CORONER'S OFFICE
AREA OF HERTFORDSHIRE

Date: 20 November 2023

[redacted]

REGULATION 28 REPORT TO PREVENT FUTURE DEATHS
THIS REPORT IS BEING SENT TO: XXX

1. **CORONER**
   I am Graham Danbury Assistant Coroner for Hertfordshire
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. http://www.legislation.gov.uk/ukpga/2009/25/schedule/5/paragraph/7

   http://www.legislation.gov.uk/uksi/2013/1629/part/7/made

4. **INVESTIGATION AND INQUEST**
   On 11 January 2021 I commenced an investigation into the death of Susan Ann GLADSTONE.

   The investigation concluded at the end of the inquest on 20 November 2023.

   The conclusion of the inquest was She died as a result of a generally unknown interaction between warfarin and tramadol which caused exceptional thinning of her blood

   1a Intraparenchymal and Subarachnoid Haemorrhage

   1b

   1c

   II

5. **CIRCUMSTANCES OF DEATH**
   Mrs Gladstone was admitted to Lister Hospital on 06/01/2021 presenting with a history of feeling increasingly unwell over the preceding few days. On admission Mrs Gladstone was found to have pyelonephritis and was treated with IV antibiotics. Mrs Gladstone was on warfarin, and had recently been prescribed tramadol. Her INR was found to be extremely elevated at 11.6. Reversal medication was prescribed. Mrs Gladstone's condition deteriorated and she died at 22.58 hrs on 08/01/2021
6. **CORONERS 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. –

(1) Mrs Gladstone had been prescribed warfarin for a number of years and her levels were regularly checked by the Anticoagulation Service. On 20th December 2020 Mrs Gladstone was prescribed tramadol for low back pain, with a further prescription on 4th January 2021.

(2) On 21st December 2020 her International Normalised Ratio [INR] was found to be 3.3. When she was admitted to Lister Hospital on 6th January 2021 tests showed her INR to be 11.6. Immediate action to reverse this was taken. The evidence showed that this level of blood thinning was likely to cause significant bleeding including in the brain. The cause of death was bleeding in the brain

(3) A comment from the Anticoagulation Service in relation to tramadol reads "Known interactor although this is not listed in the BNF, from experience we have seen that this can increase the INR." There was nothing to warn the prescribing doctor of any possible interaction.(4) I found on the balance of probabilities that an interaction between tramadol and warfarin had caused this dangerous, and in the event fatal, INR level to develop.

7. **ACTION SHOULD BE TAKEN**
   In my opinion action should be taken to prevent future deaths and I believe you, NHS England have the power to take such action.

8. **YOUR RESPONSE**
   You are under a duty to respond to this report within 56 days of the date of this report, namely by 06/02/2024. I, the coroner, may extend the period.

   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.

9. **COPIES AND PUBLICATION**
   I have sent a copy of my report to the Chief Coroner and to the following Interested Persons, [redacted].
10. I am also under 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.

11. 20 November 2023

Signature 

Mr. Graham Danbury

Assistant Coroner for Hertfordshire