Kally Cheema LLB
HM Senior Coroner for County of Cumbria

	REGULATION 28 REPORT TO PREVENT FUTURE DEATHS **THIS REPORT IS BEING SENT TO: [redacted] Medicines and Healthcare Products Regulatory Agency**
1	**CORONER** I am Dr Nicholas Shaw Assistant Coroner for **County of Cumbria**
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. http://www.legislation.gov.uk/ukpga/2009/25/schedule/5/paragraph/7 http://www.legislation.gov.uk/uksi/2013/1629/part/7/made
3	**INVESTIGATION and INQUEST** On 25/09/2019 I commenced an investigation into the death of Mary Nelson. The investigation concluded at the end of the inquest 10th February 2020. The conclusion of the inquest was Mary Nelson died at her home [redacted] Cumbria on 9th July 2019 due to a combination of hypertensive heart disease and the toxic effect of a properly prescribed medication. Hypertensive Heart Disease and Fluoxetine toxicity
4	**CIRCUMSTANCES OF THE DEATH** Mary Nelson was a 75 year old lady who had a long history of chronic depression. She had been on a regular prescription of Fluoxetine 60mg daily from her GP since 2009 along with Amitriptyline 10-20mg at night. She rarely attended her GP surgery but did have an ECG suggestive of mild LV hypertrophy and was also on a long term prescription of Bisoprolol 5mg & Ramipril 1.25mg daily and had a previous history of excess alcohol use. The circumstance of her death was simply that she was found deceased on the sofa in her living room when her husband awoke one morning, this appeared to be a sudden death during the night. At post mortem the only significant physical finding was a slightly enlarged heart, coronary arteries were less than 50% occluded by atheroma. Toxicology however revealed a blood Fluoxetine level of 3460ng/ml [lethal range >1300] & Norfluoxetine 1832ng/ml. Amitriptyline however was in therapeutic range. There was no evidence to suggest anything other than that Mary took her regular medication as prescribed. I have discussed this case with the reporting forensic toxicologist. It is acknowledged that Fluoxetine has a large volume of distribution but even allowing for that this is a very high level [and of course lethal ranges are based on PM levels obtained from other cases].
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. – [BRIEF SUMMARY OF MATTERS OF CONCERN] (1) I am concerned that Fluoxetine accumulated in Mary's body over the course of her treatment reaching a dangerous level that could trigger sudden cardiac rhythm disturbance [?torsades de pointes] and death. Should the guidance for dosage be revised [especially in the elderly], is there any indication to consider in life testing of drug levels? (2)This death has not been reported on the Yellow card system and clearly the MHRA needs to be aware

	of it. (3)----------

6	**ACTION SHOULD BE TAKEN** In my opinion action should be taken to prevent future deaths and I believe you The MHRA 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 20th April 2020 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 Person [redacted] I have also sent it to [redacted] Mary's GP 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	24/02/2020 Dr Nicholas Shaw Assistant Coroner **County of Cumbria**