	REGULATION 28 REPORT TO PREVENT FUTURE DEATHS **THIS REPORT IS BEING SENT TO:** 1. Professor Dame Sally Davies , Chief Medical Officer [redacted] **2.** [redacted] Cornish, National Clinical Director for Children, Young People and Transition [redacted] 3. [redacted], Chair (University of Oxford) - Chair of the Joint Committee on Vaccination and Immunisation [redacted] **4.** [redacted] Head of the Immunisation, Hepatitis and Blood Safety Department at Public Health England [redacted]
1	**CORONER** I am Mrs Heidi Connor, assistant coroner for the coroner area of Nottinghamshire.
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 26 July 2017 I commenced an investigation into the death of Tomas Kelly, aged 3. The investigation concluded at the end of the inquest on 14 November 2017. The conclusion of the inquest was natural causes.
4	**CIRCUMSTANCES OF THE DEATH** <u>October hospital admission</u> Tomas was diagnosed with an upper respiratory tract infection by a GP on 17 October 2016. He was prescribed antibiotics (Amoxicillin) in liquid form. Tomas did not like the taste of this and it was difficult to persuade him to take this. He suffered a choking episode on 18 October, and required resuscitation by his parents. He was admitted to hospital that day. He was diagnosed with aspiration pneumonia and a chest infection. Tomas was kept in hospital until 22 October and was given what were described as 'strong antibiotics'. One of the reasons for this was that he had Down's Syndrome. He was therefore known to be at greater risk – both of developing infections and for those infections to be potentially more dangerous than they might be for children without this condition. <u>Events post hospital admission</u> Tomas appeared to recover after the October hospital admission, but soon afterwards contracted chicken pox. His parents became concerned about him on the night of 20 November. They said his breathing was very rapid. His lips turned blue and he had raised temperatures, which they were treating with paracetamol (in the form of Calpol). Tomas was seen by a GP, [redacted], on 21 November 2016, in an emergency appointment. [redacted] did not consider him to be a particularly unwell child. He examined and listened to Tomas' airways from the back. He did not examine or listen to his chest from the front. He said that he prescribed antibiotics (this time Flucloxacillin) because of the risk that Tomas might develop infection in view of his chicken pox. He

	said he saw no signs of infection when he examined Tomas. He recorded a normal respiration rate, pulse and capillary refill time. He did not record a temperature – he felt Tomas' forehead with his hand. He did not measure oxygen saturations. He said he did not need to. [redacted] did not refer Tomas to paediatricians. Paediatric witnesses gave evidence that, if they had been contacted, in view of the risk factors for Tomas, they would have asked for him to come to hospital later that day. He would in those circumstances have been observed for a number of hours. He may have been admitted and had intravenous antibiotics administered. It is not clear whether earlier referral would have changed the outcome. The relevant risk factors for Tomas by 21 November included : • His Down's Syndrome • Recent chicken pox • Recent admission to hospital following likely arrest • Recent diagnosis of aspiration pneumonia and chest infection (during his hospital admission 18 -22 October 2016). Tomas' condition deteriorated very rapidly at home in the early hours of 22 November 2016. He died in hospital that morning. The cause of death following a PM was confluent bronchopneumonia. The evidence of the paediatric pathologist was that patients with Downs Syndrome are more prone to severe lung infections. She told us that children with Downs show a 12-times increased risk of mortality due to infection. The parents gave difficult and poignant evidence at the inquest. They said they wished they had known about the increased risks for Tomas. If they had known that infections can be more risky for children with Downs Syndrome, they may have reacted differently or sought further medical assistance sooner. They think that other parents with children who have Downs Syndrome should be made aware of these risks in future.
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. My concerns are : 1. <u>Talking to parents</u> a. I did not have concerns about the medical professionals being aware of the increased risks associated with infection in children with Downs Syndrome. I heard no evidence of the parents being made aware of this however – either when he was discharged from hospital on 22 October 2016 or when he was seen by his GP on 21 November 2016. b. Tomas' parents said they may have sought additional medical assistance if they had known about these risks. c. Whilst this may be happening to some extent in community paediatrics, it is important for health professionals in acute settings (including primary care) to be advised to share these risks with parents/ carers, so that they can adopt an appropriate threshold for seeking medical assistance. 2. <u>Vaccination against chicken pox</u> a. The evidence confirmed that it is not the chicken pox per se which creates a risk. Rather it is the immunosuppressant effect of this – creating a risk of more serious infections as a result. b. We heard from a community paediatrician that, as matters stand, there

	is no plan to vaccinate all children against chicken pox. This is limited to certain high risk groups only. c. It is clear that children with Downs Syndrome are at increased risk – both of contracting infection and of the infections being more serious. d. Careful consideration should be given to including children with Downs Syndrome to the category of children who will be routinely offered this vaccination. The fact that a Regulation 28 report has been issued should not be interpreted as a criticism of the recipient organisation. This point has been made clearly in the case of *R (Dr Siddiqui and Dr Paeprer-Rochricht) v Assistant Coroner for East London* (Admin Court CO/2892/2017 decision 28 Sept. 2017)
6	**ACTION SHOULD BE TAKEN** In my opinion, action should be taken to prevent future deaths and I believe you / 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 17 January 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 : 1. Tomas' family and legal representative 2. [redacted] and his legal representative 3. Nottingham University Hospitals NHS Trust and their legal representative 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	**22 November 2017** ***H.J.Connor***