INTRODUCTION TO STROKE EDUCATION MODULE

Adapted from the
Stroke Management in Lifestyle Education Session (SMILES)
at St. Michael’s Hospital
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The Canadian Stroke Best Practice Recommendations identify that “information and education should be provided for all stroke patients and their families, at all stages of care in a timely and interactive manner, in a variety of languages and formats that is specific to patient and family needs and impairments. The education should address the nature of stroke and its manifestations, signs and symptoms, stroke impairments and their management, risk factors, planning and decision-making, resources and community support”.

This module was developed to assist caregivers in delivering basic stroke education to patients and family members. The PowerPoint presentation along with the Facilitator’s Manual was created with the goal of significantly reducing preparatory time and enable health care providers from any discipline to deliver the content. The Facilitator’s Manual is designed to support the PowerPoint Presentation and engage the participants in active learning using principles of Adult Learning.

DEFINITIONS:

A learning task integrates information with a way to do something with it. The learning tasks in this module are identified as Anchor or Application.

**Anchor:** A task that has the learner access their own prior knowledge or experience related to the topic.

**Application:** A task that has the learner do something with the new content. In this module application of learning generally revolves around verbal responses to questions. If the group is larger there are some learning tasks included where responses can be written on sticky paper and posted. Taking into account literacy, vision, hemiparesis, hemiplegia etc., it is suggested that the facilitator write these responses on the sticky paper.

**Additional Information:**
This section is intended to supplement the information in the slides, and provide the facilitator with sufficient information to elaborate on slides and be prepared to answer some of the commonly asked questions.

**Note to the Facilitator:**
This section provides the facilitator with rational for tasks and suggested approaches.
WHO

This learning session is intended for the following persons/groups:
- Persons with identified risk factors who are at risk for stroke (primary prevention)
- Persons who have had a transient ischemic attack (TIA) or stroke (secondary prevention)
- Caregivers including spouses/partners, siblings, children, friends
- The community at large, those interested in understanding risk factors for stroke

WHY

The purpose of this session is to provide information and knowledge related to the following:
- What is a stroke & TIA
- Signs & symptoms of a stroke/TIA
- Risk Factors (modifiable & non-modifiable)
- Reducing the risk of stroke/TIA
- Identifying possible lifestyle changes and healthy choices

WHEN

The time frame for delivering this module is approx. 1 hour.
This module is intended for both primary and secondary stroke prevention.
It can be delivered to all individuals (as listed under “who”), and in a variety of settings:
- Acute care
- Rehabilitation
- Prevention Clinics
- Community

WHERE

The appropriate setting will be determined by the facilitator.

OBJECTIVES

By the end of this module participants will:
- Understand what a stroke is.
- Understand the signs and symptoms of a stroke.
- Understand that stroke is a medical emergency.
- Understand the modifiable and non-modifiable risk factors.
- Identify at least one risk factor relevant to them.
The goal of many patient education classes is to empower patients by giving them information to address health concerns and to help them create healthy lifestyles.

WHAT DOES AN EFFECTIVE FACILITATOR LOOK LIKE?
As a facilitator in a patient education program, may or may not be an expert on the topic. However, at the end of the session, it’s not how much you know that counts, it’s about how much your patients are able to learn. According to Harvard’s Carol Tobias, the best educators are “engaging, respectful and caring. They are committed to helping people take charge of their own health, and willing to answer questions during class and at breaks”.

PRINCIPLES OF ADULT LEARNING
In addition to the personal characteristics you bring, there are many factors that help you deliver a successful patient education workshop. Many of these relate to understanding how Adult Learners think. See chart on following page.

FACILITATION DISASTER PLANNING
Don’t expect to have everything work smoothly the first time, (or even the 5th time). If something unexpected occurs, adapt on the fly and do your best to keep your sense of humour intact. As with almost any skill, knowledge and feedback are helpful, but nothing will get you farther, faster than practice, practice, practice! But until you gain that experience, here are some examples of what can happen and what you can do about it.

