



Ms Joanne Andrews
H.M Area Coroner for West Sussex, Brighton and Hove

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07 January 2025

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Dear Madam

Joel Phillip Colk deceased

I write in response to the Regulation 28 Prevention of Future Deaths report issued on 13 November 2024 to the South East Coast Ambulance Service NHS Foundation Trust (SECamb) following the inquest into the sad death of Mr Colk.

I was very sorry to learn of the death of Mr Colk and I would like to convey my heartfelt condolences to his family and friends.

I note the other relevant organisations named in this PFD report:

- NHS England & NHS Improvement

With regard your first matter of concern:

"The Court heard that when a call is made to 999 that the call is categorised using NHS Pathways and that all overdoses would be in the same classification resulting in the same disposition and response category. The system does not differentiate between types of, severity of or the drugs/chemicals reported as being the cause of the overdose. The system also does not differentiate call classification taking into account the amount reported as ingested, the timing of ingestion or the patient's weight. The Court heard that all of these factors can impact on the time in which care needs to be rendered to prevent death. The example given to the Court was that someone who had taken a relatively small paracetamol that would be unlikely to cause harm would, using Pathways, have the same resultant disposition as someone who had ingested a significant amount of a known lethal chemical.

The Court heard that in the case of [REDACTED] ingestion that treatment is only effective if medications are administered before the patient suffers a cardiac arrest. This likely will occur incredibly rapidly and is a known effect of the chemical. The Pathways system does not reflect the time sensitive nature for an effective response when it is known that sodium nitrite has been ingested and would not create a higher disposition requiring more urgent attendance than category 3."



The NHS Pathways Clinical Decision Support System (CDSS) is a triage product that is used to support call handlers (known as Emergency Medical Advisors within SECamb). The product is owned by the Secretary of State for Health and Social Care and is manufactured and managed by the Transformation Directorate of NHS England.

NHS Pathways as a product has independent oversight by the National Clinical Assurance Group (NCAG), which in turn is hosted by the Academy of Medical Royal Colleges (AoMRC). Robust processes exist nationally to provide scrutiny of the NHS Pathways clinical content, which is built around a clinical hierarchy, meaning that life-threatening symptoms are assessed at the start of the call to trigger ambulance responses.

It is widely acknowledged that overdoses, both intentional or accidental, are challenging to assess remotely, with a vast array of different substances being presented to urgent and emergency care services resulting in a significant variance of potential toxidromes.

This is further challenged in the absence of signs and symptoms which would be indicative of an immediate threat to life; symptoms indicating a compromise of airway, breathing or circulation do receive Category 1 or Category 2 ambulance dispositions within overdose presentations.

When an absence of immediately life-threatening symptoms such as the above is being presented in intentional overdose, the lowest ambulance disposition that can be reached is a Category 3 emergency ambulance outcome. However this Category 3 outcome is supported by additional measures specific to overdose that have been in place within SECamb since July 2019 and further amendments to local procedures following the publication of a operational guidance by NHS England and the Association of Ambulance Chief Executives (AACE) entitled, "Category 3 – 999 Overdose and Suicidal Ideation Calls; Initial Assessment of Lethality / Toxicity Principles Document" in April 2021, subsequently being further updated in November 2023.

SECamb has procedures and processes in place to fully follow the principles as set out, which include:

- Where an overdose is declared, further clinical intervention should take place within 30 minutes, or the case must be automatically upgraded if this does not occur within 40 minutes.
- It is good practice for TOXBASE® (clinical toxicology database of the UK National Poisons Information Service) to be viewed for each overdose / accidental ingestion incident, despite the familiarity of the reviewing clinician with that particular toxicity profile, which includes [REDACTED]. It is noted that management practices often change in relation to specific toxins, therefore guidance around the use of TOXBASE® was issued instead. Utilising TOXBASE® similarly ensures that the relevant current guidance is accessed when managing emerging and novel substance ingestion enabling the clinician to assess risk on an individual case basis.



- The initial clinical review should also consider any ongoing suicidal ideation with a specific plan / means.

999 Overdose and suicidal ideation calls – initial assessment of lethality / toxicity principles document, (NHS England, 2023)

Although SECAmb followed the *999 Overdose and suicidal ideation calls – initial assessment of lethality / toxicity principles* with the call being automatically upgraded to a Category 2 response as a clinical review did not take place within 40 minutes, we do recognise that in this case Mr Colk volunteered the information to the 999 call handler that he had taken [REDACTED]. Recent reports cited within a PFD response provided by the National Ambulance Resilience Unit (NARU) indicate 1 case of [REDACTED] being ingested for every 0.5 million 999 calls in UK ambulance services, so whilst the incidence of [REDACTED] poisoning is increasing, it is still a very rare occurrence (Courts and Tribunals Judiciary - Response from NARU, 2024).

