



# Patient Safety Alert

## Stage One: Warning

*Harm from delayed updates to ambulance dispatch and satellite navigation systems*

09 July 2015

Alert reference number: NHS/PSA/W/2015/006

Alert stage: One - Warning

Ambulances are expected to provide a rapid response to life-threatening situations. If delayed, this can impact on patient safety and outcome. Ambulance vehicles should have satellite navigation systems that assist crews to identify the location of the emergency. However, reports to the National Reporting and Learning System (NRLS) suggest some ambulance satellite navigation systems may not be up-to-date with new locations, resulting in delays.

When a 999 call is made, a process initiated by the Computer Aided Dispatch System (CAD) identifies the source and approximate location of the caller and tracks the nearest ambulance. Dispatchers send preliminary details of the call (including coordinates of location) to the nearest ambulance in order for the vehicle's satellite navigation system to plot the location. Systems should be up-to-date with the latest road layouts, addresses and new build information.

In a recent 30 month period, 66 reports submitted to the NRLS described incidents related to satellite navigation systems. Nine of these reports related to new locations not yet uploaded onto ambulance CAD or satellite navigation systems. Whilst two reports suggest the delay contributed to the patient's death, three other lower harm reports described delays attending cardiac arrests, suggesting the patient was not given the best chance of survival.

### Sample incident (reported as death):

*'On route to a cardiac arrest, the sat nav has not been updated with the new road layouts of new estates built in the last few years. There was a delay of 10 minutes to arriving on scene to the cardiac arrest due to this issue. [Central control] was contacted who tried to direct us, but it also seemed their maps were not up to date either. The map book was also out of date. If the latest maps were programmed into the sat nav then the patient may have received Advanced Life Support sooner with earlier defibrillation.'*

Every six weeks digital updates are made available from Ordnance Survey to ambulance trusts with all new addresses, but NRLS reports suggest CAD was not always promptly updated. Additionally, if CAD is updated but associated satellite navigation systems are not, the vehicle may be unable to identify and display all new road networks. Commonly, the vehicle itself is the cause of a 'disconnect' between mapping and updates.

This alert focusses on ambulance vehicles, but any NHS provider relying on satellite navigation systems for providing urgent healthcare should be aware of the requirement for regular system updates.

## Actions

**Who:** All NHS ambulance trusts, and any other providers of NHS funded care relying on satellite navigation systems to provide urgent healthcare.

**When:** To commence immediately and be completed by 20 August 2015.

- 1** Identify if delay in updating CAD and satellite navigation systems has occurred, or could occur, in your organisation.
- 2** Consider if immediate action needs to be taken locally and ensure an action plan is underway, if required, to ensure timely updates to CAD and satellite navigation systems when updated Ordnance Survey information is received.
- 3** Circulate this alert to all staff with responsibilities for updating CAD and satellite navigation systems.
- 4** Share any learning from local investigations or locally developed good practice resources by emailing [patientsafety.enquiries@nhs.net](mailto:patientsafety.enquiries@nhs.net).

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### Technical notes

#### NRLS search dates and terms

**Search 1:** all incidents since **01 April 2012** if reported by 2 September 2014 containing the following phrase in the free text: sat nav.

**Search 2:** all incidents from **01 April 2012** if reported by 26 September 2014 from **care setting Ambulance Services** containing the following phrases in the free text: new address **OR** new estate.

66 reports related to satellite navigation were confirmed on review, nine of which describe incidents related to issues with new road layouts, new addresses or new builds; five reported as no harm, one as low harm, one as moderate harm, one as severe harm (patient died soon after admission) and one reported as death. Note, out of the 66 total reports, three of the lower harm incidents were the result of the ambulance crew being delayed to patient in cardiac arrest because of issues with sat navs not finding locations, suggesting the patients were not given the best chance of survival.

#### Stakeholder engagement

This alert was developed with advice and support from the following:

- Association of Ambulance Chief Executives (AACE)
- NHS England Primary Care Patient Safety Expert Group
- NHS England Patient Safety Steering Group

For details of the membership of NHS England Patient Safety Expert Groups see: <http://www.england.nhs.uk/ourwork/patientsafety/patient-safety-groups/>.