	REGULATION 28 REPORT TO PREVENT FUTURE DEATHS **THIS REPORT IS BEING SENT TO: Toxbase**
1	**CORONER** I am Emma Brown Area Coroner for **Birmingham and Solihull**
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 15/06/2018 I commenced an investigation into the death of Paul David Ryley. The investigation concluded at the end of an inquest on 11th September 2018. The conclusion of the inquest was of an Alcohol and drug related death.
4	**CIRCUMSTANCES OF THE DEATH** The Deceased died at the Birmingham Heartlands Hospital at 11:36 on the 14th April 2018 as a result of the effects of a paracetamol overdose on the 10th April 2018. He had attended hospital on the 10th April at which time he showed no clinical symptoms of paracetamol toxicity and his plasma concentration was below the treatment threshold. However, he presented again on the 11th April with persistent tachycardia, lower stomach pain, episodes of nausea and vomiting and visual hallucinations, routine blood tests were not undertaken and his symptoms were attributed to alcohol withdrawal despite a known risk that severe liver toxicity can develop in a few patients with a plasma paracetamol level that appears below the threshold. It is likely that routine blood test results would have been abnormal resulting in diagnosis and treatment which would have given a 50% chance of success. By the time he was admitted on the 12th April the deceased was too ill for treatment. The Deceased's intention when he overdosed on the 10th April cannot be identified on a balance of probabilities.. Following a post mortem the medical cause of death was determined to be: 1a) PARACETAMOL INDUCED LIVER INJURY
5	**<u>CORONER'S CONCERNS</u>** 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. The Toxbase Guidelines for Paracetamol overdose (which compromise of a general guidance sheet and then several sheets specific to the period since ingestion) were considered and it was identified that they do not expressly state whether or not they apply only to an initial attendance and do not set out any steps to be followed when a patient re-presents within a short time of an initial attendance for a Paracetamol overdose. 2. Evidence was heard from an ED Registrar, ED Consultant and the Consultant Hepatologist that lead the Trust's root cause analysis investigation that the guidelines are commonly understood by emergency department practitioners within this Trust and elsewhere to be applicable only to the patient's initial attendance and are therefore not considered when a patient re-attends even

	when that re-attendance is within days (in this case within 24 hours) of the initial attendance. Evidence from the experienced ED Consultant was that this is what she had understood from local and national training. 3. The evidence before the court was that it is, or ought to be, known that despite a plasma paracetamol level below the therapeutic threshold patients can go on to suffer liver toxicity following a paracetamol overdose and this is clearly stated within the Toxbase guidance. 4. In this case the clinicians did not refer to the Toxbase guidance when the Deceased represented other than to check that on his initial presentation his plasma paracetamol level had been below the therapeutic level (which it had been). 5. The evidence of a Consultant Hepatologist at the inquest was that he could not foresee any real risk in practice from following the guidance within the applicable Toxbase sheet based on time since ingestion even on a representation and to do so would in some cases result in treatment and avoid death. 6. There is therefore a risk that patients are not being given treatment that would increase their chances of survival because clinicians do not have clear guidance on what to do when a patient re-presents and do not regard the existing guidance as applicable.
6	**ACTION SHOULD BE TAKEN** In my opinion action should be taken to prevent future deaths in the form of review the existing Toxbase guidance and how it is used with respect to re-presentation for paracetamol overdose and I believe you 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 9th November 2018. 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: the family of Mr. Ryley, the University Hospital of Birmingham NHS Foundation Trust, West Midlands Police and Birmingham and Solihull Mental Health NHS Foundation Trust. I have also sent it to NHS England who may find it useful or of interest. 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	14/09/2018 Signature_____ Emma Brown Area Coroner **Birmingham and Solihull**