



Title Different Strokes	Date 03/02/2020
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When we think of strokes, we tend to think of the obvious signs such as a facial droop or slurred speech. Many times this is not the way strokes present and the caller may not understand what is happening to their loved one.

Patients starting to experience a stroke or TIA (mini-stroke) can come across as confused, and may be unable to communicate in a logical manner. Symptoms can present different from the textbook signs of stroke. Patients may have some tingling in their arms, trouble speaking, sudden vision problems, or loss of balance.

As call takers we want to make sure we understand exactly what is happening with the patient to help identify some of these uncommon stroke symptoms.

There are 3 main types of strokes:

1. TIA-Transient Ischemic Attack
2. Ischemic Stroke
3. Hemorrhagic Stroke

TIA:

A Transient Ischemic Attack occurs when blood flow to a certain part of the brain is cut off for a short period of time. "Short period of time" had been defined as any time from under five minutes to fifteen minutes or less. TIAs are sometimes referred to as a "mini-stroke" and there is usually no permanent damage. The stroke symptoms go away on their own with no medical



intervention. Often people think these are non-life threatening, however, these should be treated as seriously as a stroke. TIAs could be a warning sign of a future stroke. Approximately 1 in 3 patients who have an untreated TIA will go on to have a stroke sometime in the future.

Signs and Symptoms:

- Weakness or paralysis in the face, arm, or leg
 - Typically on one side of the body
- Slurred or garbled speech
- Difficulty understanding others
- Dizziness or loss of coordination
- Sudden, severe headache

With weakness or paralysis, it can be on either side of the body. Some tend to think of the left side as the only side affected by a stroke, but this is often not the case. Garbled speech and difficulty understanding others is a common way TIAs present. Patients are talking to someone, but are unable to complete a sentence or sound like they are talking in a different language. They may also be slow to respond to questions or unable to give an answer.

Causes:

TIAs are often caused by the same origins as an Ischemic Stroke. A clot blocks the blood supply to a part of the brain for a small amount of time. For TIAs this is usually caused by a buildup of cholesterol-containing fatty deposits called plaque (atherosclerosis) in an artery or one of its branches that supplies oxygen to the brain.

Things to keep in mind:



With TIAs, we want to listen to everything the caller is telling us. If there was a sudden onset of symptoms that have gone away, we want to keep Protocol 28: Stroke (CVA)/Transient Ischemic Attack (TIA) in mind to gather further information about the situation and give the best patient care instructions possible.

Ischemic Stroke:

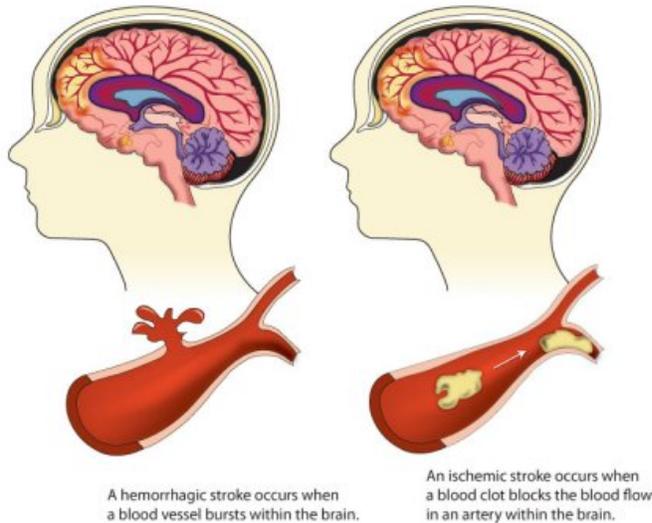
Ischemic strokes happen when blood flow through the artery that supplies oxygen rich blood to the brain becomes blocked. Often these are caused by blood clots. Blood vessels in the brain may be narrowed or blocked by fatty deposits that build up or by blood clots. These can also be caused by other debris that travel through the bloodstream and lodge in the blood vessels of the brain. (**Ischemia=Lack of blood flow**)

Hemorrhagic Stroke:

Hemorrhagic strokes occur when a blood vessel in the brain leaks or ruptures. This can result from many conditions that affect blood vessels.

