REGULATION 28: REPORT TO PREVENT FUTURE DEATHS

	REGULATION 28 REPORT TO PREVENT FUTURE DEATHS **THIS REPORT IS BEING SENT TO:** **(1) South Western Railway** **(2) The Office of Rail and Road** **(3) The British Heart Foundation**
1	**CORONER** I am **HENRIETTA HILL QC**, Assistant Coroner, for the coroner area of the Inner South District of Greater London.
2	**CORONER'S LEGAL POWERS** I make this report under paragraph 7, Schedule 5, of the Coroners and Justice Act 2009 and regulations 28 and 29 of the Coroners (Investigations) Regulations 2013.
3	**INVESTIGATION and INQUEST** **ANNABEL NEWPORT**, who was born on 22 April 1994, died at St Thomas' Hospital, London at 5.30 pm on 23 March 2018. A Coroner's investigation was opened shortly after her death. The inquest was conducted by me, sitting alone, on 1 July 2019. I summed up the evidence and gave my findings and conclusions on 9 July 2019. I indicated then that I intended to make a Preventing Further Deaths ("PFD") report, for reasons which I circulated in writing on 12 July 2019. The medical cause of Ms Newport's death was recorded as follows: I(a) Post-cardiac arrest syndrome I(b) Late complications arising from transposition of the great vessels (operated). I returned a conclusion of natural causes.
4	**CIRCUMSTANCES OF THE DEATH** Ms Newport was born with a cyanotic congenital heart disease (transposition of the great arteries with intact ventricular septum). This was operated on when she was a baby and she had recovered well from the surgery. In March 2018 she was working in central London and would commute from Woking to Waterloo. On 21 March 2018 she collapsed shortly after boarding the 8.10 am train, due to late complications from her heart surgery. Passengers came to her aid, including several who were medically qualified, and commenced CPR. A passenger used the emergency alarm system to alert the driver to what was happening but found that he could not use it more than once, and so was unable to update the driver as to her deterioration.

The guard had located himself in a part of the train where he could not hear emergency announcements being made.

There was no defibrillator on board the train and so the passengers continued to provide CPR without one.

Control staff on the wider train network made a decision that the train should not stop to enable Ms Newport to receive immediate ambulance treatment at an earlier station, so it proceeded to Waterloo. However, the control staff were unaware of the severity of her condition.

At 8.36 am the train arrived at Waterloo. London Ambulance Service staff provided Ms Newport with emergency first aid including treatment with a defibrillator. They achieved Return of Spontaneous Circulation at 8.50 am and again at 9.00 am.

Ms Newport was transferred to St Thomas' Hospital where she died 2 days later, due to the brain damage she had suffered during the period of cardiac arrest.

CORONER'S CONCERNS

During the course of the inquest, the evidence revealed matters giving rise to concern. In my opinion there is a risk that future deaths will occur unless action is taken. In the circumstances it is my statutory duty to report to you.

The **MATTERS OF CONCERN** are as follows:

(i) The lack of consistent provision of defibrillators on trains and at stations

1. Although out of hospital cardiac arrest carries a generally poor prognosis, for some patients defibrillation can be lifesaving:

    - The inquest received evidence that London Ambulance Service data suggests that around 32.9% of those with a shockable heart rhythm who receive defibrillation survive. Those figures are based on patients who received defibrillation from the emergency services. It is a reasonable inference that the survival rate will be higher if those who received defibrillation from a member of the public before the arrival of the emergency services are included in the data.

    - The European Resuscitation Council Guidelines for Resuscitation (2010) suggest that in some cases CPR can double the chances of survival from out of hospital cardiac arrest. Early defibrillation is one of the four key stages of the "Chain of Survival" alongside early recognition of the problem, calling 999 and CPR. [1]

2. The inquest received evidence that Eurostar International provides defibrillators on its trains and Virgin Trains has them on at least its 'Pendolino' trains.

[1] See the British Heart Foundation policy statement, *Creating a Nation of Lifesavers*, pp.2-3

	3. There is a concern that South Western Railway does not provide defibrillators on any of its trains or at any of its stations, other than 12 chosen stations in the area it serves, across Kent, Sussex and in London. Other Train Operating Companies may adopt similar policies in this respect. ***(ii) First aid awareness among the South Western Railway train guards and other staff*** 4. South Western Railway train guards are not first aid trained, although under its "*Caring for Customers – What to do when a person is taken ill on a train*" Protocol, it is the guard who is primarily responsible for identifying whether an unwell passenger's condition is "*life-threatening*". 5. It is also not clear whether South Western Railway drivers and control staff are first aid trained. In this case, the driver knew that Ms Newport had collapsed and was unconscious. There was communication about her between him and the control staff. The control staff decided that the train would proceed to Waterloo, leading to a delay in Ms Newport in her receiving ambulance treatment. This was on the basis that it was not understood that her condition was life-threatening. 6. There is a concern that a lack of first aid training of the driver and/or the control staff may have led to a failure to recognise that being unconscious is a potentially life-threatening condition. ***(iii) The operation of the Pass-Com emergency alarm system*** 7. The Pass-Com is the emergency passenger alarm system found in the South Western Railway train carriages. It is understood that this may feature on other Train Operating Companies' trains. Due to the operation of the alarm if it is activated by the passenger, once the call is terminated by the driver the alarm cannot be used again until the guard has re-set it. 8. In this case, the guard could not be located and so the alarm could not be used. Accordingly, a passenger took it upon himself to walk through the train to alert the driver to Ms Newport's condition and lost potentially valuable time in order to do so. This may have contributed to the delay in her receiving ambulance treatment. The passenger did not appear to have realised that he could use a Pass-Com in another carriage. This may have been due to the stressful situation he found himself in, which is quite likely to occur if someone has used the Pass-Com due to a medical emergency. 9. There is a concern that it is not sufficiently apparent to passengers that once the Pass-Com has been used once, it cannot be used again without being re-set by the guard, and that in those circumstances they should immediately go to the next carriage to use the one there.
6	**ACTION SHOULD BE TAKEN** In my opinion action should be taken to prevent future deaths and I believe that South Western Railway and the Office of Rail and Road has the power to take

	such action in respect of concerns **(i), (ii) and (iii)**. I believe that the British Heart Foundation has the power to take such action in respect of concern **(i)**.
7	**YOUR RESPONSE** You are under a duty to respond to this report within 56 days of the date of this report and so by **11 September 2019**. I, the Coroner, may extend the period further. Your response must contain details of action taken or proposed to be taken, setting out the timetable for action. Otherwise you must explain why no action is proposed.
8	**COPIES and PUBLICATION** I have sent a copy of my report to the Chief Coroner and to the following Interested Persons: [redacted] (Ms Newport's parents), **South Western Railway** and **Network Rail** who were recognised as Interested Persons in the inquest. I am also a duty to send the Chief Coroner a copy of your response. The Chief Coroner may publish either or both in a complete or redacted or summary form. He may send a copy of this report to any person who he believes may find it useful or of interest. You may make representations to me, the coroner, at the time of your response, about the release or the publication of your response by the Chief Coroner.
9	**Signed .....*Henrietta Hill QC*.....** **Assistant Coroner** **17 July 2019**