

# P-05-942 Ambulance response times for stroke patients

Y Pwyllgor Deisebau | 10 Mawrth 2020  
Petitions Committee | 10 March 2020

Reference: RS20/11773

## Introduction

**Petition number:** [P-05-942](#)

**Petition title:** The Golden Hour when Suffering a Stroke - Ambulance Response Times to be recategorised from Amber back to Red Status.

**Text of petition:** Current Welsh Assembly Policy has categorised Ambulance Response Times to a Stroke Victim to the "Amber" Category- meaning there is NO SET Response Time Target to meet or achieve.

This Petition requests that the Response Time Target for a person suspected of suffering a stroke be recategorised and return to the "Red" Category, thereby ensuring that any stroke victim has the quickest possible Ambulance Response.

There is a well-known fact of the "Golden Hour" which is the most critical 60 minutes in getting the much needed and relevant medical assistance to anyone suffering a stroke. Every single person in Wales should not have this "Golden Hour" jeopardised through having to wait for an "Amber" Category

Give Stroke Victims the Response Times they deserve and require - Make it a Red Response Time Target Today.



# Background

## The Clinical Response Model

In October 2015 the Welsh Ambulance Services NHS Trust (WAST) moved to a new way of delivering and measuring how emergency ambulance calls are responded to. The clinical response model divides 999 calls into three types:

**Table 1: Clinical Response Model**

Call type	Definition	Example
RED	<b>Immediately life threatening</b> calls. These calls will be subject to both clinical indicators and a time based standard requiring a minimum attendance at 65% of these calls within 8 minutes.	Respiratory/cardiac arrest/choking.
AMBER	<b>Serious, but not immediately life threatening.</b> These calls will include most medical and trauma cases. Amber calls will receive an emergency response. A response profile has been created to ensure that the most suitable clinical resource is dispatched to each amber call. Patient experience and clinical indicator data will be used to evaluate the effectiveness of the ambulance response.	Cardiac chest pains/stroke./fracture
GREEN	<b>Neither serious or life threatening.</b> Green calls are ideally suited to management via secondary telephone triage.  Health care professionals often require an urgent transfer from low acuity care to a higher acuity facility. These transfers are coded as green and undertaken within a timeframe agreed with the requesting professional.	Fainting – recovered and alert/minor injuries/earache.

Source: [WAST submission to Health, Social Care and Sport \(HSCS\) Committee general scrutiny session, 2020](#)

## Categorisation of stroke

The ambulance service response to a stroke can be different according to the type and severity of the stroke, as well as the circumstances relating to individual patients. [The Stroke Association](#) describes the three different types of stroke:

- An ischaemic stroke is caused by a blockage cutting off the blood supply to the brain. This accounts for 85% of all cases;
- A haemorrhagic stroke is caused by a bleeding in or around the brain;
- A transient ischaemic attack or TIA is also known as a mini-stroke. It is the same as a stroke, but the symptoms only last for a short amount of time.

## The 'Golden Hour'

The 'golden hour' is a general concept in emergency medicine which sets out that a patient with certain acute conditions including stroke has 60 minutes to receive definitive care, whereas later intervention morbidity and mortality can increase significantly. There is a significant and substantial range of research, evidence and guidance on the diagnosis, treatment and management of the different types of stroke. This contains a variety of views on the type and timing of treatment for different types of stroke; many evidence the value of the 'golden hour', but there are some differing views as to whether this timescale is appropriate for all stroke types and service responses.

NICE's Quality Standards for Stroke in Adults indicate that patients with acute stroke receive brain imaging within 1 hour of arrival at the hospital if they meet any of the indications for immediate imaging. Research in Critical Care Nursing recommends implementation of an acute ischemic stroke protocol and an acute stroke team to complete brain imaging and other tests within the golden hour. The Stroke Association state that anyone with a suspected stroke should have a brain scan, within one hour if possible, as a scan can help doctors decide on the right treatment.

Current NICE guidelines on the diagnosis and management of stroke and TIA in recommend admission of everyone with suspected stroke directly to a specialist acute stroke unit after initial assessment. Similarly, the National Clinical Guideline for Stroke (2016, p.43) published by the Royal College of Physicians state that patients experiencing a haemorrhagic stroke can deteriorate quickly and should be admitted directly to a hyperacute stroke unit for urgent specialist assessment and monitoring.

