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NICE National Institute for Health and Care Excellence

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[redacted]

08 August 2024

Mr Chris Morris
HM Area Coroner
Coroner's Court,
1 Mount Tabor Street,
Stockport
SK1 3AG.

Sent via email: [redacted]
Our reference: [redacted]

Dear Mr Morris

Re: Regulation 28 Prevention of Future Deaths Report (Thomas Lee Gibson)

I write in response to your regulation 28 report dated 19 June 2024 regarding the very sad death of Thomas Gibson. I would like to express my sincere condolences to Thomas's family.

The patient safety leads at NICE have discussed the report and understand that your request is that we develop guidance on teaching clinicians to interpret ECG readings correctly.

They have explained that teaching clinicians to take a history and interpret an ECG are both very important, however we do not feel that it is possible to produce a guideline that would achieve this aim, and therefore we do not believe that NICE is the relevant body to take action on this point. We would suggest that the request is directed to the relevant Royal Colleges/Specialist Societies and to the General Medical Council (GMC), who are responsible for postgraduate and undergraduate training respectively.

You may also find of interest the MEdTEch briefing from NICE on a related topic; The technology | Remote ECG interpretation consultancy services for cardiovascular disease | Advice | NICE

I am sorry that we could not be more helpful on this occasion, but hope that our suggestions above will help to ultimately achieve the necessary improvements in care.

Yours sincerely,

[redacted]
Chief Executive

NHS
Manchester University
NHS Foundation Trust

Joint Group Chief Medical Officers' Office
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Room 218, Cobbett House
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14 August 2024

HM Area Coroner Mr Christopher Morris
Manchester South Area Coroner's Court
1 Mount Tabor Street
Stockport
SK1 3AG

By Email [redacted]

Dear HMC Mr Morris,

Re: Regulation 28 Report into the death of Thomas Gibson

Thank you for your Regulation 28 Report to Prevent Future Deaths dated 19th June 2024 addressed to Mr Mark Cubbon in his capacity as Group Chief Executive of Manchester University NHS Foundation Trust ("MFT", "the Trust") following the inquest into the death of Mr Thomas Gibson which you heard on the 4th and 5th June 2024.

I have now had the opportunity to acknowledge and consider the matters of concern that were raised within your report and which emerged during the inquest of Mr Gibson.

On behalf of the Trust, I would like to extend my sincere condolences to the family of Mr Gibson for their very great loss.

During the inquest you heard that Mr Gibson attended Wythenshawe Hospital Emergency Department (ED) following a period of gastric illness whereupon an ECG was performed. Following this, Mr Gibson was discharged. He sadly died eleven days later as a consequence of sudden cardiac death due to idiopathic myocardial fibrosis. You received and heard evidence on behalf of the Trust which accepts that the ECG was incorrectly interpreted and there was a failure to diagnose complete heart block. Had this been recognised, Mr Gibson would have been admitted under the care of the cardiologists for investigations and interventions that would have followed, most likely avoiding his death. We are very sorry for the failure to correctly interpret Mr Gibson's ECG.

The Trust was able to provide some assurance of our learning and actions taken at the inquest. However, you felt there were matters of concern which remained and that your statutory duty under Regulation 28 of the Coroners (Inquest) Rules 2013 was engaged; and you subsequently wrote a Regulation 28 Report to Prevent Future Deaths to MFT to express your concerns.

You explained these were as follows:

1. ***Whilst some important learning has been derived from the Trust's review of the care provided to Mr Gibson, I am concerned that a narrow focus on the error of three different doctors to interpret two ECGs correctly (rather than any broader consideration of the context in which such misinterpretations occurred) represents a missed opportunity to fully understand the factors that led to Mr Gibson's discharge from hospital, thus creating a risk of future deaths.***

2. ***Having carefully considered all of the evidence at inquest, I am concerned that there does not appear to be clear guidance available to those working within the Trust as to what is required when communicating (particularly as to test results and a patient's presentation) as between different specialisms and as between different roles within the team.***

3. ***Connected with the above, I am concerned that the court heard evidence to the effect there is no specific guidance as to expected minimum standards as to obtaining appropriate context / information for clinicians (whether from the HIVE system or otherwise) when asked to review a single test or investigation result in isolation.***