Think in advance about what you might do if:
- Your technology isn’t working (have the number for tech support on hand. And always bring a paper copy of any presentation that you can talk from; if possible, write key words on a flipchart as you talk)
- There aren’t enough copies of everything (bring extra)
- The room is uncomfortable temperature (have the number for engineering on hand)
- There is noise outside that is distracting everyone
  (If the noise is temporary, pause or take a break. If it’s possible, ask that if the noisemakers can move or pause for the duration of your session. If not, laugh about it & encourage everyone to speak up!)
- You got so nervous you missed some points during your opening remarks
  (Most times you are the only one that would notice. And even if others did, they want you to be successful: Relax & keep going).
KEY POINTS FOR SUCCESSFUL FACILITATION

FACILITATION DISASTER PLANNING

- You got some information wrong
  (Correct it! You will not lose credibility by admitting you misspoke. It happens all the time.
  And if someone points it out to you before you realize, thank them for catching your error).
- You got the group full of challenging people – how can you deal with them all?
  - Endless talker
    Wait for a pause in breath, interrupt & thank for their views. Use body language to discourage individual from talking again soon by avoiding eye contact and turning your body away.
  - Non-participant
    Use extended eye contact and body language to encourage, ask directly if they have something to add, but don’t force.
  - Insensitive or rude person
    Don’t let the behaviour continue. Interrupt, change the subject or call a break or move to an independent exercise. Speak to the individual off-line and ask them to agree to make specific behaviour changes. Phrase it positively & state the impact: It’s important that everyone gets a turn to speak, please wait until you are sure someone has finished speaking before jumping in. Does that make sense to you?” or “people are different/have different opinions, and in this session I need everybody to be tolerant of and respectful of those differences. Can you agree to do that going forward?”
  - Know it all
    “You are very knowledgeable about this. Thanks for sharing another perspective”
  - Off-topic
    “That’s an interesting question. We should talk about this after the session”
  - Multi-part or confusing question:
    I heard several questions, let’s deal with them one at a time.
    I think the first question you are asking is…
  - What other challenges might happen in your particular situation and how would you deal with it?
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<th>WHAT IT MEANS</th>
<th>WHAT YOU CAN DO</th>
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<td>Self-directed</td>
<td>Adults learn best when actively involved in the learning process, and like to have some control over what they are learning. However, each individual may have different learning needs, different learning styles, and different learning speeds. You will need to use a variety of teaching methods to engage them all. Often, less is more: it’s very effective learning when someone in the group asks a question (and you get to say “that’s a great question”) than to try to flood the group with all the information you know about a subject.</td>
<td>Build in choices, such as asking what topic is most important to them. Be flexible: Pay attention to the cues your group is giving about what they need to know. (Does anyone look bored? Confused? Change your language, pace, and energy level to meet the needs of your group. Note: The programs created by the Stroke Network include “Additional information” sections that provide you with common questions that might be asked.</td>
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<td>Life experience</td>
<td>Adults have a wealth of work and life experiences, and are looking to integrate new information with previous experience.</td>
<td>Use open ended questions to draw out the many experiences that is relevant to the topic. Note: The programs created by the Stroke Network include “anchors” to help you.</td>
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<td>Goal-oriented</td>
<td>Adults have reasons of their own for attending a session. They appreciate when the purpose and objectives of a session are clearly defined and relate to their goals.</td>
<td>Clearly spell out the goals and objectives of the session. Ask learners why they are there, and help them see how their needs will be met by the objectives and/or let the group choose what topics they want to focus on most.</td>
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<td>Practical</td>
<td>Many adults are not interested in knowledge for knowledge’s sake: Adult learners like to be told why it’s important that they are learning something, and how it can help them personally.</td>
<td>Reduce the time you spend on explaining terminology, theories and models. Make learning problem-oriented: think of stories and situations you can share or that the group can share with each other to make learning as real as possible. (The programs created by the Stroke Network include “application” activities to help you).</td>
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<td>Respect</td>
<td>For adult learners, respect means being treated as equals who are able to voice opinions and even challenge ideas. Check your ego at the door &amp; be prepared to give up control sometimes. Build &amp; maintain a rapport with the learners, and create as safe and supportive environment for them. Use positive reinforcement to encourage open &amp; honest dialogue.</td>
<td>Always thank participants for their questions, comments and opinions. (“I’m glad you asked that” or “That’s an important point you made” or “thank you for sharing that with us”). If a participant says something that is not true, correct it gently. Instead of saying that’s wrong, try “Another way to think about it is...” Or, “that’s a very common perception. Has anyone else heard something different about this?”</td>
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Welcome and Introduction

Anchor:

Ask the group members to name 2 things they have been told or have heard about stroke?

Note to the Facilitator:

This is a broad question, it meant to engage with the group members, without expectation of a correct answer. The phrasing of the question takes the focus away from what they “know” and a perception of testing. Instead the focus is on what they have heard or been told. This also allows for clarification of myth & fact and allows the facilitator to assess basic stroke knowledge among participants, as well as language and comprehension skills. This is an opportunity for the facilitator to provide reassurance & reinforcement that the goal is to learn together and from one another.

