Chair Tom Steele
Chief Executive Pauline Howie

13 June 2019

New Clinical Response Model

To: the Community Council Leader/Chairman,

I would like to ask you if you would kindly include the item in **Annex A** below to note at your next all council meeting: the Scottish Ambulance Service's New Clinical Response Model (NCRM), which has improved the way we respond to emergency calls. As you'll see below, the new response model has saved lives with more people in Scotland surviving a cardiac arrest.

The Scottish Ambulance Service values highly the work community councils perform – we are contacting you directly because we are committed to ensuring local communities across Scotland develop a better understanding of the role we play in helping local residents and we are keen for communities to understand the changes we have made and how these are benefitting patients.

The information about our new model is contained below. I would be very grateful if you would read and distribute it to individual members of your council for their perusal as appropriate.

Many thanks in advance for your help.

Yours faithfully,

Dr Jim Ward
Medical Director
Scottish Ambulance Service

Annex A - The New Clinical Response Model

Background

As you know, triage is the system the medical profession uses to asses a patient's condition – generally this enables us to determine how sick a patient is, how quickly they need help and the most appropriate response for their condition.

Our staff work 24/7, 365 days a year caring for patients and in every minute of every day, our ambulance control centre staff receive multiple calls from people needing our help – one minute they could be receiving a call about someone having a cardiac arrest, another about two drivers involved in a road traffic accident, suffering major trauma. Calls might come about someone in a mental health crisis, a footballer with a broken leg or a person who has fallen in a bar.

In these situations, triage enables our medical professionals to ensure we get our quickest response to critically ill patients whose lives are in danger and the right response to less ill patients who need our help but may not require immediate help. This allows us to maximise the resources we have and treat patients in the most efficient way possible to save lives.

The New Clinical Response Model was introduced in November 2016. Prior to this, we used a system that was introduced across the whole of the UK in 1974. That system had not changed very much since its introduction.

The old model did not take into account the fact that the role of ambulance staff has changed significantly. In the 1970s, ambulance drivers would pick a patient up and transfer them to the nearest hospital where they would be seen by a doctor. Nowadays paramedics and technicians are qualified medical professionals – they can treat patients at the scene and some can make clinical decisions previously only reserved for doctors.

As this system was outdated, we carried out a systematic review of two years' worth of data relating to our ambulance responses. The aim was to see if we could use our resources more effectively and save more lives. We also wanted to better identify time-critical patients more often, provide the right response for patients first time and give patients and staff a better overall experience whilst improving their survival chances.

The New Model

The old system we used placed patients into one of three categories determined by the seriousness of their condition. Our new triage system places patients into one of five categories.

Patients in the purple category are our most critically ill patients - those who are most at risk of dying. Generally speaking they are patients who have a more than 10% chance of suffering a cardiac arrest (Though in reality, the rate of cardiac arrest in the purple category is actually as high as 50%). Those patients in our red category are less at risk of a cardiac arrest, but they still need urgent medical attention.

A cardiac arrest is when the heart stops dead – it is quite distinct from a heart attack. For every minute it is not pumping oxygen-rich blood to the brain, the patient's chances of surviving are estimated to reduce by 10 per cent. The sooner CPR is performed, the greater the chances of survival.

These patients need an immediate response from the ambulance service and, under the new system, we prioritise these patients above all others – we will even divert ambulances already heading to those who are less sick. This occasionally causes a delay for less critically ill patients but the consequence is that we are helping to save many more lives as a result.

Your chances of surviving a cardiac arrest are also better if you have two crews on scene – CPR is very labour intensive, so having at least three people on hand to take it in turns is hugely beneficial to the patient. Our new model aims to get these resources to patients quickly.

Less critical patients

Patients in other categories – amber, then yellow, then green – will sometimes experience a slower ambulance response, generally because we will be prioritising our resources on those patients in the purple and red categories who are most at risk of dying.

It's worth noting that the yellow category makes up around 60% of the total work we do – and around 30% of patients within this category have medical issues that are resolved without a trip to hospital.

For those in the green category we will most likely seek an "alternative care pathway" for them. This means the best treatment for that person might be medical attention at home, or referral to a service based in their community, e.g. for people who fall and are otherwise uninjured who may benefit from some form of physiotherapy, rather than a lengthy trip to A&E and a possible long wait within a hospital's emergency department.

NCRM results

In February this year (2019), we published the results of two separate evaluations of how well our new response model was working. The results were extremely good. Our own analysis, and one carried out by Stirling University, found that the new model was helping us save more lives.

The results showed that, as a result of our changes and better prioritising of patients, there had been a 43% increase in the number of our most at risk patients (those in the purple category) that had survived 30 days after being taken to hospital.

Another benefit of the new response model is that we have seen a 100% increase in the number of times two crews have arrived on scene in these cardiac arrest cases.

Obviously there are likely to be many factors involved in saving a patient's life – more members of the public know CPR, we have a growing network of community first responders, more public access defibrillators and, of course, the dedicated, hard work going on in individual hospitals – all of which can contribute to a patient's chances of survival. However, the clinical evidence shows that by having two crews in attendance to help save a life in a cardiac arrest situation, the chances of survival increase. We are confident that the way we are now responding to these emergencies is having a positive impact.

The New Clinical Response Model isn't just benefiting those patients who are most seriously ill. It's also helping us better identify the kind of response a patient needs. Under the old system we'd often just send the closest response – often this would lead to resources being wasted. For example, there is no point in sending a paramedic on a motorbike to a patient who then needs to be transported to hospital.

Instead, we now aim to send the right response first time to our patients. As a result, patients are getting better overall care. For example, by ensuring we take a little more time to understand a patient's condition, their needs and the response we are sending, we can often now also make sure they end up at the most appropriate facility. In stroke or heart cases, this could be a specialist facility, rather than just the nearest hospital. Or indeed, someone who has a broken finger could be taken to the nearest minor injuries unit, rather than to A&E.

The evidence is showing that these changes are having an extremely positive impact upon patient care and outcomes – with more lives being saved as a result and better treatment for all types of patients. The feedback we receive from patients across Scotland indicates that many understand and support the fact that sometimes they may have to wait slightly longer if there is a critically ill patient our crews need to attend to first.

However, we are keen to do all we can to ensure people understand the triage system we operate and the reasons for the changes we are making. There are a very small minority of cases where some patients are waiting an unacceptably long time for treatment and we are taking action to improve our systems for these types of patients too – with clinical advisors regularly checking in on them and an automatic upgrade to a high priority call out if any vulnerable patients are waiting too long or if their condition deteriorates at any point. There is more work to do on this and it is progressing well.

We have a very positive platform to build upon from these extremely positive results and we are proud to share the results of this first review with you. Thank you for your support and if you would like any further information or wish to share any feedback with us, we would be happy to work with you.

You can contact us on scotamb.communications@nhs.net