4. ***I am also concerned that there does not currently appear to be any particular requirement in place for a senior review of the patient to take place in circumstances where diagnostic tests undertaken yield results which appear incongruous / unexpected in the context of their presentation.***

5. ***Given the Trust's own findings on investigation, I am concerned that no wider audit of ECGs interpreted in the Emergency Department / Acute Medical Unit prior to discharge of patients appears to have been undertaken; and***

6. ***It is a matter of concern that no audit as to the sufficiency of detail contained in discharge summaries appears to have been undertaken to date in the light of the issues identified by the Trust's High Impact Learning Assessment.***

MFT is committed to learning from any incident, and we thank you for the opportunity to address your concerns and thereby improve the care we provide. A multi-disciplinary approach has been taken to address your concerns as follows:

1. The Trust has given careful consideration to this concern and apologises for giving the impression of a narrow focus. The Trust is aware that there is a longstanding issue with ECG interpretation both within the UK and internationally. Multiple studies have confirmed that the accuracy of ECG interpretation varies from 42% for medical students and 75% for cardiologists (who are the experts at interpreting ECGs).[1] These issues with ECG interpretation are present even after extensive training and other interventions. For this reason, we have focused on the Human Factors of errors in clinical medicine and have engaged with our Human Factors Academy (HFA). This will support us to understand better the other factors at play which contribute to incorrect ECG interpretation; and which can be mitigated in the future.

[1] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7522782/

Additionally, we have confirmed with our undergraduate educator colleagues that training on ECG interpretation starts in the first year of medical school and is woven through a number of modules across the five years.

2. Clarification of roles and responsibilities is a key aspect of our training and the mechanism for securing a senior / speciality review is clearly defined. There is an opportunity at least twice daily to discuss medical cases both on the ward and in ED. It is part of standard medical training around how and when to escalate patients with tools such as the SBAR (Situation, Background, Assessment, Recommendation) taught and reinforced in undergraduate and postgraduate training across the UK. The SBAR tool is recommended by NHS England for use by all clinical staff; it is described as 'a structured way of communicating information that requires a response from the receiver. As such, SBAR can be used very effectively to escalate a clinical problem that requires immediate attention, or to facilitate efficient handover of patients between clinicians or clinical teams'. Consultants from a range of specialties make themselves available as much as possible, with named consultants present in ED and on the admitting wards 7 days a week. A consultant attends medical handover twice a day and each department at Wythenshawe, Trafford, Withington and Altrincham ("WTWA") (and indeed across MFT) discusses SBAR and escalation processes for senior review at induction with the junior doctors. It is also written in the induction booklets handed out at the start of each placement for the medical teams.

   ECG training is delivered regularly as part the Wythenshawe medical teaching programme. The training also encourages junior members of the team and other Health Care Professionals (HCPs) to have a low threshold to seek a second opinion either from a Consultant/Specialist Trainee (who are signed off as competent to interpret ECGs independently) or cardiologist.

3. The reality of practice in a busy Emergency Department does mean that at times, clinicians will be presented with a test result in relative isolation without a fully comprehensive clinical picture, and asked to comment on this result in the context of other potentially competing priorities. In any situations of competing priorities, clinicians need to be able to weigh the relative risks and benefits of dealing with one matter ahead of another. We recognise the challenge this real-world scenario presents, and the need to support staff to recognise and mitigate the risk of those "human factors" and situational challenges that can impact a correct diagnosis being reached. The concept of "human factors" in healthcare is described as *"enhancing clinical performance through an understanding of the effects of teamwork, tasks, equipment, workspace, culture and organisation on human behaviour and abilities and application of that knowledge in clinical settings".*[2] We are therefore expanding our simulation and Human Factors training. This HF training will form part of regular teaching programmes for medical and surgical junior doctors and the content and syllabus will be discussed with the HFA. The aim is to have a rolling 12-month programme established by 31 December 2024. This program will look at how to provide training across MFT sites. It is anticipated that Human Factors training will focus on increased vigilance in the interpretation of screening investigations such as a chest radiograph or ECG when patients do not have typical presenting features, as in the case of Mr Gibson. The Human Factors training will also reinforce the importance of clinicians having a robust systematic process for interpreting ECGs. There are

[2] *Catchpole (2010), cited in department of Health Human Factors Reference Gorup Interim Report March 2012,* National quality Board, March 2012.

ongoing discussions with Cardiology and the Human Factors Academy to ensure this training achieves these objectives.