This task also emphasizes to the group that their participation is valued. Participants should be reminded to ask questions at any time.
Note to the Facilitator:

Blood traveling to the brain supplies oxygen and nutrients. A clot can block an artery or an artery can burst.

Without oxygen and nutrients the brain cells will become damaged and this may be irreversible.

Specific parts of the brain control specific body functions. When part of the brain becomes damaged the part of the body that it controls is affected.

The symptoms of stroke occur suddenly. It is often referred to as a “brain attack”. You can make the analogy between brain attack and heart attack to enhance understanding.

WHAT is STROKE?

Interruption of blood flow to the brain, resulting in damage to the brain tissue.

There are TWO TYPES of STROKE

- Ischemic Stroke
- Hemorrhagic Stroke
Note to the Facilitator:

You may wish to elaborate on information on the slide with the information below.

Additional Information:

80% of all strokes are Ischemic.

There are 4 reasons why an Ischemic stroke may occur:

- **Cerebral Thrombosis:**
  A blood clot forms locally in the artery of the brain. This occurs gradually from cholesterol deposits, and eventually cuts off blood supply.

- **Embolism:**
  A blood clot forms somewhere else in the body, dislodges and travels to the brain and cuts off blood supply to that part of the brain. (Emboli often arise from the heart especially in atrial fibrillation but may originate elsewhere in the body).

  **Definition:**
  **Atrial fibrillation:**
  The heart beats quickly and irregularly. This can lead to the formation of blood clots.

- **Cerebral venous sinus thrombosis:** (rare)
  A clot forms in specific part of the brain (called the venous sinuses) which interferes with the drainage of blood from the brain.

- **Cryptogenic stroke:**
  The cause of stroke is not known.
Additional Information:
20% of all strokes are hemorrhagic
A hemorrhagic stroke occurs when there is a sudden rupture of an artery.

There are two types of hemorrhagic strokes.

- Intracerebral Hemorrhage:
  The artery bursts, bleeding into the brain causing pressure in the brain.

- Subarachnoid Hemorrhage:
  The artery bursts on the surface on the brain. The bleeding occurs in the area between the brain and the skull, and this causes pressure on the brain.

Additional Information:
A TIA is a mini stroke (warning stroke) caused by a temporary blockage of blood by a clot.

The symptoms are the same as for stroke but only last for a short time (usually for only a few minutes, but sometime just under an hour).

After a TIA the person feels normal, but PAY ATTENTION. This is a serious condition that requires immediate medical attention because a full stroke can follow.

The TIA is a warning that shows that conditions in the body already exist that can cause a stroke.

If you think you’re having a TIA, call 911 or go to the nearest hospital emergency room immediately.
Anchor:
Who has seen the TV commercial about the signs & symptoms of a stroke?

Application:
Ask the group members if they can name one of the S&S of stroke. If the group has more than 2 people the facilitator can write the answers on a sticker paper, then compare to the answers on the slide.

Application:
Facilitator to read each Sign & Symptom after each one ask the group how they would know if they were experiencing this symptom or how would they recognize it if someone else was experiencing it. Encourage questions.

Additional Information:
Not everyone experiences stroke symptoms in the same way. Often only some of the 5 symptoms are experienced during a stroke. The type of signs and symptoms that a person has during a stroke depends on:

- Which side of the brain the stroke occurred (each part of the brain controls different functions)
- How much damage occurred in the brain (size of the stroke and damage to brain tissue)

Note to the Facilitator:
The participants may ask questions about how to differentiate some of the symptoms such as headache as a sign of stroke vs a regular headache.

Emphasize that the symptoms are:
- Sudden
- Severe (headache)
- Unusual
Additional Information:
A stroke is a medical emergency

Call 911 because:

1. Ontario has a stroke system in place, ambulance crews have been taught about the signs and symptoms of a stroke, and if patients meet specific criteria they are taken directly to hospitals that have been designated as Regional or District Stroke Centres where emergency stroke treatment can be delivered.
2. Rapid assessment and diagnostic testing must be done in order to determine the most appropriate treatment. Thorough diagnostic testing takes about 1 hour.
3. Treatment for acute stroke such as administration of medication to dissolve the blood clot in the brain must be delivered within 4 ½ hours from onset of symptoms; otherwise treatment is not effective and the risk of serious complications increases significantly. The 4 ½ hour time frame is a new provincial guideline for t-PA administration (the previous guideline was 3 hours from onset of symptoms).
4. Brain damage after a stroke occurs quickly & progressively over several hours. The goal of treatment is to improve survival and reduce disability.