As a Trust, we would like to use this case alongside others to support a workstream in early development that we are undertaking, regarding the potential for the use of new and emerging technologies, such as Artificial Intelligence to ‘ambiently listen’ to 999 calls. The aim is to enhance patient safety and reduce human cognitive burden, potentially highlighting certain calls to clinicians that have rare or unique risks earlier. We are in the early stages of understanding this technology and undertaking this work alongside four other NHS Ambulance Trusts as part of the Southern Ambulance Collaborative, and although we envisage if successful this having wider benefits to a range of presentations that 999 ambulance calls present, we have included [REDACTED] overdose as an example within the proposed case for change.

With regard your second matter of concern:

“The Court was also told that clinicians do not carry on any Ambulances within South East Coast Ambulance Service NHS Foundation Trust Methylene Blue which is the antidote to [REDACTED] ingestion as this is not within national guidance. I heard that in some areas there are ongoing trials for some areas that this is on board vehicles within the HART (Hazardous Area Response Team). Therefore in this area the treatment is only available when a patient reaches an acute hospital with an A&E department and the evidence was that often patients enter cardiac arrest before this occurs.”

Governance and Decision-Making

SECAmb employs a rigorous and comprehensive governance framework to determine which medications are carried by its clinicians. Our Medicines Governance Group (MGG)—chaired by the Chief Pharmacist and comprising senior clinicians, operational managers, academic representatives, public members, and subject matter experts—oversees all medication-related decisions. Any proposal to add or amend a medicine within our formulary requires a robust New Drug Application (NDA) and consideration of clinical evidence, operational feasibility, financial sustainability, and alignment with national best practice.



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Challenges in Pre-Hospital Diagnosis and Treatment

██████████ poisoning causes methaemoglobinaemia, which can only be reliably diagnosed using specialised diagnostic equipment (e.g., Masimo Rainbow SET sensors). In a pre-hospital context, the accurate identification of sodium nitrite ingestion is complicated by non-specific presentations and the unlikelihood of having immediate access to this specialist equipment on every frontline vehicle. Consequently, the administration of methylene blue in the pre-hospital setting poses significant diagnostic and logistical challenges, especially given the low incidence of confirmed sodium nitrite poisonings.

Availability and Cost Implications

Methylene blue is supplied in 50 mg vials in the UK, with treatment for methaemoglobinaemia potentially requiring several vials per patient, depending on body weight. Equipping the entire SECamb fleet of over 300 clinical vehicles with sufficient stock—much of which may expire before use—would place significant demands on the service in terms of finance, logistics and workforce training. Additional resource investment would also be necessary for specialised diagnostic equipment, further complicating routine operations.

Specialist Resource Considerations

Although certain regions are trialling the use of Hazardous Area Response Teams (HART) to carry methylene blue, these teams are designed for high-risk environments. SECamb's HART operates from two bases (Ashford and Crawley), but their geographic reach and the unpredictable nature of ██████████ poisonings do not guarantee they would always be the initial or timely responders to these cases. In many instances, rapid transfer to hospital—where comprehensive evaluation and definitive treatment (such as intubation, ventilation, inotropic support, or exchange transfusion) can be provided—remains the most pragmatic approach.

Cardiac Arrest Considerations

Critically, for those patients who have already sustained a cardiac arrest by the time ambulance clinicians arrive, the likelihood of restoring spontaneous circulation using methylene blue is indicated to be low. Advanced cardiac life support measures—including prompt hospital transfer for definitive care—are therefore prioritised, as per current clinical best practice.

Ongoing National Discussions

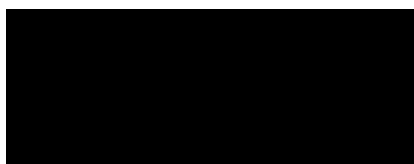
SECamb is aware that discussions are ongoing nationally regarding the role of methylene blue for sodium nitrite poisoning. We remain actively engaged with NHS ambulance services and will carefully review any future recommendations that emerge, particularly if published via JRCALC or other authoritative bodies.



In conclusion, SECamb remains committed to delivering the highest standard of pre-hospital care within the framework of evidence-based clinical practice. We continuously review our medication formulary in line with emerging guidance and new evidence. At present, and in accordance with current national recommendations, equipping all front-line ambulances with methylene blue and specialist diagnostic tools is neither clinically feasible nor cost-effective. Nevertheless, we will continue to monitor evolving guidance and, where appropriate, modify our protocols to maintain patient safety and optimise outcomes.

I hope this response clearly sets out our commitment to meet the needs of all patients requiring an emergency care response from us and from the wider system. If I can be of any further assistance, please do not hesitate to contact me.

Yours sincerely



Chief Executive Officer
South East Coast Ambulance Service NHS Foundation Trust

References

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