifteen percent of all documented strokes. While older people are having less strokes, the opposite is true among young people, which is nerve-racking. In the southeast, individuals are having strokes two to four times more frequently than what is classified as the national average for strokes, and this is why the southeast is referred to as the “The Stroke Belt”. Between the years 2010 and 2016, the prevalence of strokes among young people were three times that when in comparison to strokes among older individuals. According to neurologist Andrew Russman, many younger stroke survivors have no idea that they have an underlying health condition which caused their stroke until they are brought into the hospital, which are commonly a patent foramen ovale, or tiny holes in the heart’s atria, an arterial dissection, or some form of a clotting disorder. Substance abuse is another huge factor in the determinant of whether or not younger individuals will have strokes. As obesity rates are rising, the risk factors for strokes in young individuals are rising as well. Avoiding salt, eating healthy foods, and refusing to smoke are three ways to lower one’s chance of having a stroke in their younger years. When young people have strokes, their recovery can take the rest of their lives, which is devastating. Nearly forty-four percent of individuals who are younger than sixty-five will never return to work after having a stroke due to the complications it caused them. However, younger people have more brain plasticity than older

people, which explains why young people can still adjust after having their strokes and even adopt new ways of doing things. Everyone is impacted differently by strokes, and major determinants for their well-being afterwards consist of where and how the stroke affected the person's brain, whether or not they have support by loved ones, how their health was before they had the stroke, how well they are doing in rehabilitation, and whether or not the survivor is determined to get better.

Section 5: Solutions to the Problem (or Issue)

- **Web site #1 Name:** NCBI (National Center for Biotechnology Information)
- **Web address:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3795593/>
- **Summary of the information:**

There have been some successful public health measures aimed at addressing the issue of strokes in young people, which include raising awareness through the Internet and social media platforms, developing nonprofit organizations such as The Stroke Awareness and Support Association, Sickle Cell and Young Stroke Survivors, the Stroke Awareness Foundation in California which has formed the Young Adult Stroke Survivor Group, The Children's Hemiplegia and Stroke Association website, YoungStroke, Inc., and various other charities, associations, and opportunities to donate money in the hopes of developing more research for young stroke survivors. The United States Senate declared May 6th as Childhood Stroke Awareness Day, which is awesome for raising awareness. Still, there is much more research and work that needs to be done in the hopes of correcting this public health issue and lowering the incidence and frequency of young individuals who experience strokes (NCBI).

- **Web site #2 Name:** NINDS (National Institute of Neurological Disorders and Stroke)
- **Web address:** <https://www.stroke.nih.gov/materials/strokechallenges.htm#Future>
- **Summary of the information:**

The stroke community at the NIH has been organizing research with the hope of finding more beneficial ways to diagnose and treat strokes when they occur. The U.S. also has many academic centers which are given research grants for this very purpose, which is hopeful. In 2006, The National Institute of Child Health and Human Development, which belongs to NINDS and NIH, financed a workshop which consisted of pediatricians, neurologists, cardiologists, and public health workers for the purpose of gaining a better understanding of stroke in young people, and how they can handle them better in the future. NINDS understands the importance of addressing this public health issue, which is reflected by their various initiatives to educate individuals about the risk factors of strokes, such as through their 1995 survey of Ohio residents which they then repeated in 2000, and were pleased to discover that individuals had a slightly increased knowledge of stroke risk factors. NINDS launched their NIH Stroke Scale, which has been widely used throughout clinical trials of stroke survivors. NINDS released a campaign called Know Stroke in 2001 for the purpose of informing community members about crucial stroke signs and risk factors, which even includes a stroke education kit. NINDS is well-known for supporting efforts that aim at increasing stroke awareness, research methods and treatment options, whether that be through hospitals or health departments, such as their involvement with the Brain Attack Coalition.

Conclusion

Developing this fact sheet taught me so much about strokes in young people, and I now feel like I have a solid understanding of what strokes are and the preventative measures that can be taken to combat them. As I now sit and reflect on the time when my father experienced his strokes, I have a stronger foundation and knowledge of what was taking place inside of his brain at the time of each of his strokes. It also makes much more sense to me why and how his underlying heart condition played a huge role in his experiences. I never knew that nearly eighty-percent of strokes can be prevented, and I loved learning about this because it gives me hope, and makes me want to tell all of my friends who struggle with unhealthy habits that they should try to make changes in their days, as I would hate to receive the bad news that they have had a stroke.

Include a screen-shot of your tweet here:



Include your Fact Summary here

Introduction

I chose to write about strokes in young people for my fact sheet paper because when I was thirteen years old and celebrating Thanksgiving, I watched my dad have a stroke and it was terrifying. This marked the start of his health journey and I am grateful that he is happy and healthy today, but I acknowledge the fact that some young people are not as lucky after having a stroke, and I wanted to explore this public health issue.

Section 1: Background and Problem Statement

A stroke is a type of cerebrovascular disease that is defined as “damage to the brain that occurs when a blood vessel in the brain is blocked or bursts”, characterized by speech loss, facial droop, and a weakness on one side of the body, and mainly caused in young people by atherosclerosis which can form from diabetes, high blood pressure, high cholesterol and smoking, and other causes can be from drugs, inflammatory conditions, infections, and genetics. Strokes are often treated through tissue plasminogen activator, aspirin, and rehabilitation. As strokes are a main contributor to substantial financial loss, death, illness, disability, and a decreased quality of life, there is no question that they are of great concern to public health.

Section 2: Research

There is a concerning number of young adults who do not know enough about strokes but definitely should, as those who smoke and have underlying health conditions are particularly vulnerable and at risk of experiencing strokes. The American Heart Association’s president commented and referred to the finding that three percent of young adults would not be able to ascertain someone having a stroke, by saying, “that finding is a matter of life and death”. One study found that the only major changes among the risk factors associated with ischemic stroke were that smoking and hypertrophic cardiomyopathy became much more common, while carotid plaques, atrial fibrillation and hypertension experienced the latter.

Section 3: Statistics

Stroke is the fifth leading cause of death in the United States. Eighty-three Americans will die every hour in the United States as a result of a stroke or heart disease, and over twenty-five percent of these had the potential to be prevented, which is devastating. Young adults are increasingly likely to have strokes as they age. Strokes have made an unfortunate dent in the country’s economy, as they sum up to three-hundred and twelve point six billion dollars a year in order to make up for productivity lost and healthcare expenses.

Section 4: Consumer Information

The prevalence of strokes among young adults has almost doubled since 1995. Heart disease is usually the main culprit for strokes among older individuals, but strokes among younger people tend to result from genetic defects, congenital heart disease, or heart problems that have formed due to drug use and other factors. Dr. Pandya says that the three most important factors that influence whether or not one is at risk for having a stroke are eating habits, lack of physical activity, and consistent inability to cope with stress. While older people are having less strokes, the opposite is true among young people.

Section 5: Solutions to the Problem (or Issue)

There have been some successful public health measures aimed at addressing the issue of strokes in young people, which include raising awareness through the Internet and social media

platforms, developing nonprofit organizations such as The Stroke Awareness and Support Association. The United States Senate declared May 6th as Childhood Stroke Awareness Day. The stroke community at the NIH has been organizing research with the hope of finding more beneficial ways to diagnose and treat strokes when they occur.

Conclusion

Developing this fact sheet taught me so much about strokes in young people, and I now feel like I have a solid understanding of what strokes are and the preventative measures that can be taken to combat them.