Anchor:
Now that we have discussed how important it is to get immediate medical attention for stroke or TIA.
Can you think of anything that would prevent you or stop you from calling 911?

Note to the Facilitator:
The answer to this question will help you determine if there are any real or perceived barriers for the client, and if they have fully understood that a stroke or TIA is a medical emergency.
Although these risk factors cannot be modified or changed, they can be used to identify people with a greater risk for stroke. Once this is identified, individuals may make changes in other risk factors, which will be discussed in the next slide.
The good news is: there is treatment.
If you have had a previous stroke or TIA, depending on the cause, your doctor may prescribe medication or other treatment to help control the condition (diabetes, cholesterol, hypertension etc).

High blood pressure is the most important modifiable risk factor. The target BP for the prevention of first or recurrent stroke should be <135/85 and <130/80 for diabetics.

Cholesterol:
LDL – lousy cholesterol    HDL – healthy cholesterol
LDL should be <2.0 mmol/L (this is the bad cholesterol). The total cholesterol should be <4.0 mmol/L. This is a ratio of good cholesterol & bad cholesterol. Cholesterol comes from what your body makes plus what you eat (dietary cholesterol). High blood cholesterol level contributes to heart attack, stroke, clogging of arteries and high blood pressure. Foods high in saturated and trans fats can raise blood cholesterol. Trans fats are often found in commercially prepared foods and in shortening (make food taste good, but cause plaque to build up in the arteries).

Heart disease:
Cardiac diseases can increase the risk of stroke. Patients with atrial fibrillation (rapid irregular twitching of the upper chambers of the heart) may take anticoagulants to prevent clots from forming in the atria.

Diabetes:
Patients with diabetes have an increased susceptibility to hardening of the arteries—a contributor to ischemic stroke.
Additional Information:
It is important to be active. You should do some form of physically active most days of the week. You don’t have to jog or run. Walking for 30 – 45 minutes 3 times a week is a good form of exercise.

Obesity/inactivity:
Obesity and inactivity increases the risk of stroke because it is associated with other risk factors, such as high blood pressure and atherosclerosis

Alcohol intake:
Research finding suggest that moderate alcohol consumption may decrease the risk of stroke (one drink/day for women & two drinks/day for men), but high alcohol consumption increases the risk for brain hemorrhage. However, if you currently don’t drink, don’t start. You should discuss your alcohol intake with your doctor as certain medications can be affected by alcohol.

Smoking:
Smoking increases the risk of ischemic stroke. Studies show that stopping smoking decreases the risk of stroke. Even if you have smoked for years you can still reduce your risk by quitting now. You may want to consult your doctor or consider a smoking cessation program.
Ontario Smoker’s Helpline: 1-877-513-5333
www.smokershelpline.ca

There has been documented evidence that use of cocaine, ecstasy and amphetamines may cause hemorrhagic stroke.
Note to the Facilitator:
This question will help to apply the learning that has taken place and help the patient identify ways that they can improve their health by making better choices.

Starting with something easy is more achievable and less overwhelming.

Application:
Ask: “What is your greatest risk factor?”

Note to the Facilitator:
This discussion is intended to assist the individual to differentiate between the external things that need to happen and what they need to actually do. Example: if the spouse does all the shopping and cooking, the couple will need to discuss how their meal might change and what that means for the spouse. The individual who has identified loosing weight as a goal, may chose saying no to “seconds” as something they can change.

Application:
Ask: “When do you think you might begin with this change?”

This question will help to reinforce that action needs to happen for change to occur.

Note to the Facilitator:
Emphasize that change occurs one step and one day at a time. Start small, with something that is easy. Change is a process that takes time, don’t get discouraged.
This module was a basic overview of stroke. The participants may have interest in specific topics related to stroke that are relevant to their needs. Their responses will assist you in determining their future education needs and directing them appropriately.
FREQUENTLY ASKED QUESTIONS

Question: What do the numbers in the blood pressure reading mean e.g. 120/80?
Answer: The higher number measures the force of the blood against the walls of the arteries when the heart is pumping; this is called the systolic pressure. The lower number is called the diastolic pressure. This is the force of blood against the walls of the arteries when the heart is relaxed.

Question: Is vomiting a sign of stroke?
Answer: No, vomiting is not associated with stroke.