There are two types of hemorrhagic strokes:

- **Intracerebral hemorrhage:**
 - This is the most common type of hemorrhagic stroke. It occurs when an artery in the brain bursts, flooding the surrounding tissue with blood.
- **Subarachnoid hemorrhage:**
 - This is a less common type of hemorrhagic stroke. It refers to bleeding in the area between the brain and the thin tissues that cover it.



Both Ischemic Strokes, and Hemorrhagic strokes present in a similar manner. Some are commonly known such as the facial droop while others may present in a way that is not so common such as a sudden inability to speak or understand others. We want to keep this in mind as we are listening to what the caller is explaining and what type of symptoms the patient is having.

Signs and Symptoms of Strokes:

- Trouble speaking and understanding what others are saying
 - Patients may be having a normal conversation one minute, then unable to form words or answer questions the next.
- Paralysis or numbness of the face, arm or leg
 - This is usually a sudden onset of numbness, weakness, or paralysis on one side of the body.
- Problems seeing in one or both eyes
 - Sudden blurred vision or blackened vision may occur in stroke. It is also possible to be seeing double.
- Headache
 - Sudden, severe headaches accompanied with dizziness or an altered level of consciousness
- Trouble walking
 - Sudden stumbling or loss of balance



The causes of an ischemic stroke and a TIA are the same. It is important to understand some risk factors to decrease a chance for stroke.

Some causes for TIAs and Strokes can be:

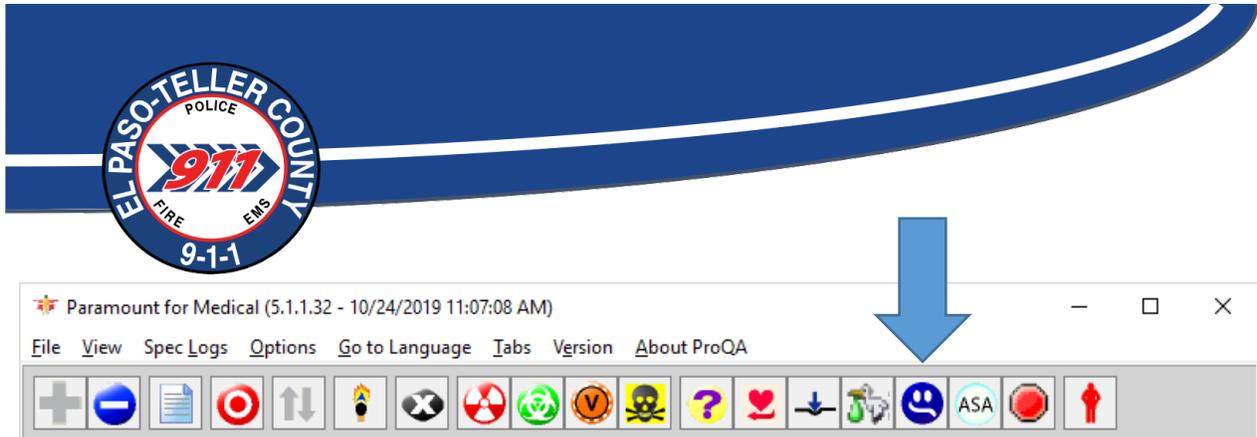
- Heart disease
- Blood clotting problems
- Obstructive Sleep Apnea
- Diabetes
- High cholesterol
- Smoking
- Being overweight or obese
- Family history of stroke, heart attack or TIA

Protocol is set up to identify, as well as further assist in determining if a patient is having a stroke. On Protocol 18: Headache, the sudden onset of a headache will automatically launch the Stroke Diagnostic. It will also automatically launch while on Protocol 28: Stroke (CVA)/Transient Ischemic Attack.

This diagnostic contains tasks for the patient to perform as well as phrases for the patient to say in order to get a numerical value on the likeliness that the patient is having a stroke or TIA. We want to work through this diagnostic and document answers as accurately as we can to get a correct evidence level. This will help us with making sure to provide the proper patient care instructions.

