

Editorial

What is NICE about the latest stroke guidelines for general practitioners?

Jeremy C Gibson MRCGP

General Practitioner, Jessop Medical Practice, Ripley, UK

In July 2008, the National Institute for Health and Clinical Excellence (NICE) published their clinical guideline entitled, *Stroke: diagnosis and initial management of acute stroke and transient ischaemic attack (TIA)*.¹ This short paper considers the implications for general practitioners (GPs) in the United Kingdom (UK). The NICE stroke guideline begins by explaining that stroke is a major health and economic issue. In 1999 it accounted for more than 56 000 deaths in England and Wales (11% of all deaths).² Each year in England, approximately 110 000 people have a first or recurrent stroke; a further 20 000 have a TIA, and over 900 000 people in England live with the effects of stroke.³ It is estimated that stroke costs the economy in England £7 billion per year (direct NHS costs – £2.8 billion; costs of informal care – £2.4 billion; costs resulting from lost productivity and disability – £1.8 billion).² These large numbers make the NICE stroke guideline relevant for all GPs.

Evidence is accumulating that acute interventions – e.g. administration of tissue plasminogen activator (tPA), aspirin, and management in specialist stroke units – soon after the onset of symptoms, improve long-term outcomes after stroke and TIA. This makes the NICE stroke guideline, which focuses mostly on management in the first 48 hours after onset of symptoms of ‘acute stroke’ or TIA, an important document for GPs who are often central to ensuring rapid transfer of patients to appropriate secondary care facilities.⁴ To its credit, despite strongly emphasising acute management, the guideline states that care should be patient centred, with treatment taking into account people’s needs and preferences, and, where possible, people should be allowed to make informed decisions about their care, in partnership with their healthcare professional.

The main message of the NICE stroke guideline for GPs is that speed is of the essence – rapidly recognise the symptoms of ‘acute stroke’ or TIA, and ensure a diagnosis is made quickly (‘time is brain’). In people with a sudden onset of neurological symptoms, GPs should exclude hypoglycaemia as a cause of symptoms, and use a validated tool, such as FAST (Face,

Arm, Speech, Time to call 999), for the diagnosis of possible stroke or TIA, and consequently urgently admit all suspected acute strokes directly to a specialist acute stroke unit (see Table 1 for management of TIA).

The NICE guideline acknowledges that barriers exist to implementing these recommendations for rapid recognition of symptoms and referral. A growing body of international evidence is starting to show why delay in admission or presentation of acute stroke occurs (see Box 1). A study in Karachi sought to identify factors that delayed arrival at hospital of patients with acute stroke. It found that, as well as lack of contact with a local doctor and non-availability of ambulance services, lack of knowledge of stroke symptoms and low perception of threat in patients contributed to delay in presentation.⁵ A French study showed that stroke unit admission was fastest in patients brought to the hospital by emergency medical services (EMS) or fire department (FD) ambulances.⁶

A cross-sectional survey of German primary care physicians found that, although they recognised stroke and TIA as medical emergencies, only two-thirds would immediately admit patients with clear symptoms of a stroke to hospital as a medical emergency.⁷ Another study found that younger age, especially in women, mild and/or unspecific symptoms, and underestimation of symptoms were associated with delays in early admission to a stroke unit.⁸

In a rural French population, people tended to arrive at hospital faster if they suffered a stroke during the day, rather than in the evening or at night, if they had more severe neurological symptoms or signs, and if they were younger. The presence of headache delayed admission.⁹ An Italian study found that patients with acute stroke who used the EMS had shorter arrival delays. This study also found that only about half of the patients with stroke were sufficiently aware of the urgency of this clinical condition to activate the emergency telephone system.¹⁰ A study in New Jersey also found that people who arrived by ambulance were more likely to arrive early after acute stroke.¹¹

Another significant factor in access to medical care in the UK is the new GP contract. This has released

Table 1 General practitioner management of transient ischaemic attack

Suspected TIA/high risk of stroke (ABCD score ≥ 4)	Suspected TIA/lower risk of stroke (ABCD score ≤ 3)	Manage late presentation of TIA (>1 week after last symptom resolved) as though lower risk of stroke	Treat crescendo TIA (\geq two TIAs in one week) as high risk of a stroke
Aspirin (300 mg daily) immediately	Aspirin (300 mg daily) immediately		
Specialist assessment/investigation within 24 hours of onset of symptoms	Specialist assessment and investigation as soon as possible; definitely within one week of onset of symptoms		
Secondary prevention measures introduced as soon as the diagnosis is confirmed; include discussion of individual risk factors	Secondary prevention measures introduced as soon as the diagnosis is confirmed; include discussion of individual risk factors		

ABCD is a prognostic score to identify people at high risk of stroke after a TIA and is calculated as follows:

A – age ≥ 60 years: 1 point

B – blood pressure at presentation $\geq 140/90$ mmHg: 1 point

C – clinical features: unilateral weakness 2 points; speech disturbance without weakness 1 point

D – duration of symptoms ≥ 60 minutes: 2 points; 10–59 minutes: 1 point

The calculation of ABCD also includes the presence of diabetes (1 point)

