



UK Health
Security
Agency

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Ms Rebecca Sutton
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26 November 2024

Dear Ms Sutton

Re: Ref: 2024-0574, Regulation 28 report to prevent future deaths

Thank you for the prevention of future deaths report received by the UK Health Security Agency (UKHSA) on 25 October 2024.

UKHSA would like to start this response by expressing our deepest sympathies to the family of Patricia Lines.

The concerns raised in the report have been considered and reflected upon by UKHSA and its response is below.

Invasive Group A Streptococcus

Invasive group A streptococcus (iGAS) infection was introduced as a statutorily notifiable infectious disease in England and Wales in 2010 to enable public health actions to prevent and control the spread of infection through (a) the establishment of any potential sources of infection and (b) the establishment of any settings or contexts that may require a more detailed risk assessment to establish close contact and take action to limit possible onward transmission.

Notification and UKHSA health protection investigation/action

UKHSA's North East health protection team (HPT) was notified that Mrs Lines had iGAS on 20 October 2023, on the basis of a specimen taken on 18 October 2023. In line with UKHSA guidance, the HPT undertook contact tracing to identify vulnerable and symptomatic contacts of the case and establish their requirement for antibiotic treatment or chemoprophylaxis.

Vitamin B12 intramuscular injection

Prior to the receipt of the prevention of future deaths report, the HPT was not aware that Mrs Lines had received an intramuscular injection prior to the onset of her symptoms. However, as the risk of infection following intramuscular injection is a rare but recognised complication of the procedure and given that no other linked case of infection had been reported, knowledge of this series of events would have been unlikely to alter the course of our investigation.

Your report highlighted that, when questioned at the inquest, the nurse who administered the intramuscular injection cited guidance from the 'Green Book' regarding the requirement for the use of alcohol wipes prior to vaccination as well as an NHS e-learning module.

Immunisation against infectious disease: the Green Book

The 'Green Book' (officially entitled 'Immunisation against infectious disease') is a UKHSA publication (having previously been produced by Public Health England). It is the main authoritative resource for healthcare professionals involved in the delivery of immunisation programmes across the UK. The last printed version of the book was published in 2006; since then it has been published online. The publication contains two parts. Part 1 covers principles, practices, and procedures in relation to vaccination. Part 2 contains individual chapters in relation to vaccinations and vaccines for specific diseases.

Response to concerns raised in the prevention of future deaths report

The 'Green Book' advises that, prior to administration of vaccinations, only visibly dirty skin needs to be washed with soap and water and it is not necessary to disinfect the skin. This is because studies have shown that cleaning the skin with isopropyl alcohol reduces the bacterial count, but there is evidence that disinfecting makes no difference to the incidence of bacterial complications of injections.

Furthermore, alcohol wipes may increase injection site reactions as alcohol may track intramuscularly, subcutaneously, or intradermally following vaccination. In addition, the use of alcohol wipes is not recommended prior to the administration of vaccines due to the theoretical risk of the alcohol deactivating a live vaccine. There is a lack of international consensus on the use of alcohol wipes prior to vaccination but the Green Book guidance aligns with the advice on vaccinations contained within the [World Health Organization's Best Practices for Injections and Related Procedures Toolkit](#).

Although infection is a known risk associated with intramuscular injections, infections following administration of vaccinations remain rare. The 'Green Book' provides specific and clear guidance on the administration of vaccinations and should not be interpreted as a general guide for delivering all intramuscular injections.

This is because the risks associated with other intramuscular injections may vary according to the specific product being used, including the nature and volume of the substance to be injected, the manner of its preparation, and the characteristics of the needle used to perform the injection. The manufacturer's guidance contained within the product information may be a source of information for the delivery of intramuscular injections that are not vaccinations. UKHSA is unable to comment on the appropriateness of using alcohol wipes before administering Vitamin B12 injections, as this falls outside of its remit.

Given the above information, and following discussions within UKHSA involving both the Specialist Vaccines team and the Infection Prevention and Control team, UKHSA has no plan to amend the 'Green Book' guidance in relation to the use of alcohol wipes prior to the administration of vaccinations.

Thank you for bringing this matter to our attention.

Yours sincerely,



Regional Deputy Director for Health Protection, North East
UK Health Security Agency