REGULATION 28: REPORT TO PREVENT FUTURE DEATHS (1)

*NOTE: This form is to be used **after** an inquest.*

	REGULATION 28 REPORT TO PREVENT FUTURE DEATHS **THIS REPORT IS BEING SENT TO:** **1.** The Right Honourable Jeremy Hunt, Secretary of State, Department of Health, Richmond House, 79 Whitehall, London, SW1A 2NS
1	**CORONER** I am Alan Peter Walsh, HM Area Coroner, for the Coroner Area of Manchester West
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** On 5th September 2014, I commenced an Investigation into the death of Mary Magdalene Marshall, 87 years, born on the 26th May 1927. The Investigation concluded at the end of the Inquest on 23rd February 2015. The medical cause of death was: 1a) Pseudomembranous Colitis 1b) Clostridium Difficile Colitis The conclusion of the Inquest was that Mary Magdalene Marshall died as a consequence of a recognised complication of antibiotic therapy on a background of Glutamate Dehydrogenase and naturally occurring disease.
4	**CIRCUMSTANCES OF THE DEATH** 1. Mary Magdalene Marshall died at the Royal Bolton Hospital, Minerva Road, Farnworth, Bolton on the 29th August 2014. 2. In March 2013 Mrs Marshall was an inpatient at the Royal Bolton Hospital when she was identified as being Glutamate Dehydrogenase (GDH) positive from a faecal specimen. 3. A GDH positive result indicates vulnerability to the development of Clostridium Difficile infection. 4. The Royal Bolton Hospital had two systems to report a finding of GDH positive, namely:-

i. The Ascribe Discharge summary which communicates findings to a General Practitioner.

ii. The Extramed which records the findings on the hospital records so that appropriate measures may be taken on any subsequent admission in terms of infection control.

5. On the 13th August 2014 Mrs Marshall was seen by her General Practitioner who diagnosed a chest infection and prescribed Amoxicillin as a recommended antibiotic to treat the chest infection.

6. On the 19th August 2014 Mrs Marshall was admitted to the Royal Bolton Hospital with a tender swelling in the left inguinal region and a CT scan on the 20th August 2014 identified an incarcerated inguinal hernia causing small bowel obstruction. Mrs Marshall consented to surgery to repair the hernia but when she was transferred to the operating theatre, later the same evening, she suffered a cardiac arrest and required cardiopulmonary resuscitation. She was transferred to the High Dependency Unit when it was deemed too high a risk to proceed with the surgery and the small bowel obstruction was managed with conservative measures including intravenous fluid administration and nasogastric drainage.

7. On the 26th August 2014 Mrs Marshall developed an elevated temperature and a chest X-ray showed evidence of a right sided pneumonia. Appropriate antibiotic therapy was commenced along with chest physiotherapy.

8. On the 28th August 2014 a stool sample confirmed Clostridium Difficile infection and, after discussion with the Consultant Microbiologist, Metronidazole was commenced as an appropriate antibiotic to treat Clostridium Difficile but Mrs Marshall continued to deteriorate and died on the 30th August 2013.

5 **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:-

1. During the Inquest evidence was heard that:

i. A GDH positive result indicates vulnerability to the development of Clostridium Difficile infection.

ii. The evidence indicated that there was a lack of awareness, in general, of the importance of GDH positive results in relation to the future prescription of antibiotics and the risk of the

development of Clostridium Difficile infection. Furthermore there is a lack of awareness amongst General Practitioners in relation to GDH positive results.

iii. The evidence indicated that there were Hospital Trusts in the North West that did not inform General Practitioners of GDH positive results and it is believed that a similar problem may exist Nationwide.

iv. The Bolton NHS Foundation Trust has addressed the problem of awareness and procedures have been implemented with instruction to all medical staff to communicate information regarding the GDH positive results to General Practitioners and other providers of primary care. Furthermore there has been a discussion with the Bolton CCG Clinical lead regarding raising awareness of GDH positive results in primary care and the implications for future prescription of antibiotics.
The Trust has drafted letters (copies attached hereto) to be sent to General Practitioners, immediately upon diagnosis of GDH positive results, to confirm the diagnosis and to confirm that the patient is an inpatient at the Hospital at the time of the writing of the letter. The Trust will share the diagnosis with the relevant CCGT, in real time, if the patient is not an inpatient.

v. In so far as inpatients at the Hospital are concerned the Bolton NHS Foundation Trust has established procedures whereby the Extramed is noted with the GDH positive results and the Hospital has initiated a ward clerk alert system at the beginning of each ward round confirming that a patient is GDH positive so that the prescription of antibiotics may take account of the positive results.

vi. The evidence raised concerns that future deaths will occur unless action is taken to review the above issues on a Nationwide basis.

2. I request you to consider the above concerns and to carry out a review with regards to the following:

i. The awareness amongst all Health Practitioners of the significance of GDH positive results and the training of General Practitioners in relation to the relevance of GDH positive results, particularly in relation to the future prescription of antibiotics.

ii. The procedures in Hospitals to advise General Practitioners and Primary Care Practitioners of a GDH positive result by use of letters similar to the attached letters prepared by the Bolton NHS Foundation Trust.

iii. Hospitals to have a log, similar to the Extramed system at the Royal Bolton Hospital, recording GDH positive results in the hospital records and procedures for such results to be brought to the attention of Clinicians at the beginning of every ward round.

	I request the above review to increase the awareness in relation to GDH positive results particularly in relation to the future prescription of antibiotics and the reduction of the risk and the occurrence of Clostridium Difficile infection which may lead to Pseudomembranous Colitis and future deaths.
6	**ACTION SHOULD BE TAKEN** In my opinion urgent action should be taken to prevent future deaths and I believe you and/or your organisation have the power to take such action.
7	**YOUR RESPONSE** You are under a duty to respond to this report within 56 days of the date of this report, namely by 1st May 2015. 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.
8	**COPIES and PUBLICATION** I have sent a copy of my report to the Chief Coroner and to the following Interested Persons: 1. [redacted] – Husband of Mary Magdalen Marshall 2. [redacted] – Son of Mary Magdalen Marshall 3. [redacted] – Assistant Director Infection Control, the Royal Bolton Hospital NHS Foundation Trust. 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.
9	**Dated** **6th March 2015**
	Signed [redacted] **Mr Alan P Walsh**