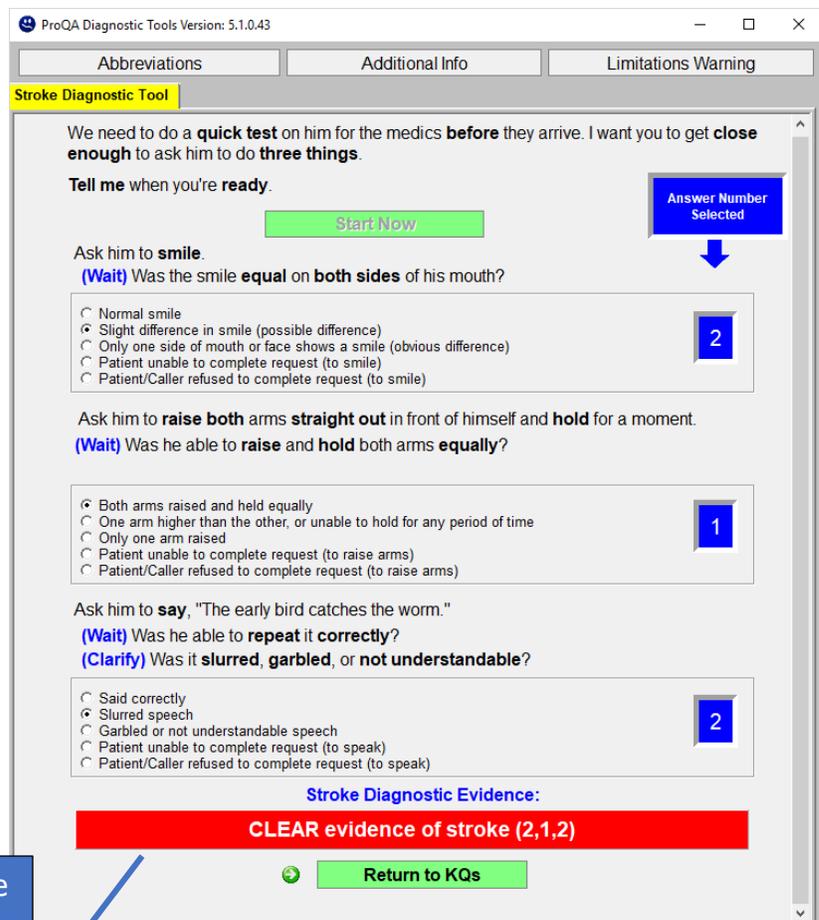
The stroke diagnostic tool can also be launched in the tool bar at the top of ProQA. This allows for the call taker to use this tool at any time where they see necessary or as dictated by policy.

The Stroke Diagnostic is the crooked smile face in between the stork and ASA buttons:



We want to read the stroke diagnostic as written including the follow up questions. We also want to make sure to give the caller and patient enough time to perform the tasks that we are asking them to do as well as document the answers accurately as this can change the numerical value assigned to that question/task in ProQA.

Stroke/TIA symptoms can also be found in additional information of ProQA and EMD Protocol. Remember to look through these as well as the rules/axioms to better understand stroke symptoms.



ProQA will assign the evidence level of stroke based off the answers the caller provides



KQ Answers Additional Info Problem Suffixes Determinants w/ Suffixes Det. Codes CC Selection Rules

STROKE Symptoms

Select Protocol 28 for the conscious and breathing patient when the caller initially reports "stroke" or the sudden onset of one or more of the following symptoms:

- Sudden **speech** problems
- Sudden **weakness, numbness, or paralysis** of the face, arm, or leg **on one side** of the body
- Sudden **loss of balance** or **coordination**
- Sudden **trouble seeing** in one or both eyes
- Sudden, **severe headache** with no known cause

While **symptoms** such as trouble speaking, trouble understanding, or confusion may be caused by a **STROKE**, they may also be due to a decreased level of consciousness (*priority symptom*) caused by many other problems. The **Chief Complaint** should be very **carefully evaluated** at the "Tell me exactly what happened" point in Case Entry to determine the **correct** protocol selection.

STROKE

Disruption of blood flow to the brain or part of the brain due to a **blood clot** or **hemorrhage**. Hemorrhage causes increased pressure within the skull and is more likely to cause a decreased level of consciousness (*alertness*), unconsciousness, or death.

Definitions:

Ischemia: Lack of blood flow

CVA: Cerebrovascular accident

Resources:

<https://www.stroke.nih.gov/materials/needtoknow.htm>

<https://www.ninds.nih.gov/Disorders/All-Disorders/Transient-Ischemic-Attack-Information-Page>



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