Question: My blood pressure is generally high, what should I do?
Answer: Make an appointment with your family physician for this specific issue. The family physician will likely see you on several occasions to monitor and review your blood pressure and possibly order more tests before making a diagnosis of hypertension (high blood pressure) and determining a treatment plan.

Question: When I feel dizziness, numbness or get a headache how do I know if it is a stroke or not?
Answer: Dizziness, numbness and headaches can occur for a variety of reasons, one of them being stroke. Let’s review the Signs and Symptoms of a stroke /TIA in more detail. Keep in mind that the symptoms of a stroke or TIA come on suddenly. The symptoms you experience depend on what part of the brain is affected.

- Sudden weakness in the arm, leg (or both limbs on the same side of the body) or face:
  - This can range from total paralysis to a very mild weakness. Complete numbness or a pins-and-needles feeling may be present on one side of your body or part of one side of your body. Your face may droop or look lopsided. You may have trouble controlling the movement of your lips or tongue and experience slurred speech.

- Sudden difficulty speaking or understanding:
  - You can’t speak, speech may be very slurred, or the words you use don’t make sense.

- Sudden vision problems:
  - You may develop difficulty with vision, such as double vision, loss of side vision, or blindness in one eye. (Blurred vision by itself is not usually a symptom of stroke.)

- Sudden severe and unusual headache:
  - A sudden, severe headache may strike like “a bolt out of the blue.” Some people have called this the worst headache of their lives.

- Sudden dizziness/loss of balance:
  - Sudden loss of balance especially with any of the above signs.

THE FIRST 3 SIGNS ARE THE MOST COMMON.
Note:
The resources listed below are suggestions for handouts to those who attend the Education Session. Please feel free to substitute or add other appropriate resources.

Listed below are some resources you may wish to consider as handouts during this education session. Please be aware that periodically new resources may be added while others resources are updated or discontinued. For updates please check:  www.heartandstroke.ca/resourcecatalogue


Let’s Talk About Stroke:

HIS-PAMPHLET 117 - F06  English
HIS-PAMPHLET -249 - F06  French

Understanding Transient Ischemic Attack (TIA):

BOOKLET 49961  English
BOOKLET 49962  French

Coping With Stress:

HIS-PAMPHLET – 107 - F06  English
HIS-PAMPHLET – 239 - F06  French

Get Your Blood Pressure Under Control:

BP – BOOKLET – 101 - F02  English
BP – BOOKLET – 202 - F06  French

Healthy Weight and Active Living:

HIS-PAMPHLET – 115 - F06  English
HIS-PAMPHLET – 247 - F06  French

Living with Cholesterol:

HIS-PAMPHLET – 159 - F07  English

Cholesterol & Healthy Living

HIS-PAMPHLET – 260 - F07  French

Signs & Symptoms of Stroke Fridge Magnets:

PE-MAGNET – 001 - F07

Taking Control:

HIS-PAMPHLET – 121 - F06  English
HIS-PAMPHLET – 253 - F06  French

Lowering Your Risk of Heart Disease and Stroke:

HIS-BROCHURE 001 - F06  Chinese
HIS-BROCHURE 002 - F06  Tamil
HIS-BROCHURE 003 - F06  Hindi
HIS-BROCHURE 004 - F06  Urdu
HIS-BROCHURE 005 - F06  Punjabi

Canada’s Food Guide

See ordering info on next page
HOW TO ORDER

Printed material for Patients and families can be ordered from Heart & Stroke Foundation of Ontario. There is No Charge for materials or shipping.

Ordering by e-mail: send request to – csor@hsf.on.ca
Ordering by telephone: Call 416-489-7111 ext 389 or ext 428

Provide the following information:
Name of brochure
Order code
Quantity
Your contact info: Name,
Mailing address
e-mail
Telephone

Canada's Food Guide can be ordered from:

Publications Health Canada
Ottawa, ON K1A 0K9
e-mail: publications@hc-sc.gc.ca
Tel: 1-866-225-0709

Alberta Provincial Stroke Strategy.

American Heart Association.

Canadian Stroke Best Practice Recommendations for Stroke Care: 2006.
Canadian Stroke Network and the Heart and Stroke Foundation of Canada.


### ACKNOWLEDGEMENTS

#### CONTENT EXPERTS

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Members of the  
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#### IMAGES

Images depicting ischemic stroke and hemorrhagic stroke were reproduced with permission from the Heart and Stroke Foundation of Ontario

#### KEY POINTS FOR SUCCESSFUL FACILITATION was written by

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