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Transient Ischemic Attack (TIA)

An estimated 300,000 transient ischemic attacks (TIAs) occur every year. Fifteen percent of all stroke patients will have experienced a TIA prior to the stroke. Certain populations are at even higher risk for TIA and stroke.

Studies show that more than 25 percent of TIA patients will have a stroke or other adverse event, ten to 15 percent of TIA patients will return to the emergency department with a stroke within 90 days after discharge from the emergency department, and half of these occur within three days.

Other studies have shown the risk of stroke after TIA is:

- 10 percent after seven days
- 14 percent after 30 days
- 18 percent after 90 days

After a minor stroke, the risk of recurrence is even greater:

- after seven days—11.5 percent
- after 30 days—15 percent
- after 90 days—18.5 percent

It is not clear how rapid of an evaluation is required in order to prevent a subsequent stroke. North American guidelines suggest that investigation be completed within one week, and British guidelines suggest that this be done in two

weeks (Wolf PA, Claggett GP, Eastomn JD, *et al*, Preventing ischemic stroke in patients with prior stroke and transient ischemic attack, Stroke 1999;30:1991-1994). However, delays of several weeks are not uncommon during which many patients will have needlessly suffered a stroke. A recent study from Britain evaluated TIA patients referred to a clinic (Lancet 2005, July 2-8;366 (9479)29-36). The average elapsed time until evaluation was seven days, during which time 7.5 percent of patients had a stroke before being fully evaluated.

Most patients have learned to go to the emergency department if they experience a sudden neurological deficit, but the ability to rapidly evaluate these patients is limited by lack of experienced personnel and access to appropriate diagnostic testing. Many patients are therefore admitted to the hospital – the national admission rate is 54 percent – for an average of two days. This is an ineffective and costly way to evaluate these patients.

Our local emergency departments are becoming increasingly stretched. As written in a recent Beacon Journal article (Beacon Journal, June 15, 2006) 500,000 patients are turned away each year from emergency departments and transferred further away for their care.

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The TIA clinic at NNA was developed to meet the needs of people living in the greater Akron area and to better utilize local medical resources.

The TIA clinic is a means to appropriately evaluate patients with resolved neurological deficits without admitting them to the hospital or the emergency departments in the area.

Through the use of validated screening methods, rapid examination and imaging, patients can be evaluated properly. After evaluation, determination is made for the patient to receive either appropriate preventive measures, or if necessary, to be admitted directly to the hospital. We feel this is a more appropriate utilization of resources and gives our clinicians a way to properly screen patients.

Primary care physicians who learn of their patients potential TIA symptoms can refer them directly to the TIA Clinic at NNA, where patients are seen within 24 hours, and typically the same day. Emergency departments will have the option of discharging a patient to the TIA clinic once preliminary screening has been performed.

The criteria for referral to the TIA clinic is based on recent studies which show the importance of rapid evaluation and risk stratification. Patients whose symptoms have completely resolved are candidates for the TIA clinic. Patients whose

neurological symptoms are minor and have been present for more than one week also are potential patients.

Each patient initially will be triaged by our clinical nurse. Those patients who do not meet our criteria will be referred directly to the Emergency Department. After an initial phone screening, patients will be seen that day or within 24 hours.

The initial evaluation will include complete history and physical exam, blood work, EKG and MRI/MRA. Further testing, if deemed appropriate by the attendant physician, will be performed; this includes echocardiogram, additional imaging and blood work. Treatment will be instituted immediately, and if the risk for a recurrent stroke is high, the patient will be admitted to the hospital for further high-level care.

In addition, patients will receive stroke and cardiovascular education regarding risk reduction. Following the initial visit, a patient will be seen within one week to review testing and to answer any questions he or she may have regarding the TIA/stroke.

Our goal is to appropriately screen and treat patients with recent TIA/stroke in order to better utilize ever-increased limitations on resources.



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