Total scores range from 0 (low risk) to 6 (or 7 in ABCD²) (high risk)

Box 1 Causes for delay in presentation or admission after acute stroke

General practitioner

- Perception of urgency
- Availability for patient contact, including out-of-hours cover

System

- Availability of ambulance services
- Ambulance arrival at hospital linked to faster presentation

Patient

- Lack of knowledge of stroke symptoms
- Low threat perception
- Age: evidence varies as to whether older or younger present earlier
- Severity of symptoms: more severe present sooner
- Presence of headache delays presentation
- Time of stroke: presentation sooner if during the day

GPs from their enormous 24/7 responsibility for their patients. But has it affected acute stroke care? A study of nine general practices in Oxfordshire (involving 91 000 patients) found that GPs' opening hours do influence patients' healthcare-seeking behaviour after TIA and minor stroke. Current opening hours increase delay in assessment.¹²

What next? Public awareness of stroke and TIA needs to be increased so that patients present to healthcare services in time to receive optimum care. GPs need to be convinced of the importance of emergency admission of 'acute stroke' and early assessment of TIA. Cynicism has already raised its ugly head concerning these latest stroke guidelines, with the suggestion that they are more political than scientific.¹³ There are concerns by some that the finding that GP opening time affects stroke care could be used as further leverage to increase GP opening times in the future.

The Department of Health's new three-year stroke awareness campaign, launched this month, targets some of these issues. By using the acronym FAST and a high-profile media campaign, it aims to increase

public knowledge of stroke, enabling the 'stroke saver' to identify when someone is having a stroke and call the emergency services immediately, without delaying to call NHS Direct or their GP. This new campaign is supported by adverts on TV, radio, online and in print, showing stroke spreading like fire in the brain. Leaflets and posters can be downloaded directly from the Department of Health website.¹⁴ Although this campaign aims at bypassing primary care altogether, practically, some people will still present to their GPs. In the next few months, as the campaign progresses, it is imperative that good communication is maintained between local GPs and ambulance services, to ensure that people who suffer stroke receive optimum care.

REFERENCES

- 1 National Institute for Health and Clinical Excellence. *Stroke: diagnosis and initial management of acute stroke and transient ischaemic attack (TIA)*. London: National Institute for Health and Clinical Excellence, 2008.
- 2 Mant J, Wade DT and Winner S. Health care needs assessment: stroke. In: Stevens A, Raftery J, Mant J *et al* (eds) *Health Care Needs Assessment: the epidemiologically based needs assessment reviews*, first series, 2e. Oxford: Radcliffe Publishing, 2004, pp. 141–244.
- 3 National Audit Office. *Reducing Brain Damage: faster access to better stroke care*. (HC 452 Session 2005–2006.) London: The Stationery Office, 2005.
- 4 Dhamija RK and Donnan GA. Time is brain-acute stroke management. *Australian Family Physician* 2008; 36:892–5.
- 5 Siddiqui M, Siddiqui SR, Zafar A and Khan FS. Factors delaying hospital arrival of patients with acute stroke. *Journal of the Pakistan Medical Association* 2008;58:178–82.
- 6 Derex L, Adeleine P, Nighoghossian N, Honnorat J and Trouillas P. Factors influencing early admission in a French stroke unit. *Stroke* 2002;33:153–9.
- 7 Roebbers S, Wagner M, Ritter MA *et al*. Attitude and current practice of primary care physicians in acute stroke management. *Stroke* 2007;38:1298–303.
- 8 Silvestrelli G, Parnetti L, Tambasco N, Corea F and Capocchi G. Characteristics of delayed admission to stroke unit. *Clinical and Experimental Hypertension* 2006;28:405–11.
- 9 Ossemann M, Mormont E, Marvin V, Jamart J and Laloux P. Identification of factors influencing hospital admission delay after ischemic cerebrovascular stroke. Study of a rural population. *Revista de Neurologia (Paris)* 2001;157:1525–9.
- 10 Maestroni A, Mandelli C, Manganaro D *et al*. Factors influencing delay in presentation for acute stroke in an emergency department in Milan, Italy. *Emergency Medicine Journal* 2008;25:340–5.
- 11 Lacy CR, Suh DC, Bueno M and Kostis JB. Delay in presentation and evaluation for acute stroke: Stroke Time Registry for Outcomes Knowledge and Epidemiology (STROKE). *Stroke* 2001;32:63–9.
- 12 Lassweaon DS, Chandratheva A, Giles MF, Mant D and Rothwell PM. Influence of general practice opening hours on delay in seeking medical attention after transient ischaemic attack (TIA) and minor stroke: prospective population based study. *BMJ* 2008;337:a1569.
- 13 Dudley N. Are NICE stroke guidelines scientific or political? *BMJ* 2008;337:a1339.
- 14 Department of Health. *Approaching FAST ...a National Campaign to Increase Stroke Awareness: campaign materials*. www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_091519 (accessed 16 February 2009).

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CONFLICTS OF INTEREST

None.

ADDRESS FOR CORRESPONDENCE

Jeremy C Gibson, General Practitioner, Jessop Medical Practice, Church Farm, Ripley, Derbyshire, UK. Email: jeremygibson@doctors.org.uk

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