At the same time, according to NICE and the Stroke Association, for most people experiencing an ischaemic stroke, thrombolysis needs to be given within four and a half hours of the start of stroke symptoms.

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In their oral evidence to a Health Social Care and Sport Committee [general scrutiny session in January 2020](#), WAST confirmed the need for differing responses to haemorrhagic – which is potentially significantly more clinically serious – and ischaemic stroke:

Severe haemorrhagic strokes,...will present, very often, differently, and under those circumstances, they would often tip into the red category, and, of course, then, you would have to get them to a neurosurgical unit and ensure that they are scanned prior to treatment. (para.38)

WAST also reported that (para.44), although there is no response time standard for amber calls, the ideal response time for a patient in what they term the Amber 1 category is around 20 minutes and around 30 to 40 minutes in their Amber 2 category.

## The Amber Category Review

In November 2018, in response to concerns about Amber performance WAST published [A review of calls to the Welsh Ambulance Service categorised as Amber](#).

WAST, as with many other emergency services in the UK and abroad, use a set of protocols containing key questions and instructions for the call handler to provide a standardised way of classifying the type and medical urgency of the call. WAST use the Medical Priority Dispatch System (MPDS), which has approximately 1,900 codes that can be generated in response to the caller's answers.

Of these calls, 62% fall in the Amber category. Amber 1 codes make up around 14% of these and include such things as recent strokes (within 4 hours) and chest pain. Amber 2 codes account for around 48% of the codes and covers such things as falls and less-recent strokes (over 4 hours).

According to the [Amber Category Review](#) (p.26), this does not mean that all those contacting ambulance services who believe they, or someone with them, is experiencing a stroke will be prioritised in the stroke protocol or as Amber; other symptoms such as unconsciousness may mean that the call is categorised as another condition with a higher priority code, such as Red. The system prioritises the urgency of a call comparative to others, and the decision is then made as to what type of response or vehicle is needed.

The Review set out a number of key findings, including:

- The prioritisation of calls is complex, but there are a range of different responses depending on the patient's condition;
- The public felt that it was important to get the best response for their condition, even if this was not the quickest;
- The clinical response model is a valid and safe way of delivering ambulance services, and the public support the model's principles;
- The length of time waiting for an ambulance response in the Amber category does not appear to correlate with worse outcomes.

The Review also recommended a programme of engagement to ensure clarity on the role of emergency ambulance services and how calls are prioritised and categorised. In January 2020, the Minister for Health and Social Services, announced the establishment of an Ambulance Availability Taskforce to lead work in a number of areas, including building on progress made against the Amber Category Review. WAST have reported (p.10) continued concerns around Amber performance, with response times higher than in 2018.

## Evidence from elsewhere in the UK

Following a review of ambulance service standards by the University of Sheffield, in 2017 NHS England put a new set of ambulance emergency targets in place for England. These are based around four categories; life-threatening illnesses or injuries, emergency calls, urgent calls and less urgent calls. Stroke patients tend to be included within the 'emergency' category, which has a performance target of 18 minutes.

The Scottish Ambulance Service (Board Quality Indicators Performance Report pp.11-15) reports against a five-tier system of Purple (target time of below 6 minutes), Red (target time of below 7 minutes), Amber, Yellow and Green (the latter three have no target response time). Suspected stroke patients tend to be included in the Amber category.

## Welsh Government response to the petition

The Welsh Government's response highlights that the Welsh clinical response model was devised by leading clinicians and places a greater focus not just on the timeliness of the response, but also on the quality of care people receive and ensuring that stroke patients are transferred to the most appropriate setting for their treatment.:

This is why the Welsh Ambulance Service aims to respond to patients with new onset stroke as quickly as possible by dispatching a suitable emergency ambulance vehicle under blue light driving conditions which is capable of transporting them immediately to a specialist stroke team to begin the treatment they require.

The response also stresses that the cause and clinical severity of conditions can vary and will require call handlers to categorise the call accordingly, which means the criteria within the response model may not always be applied rigidly, unless circumstances and clinical condition support this.

For example, heart attacks and strokes may be categorised within the Red or the Amber category according to their relative clinical severity.

Finally, Welsh Government also confirm that, in line with one of the recommendations of the Amber Category Review, the Review Implementation Programme has been working with the Stroke Association, Community Health Councils and partners from within NHS Wales to develop new measures that 'give greater context to ambulance response times to people who have a stroke'. This work is intended to support the design of time-based measures for stroke, which the Minister expects to be published 'in early 2020'.