4. Whilst no Consultant reviewed the ECG prior to Mr Gibson being discharged, the Registrars did review this. A Registrar is an appropriately senior clinician to discharge a patient; it is not anticipated or reasonable for a Consultant to oversee all ECG interpretation 24 hours a day, as the opportunity cost of this would adversely impact other activity that necessitates Consultant input.

   Acute Medicine and ED have weekly junior doctor teaching sessions. Once a month these are based on 'missed opportunities' or 'lessons learnt' from the previous month. This includes clinical cases or themes relating to errors to ensure learning is disseminated across the teams. Relevant cases are also added to the monthly governance meetings and mortality meetings which have a broader reach to include Consultants and senior nursing staff.

5. As stated above, it is well documented that ECG interpretation accuracy varies between 42% and 75% (expert cardiologists) and so it has been agreed by the Clinical Head of Division and the WTWA Associate Medical Director for Quality and Patient Safety that performing a random audit of selected ECGs would not provide assurance of the quality of interpretation. The only way to seek assurance would be to audit all ECGs and this would be extremely onerous on the ED department and distract from delivery of patient care. An audit presented in August 2024 has shown that we perform 100-190 ECGs every day in ED which amounts to 41% of all attendees. Of these ECGs, 35-56% of them have an abnormality detected.

   However, it was agreed that there would be benefit in performing an audit to ensure that the correct processes are being followed in ED with regard to the Standard Operating Procedure (SOP). i.e. ECG reviewed by the appropriately qualified member of staff with interpretation and action plan documented. This audit used data from timepoints in December 2023 with 64% of ECGs having an interpretation documented within the medical records. Of those not interpreted within the ED, some patients had opted to leave the department, and some had been under the care of specialties so not the direct responsibility of ED teams. Since that audit we have revised the SOP around documentation standards and delivered education on which patients should receive an ECG. The second phase of the audit will now take place to assess the impact of that intervention. Our expected standard is that 100% of ECGs will have an interpretation documented. Although this cannot guarantee accurate interpretation each time, the standard will enforce that a period of time be given to the ECG interpretation, ensuring due attention and thus removing some of the human factors issues which can limit focus and assessment skills in the moment.

6. A Task and Finish Group involving colleagues in Primary Care and MFT clinicians was set up in April 2024 to ensure that discharge summaries confirm to a basic standard set by the Professional Records Standards Body. A new template has been produced which includes all relevant descriptors. It is important that discharge summaries are kept succinct to enable all relevant information to be easily accessed by the receiving clinician. However it is also important that the relevant information is included to ensure that the care provided and ongoing plan can be understood by Primary Care colleagues. As part of the changes made, this new version will automatically provide any medication updates and concerns and each section must be completed: see example below. This template has been signed off by Primary Care; and colleagues in

Primary Care have been encouraged to feed back any suboptimal discharge summaries.

Recommended Actions for GP or Receiving Dept:
Please document any recommended actions for the GP or Receiving Dept if needed.
***

Problem List at Discharge:
Please ensure problem list is updated if it differs from below {(click here to update):1}
There are no hospital problems to display for this patient.

Clinical Summary:
Please document a clinical summary of this admission, including procedure or investigation results information.
***

Hospital Plan:
Please note that results of any outpatient investigations will be sent to the Attending Consultant at discharge. {(click here to update):1}
***

Rationale for Medication Changes:
Document rationale for medication changes. Please note medication information is already included within the Discharge Summary Letter and does not need to be repeated.
***

We hope that this response provides you and Mr Gibson's family with assurance in respect of the matters of concern you have raised, and we thank you for your Report. The Trust is committed to ensuring patient safety is our priority at all times. If you require any further information, please do not hesitate to contact us.

Yours sincerely

[redacted]
Joint Group Chief Medical Officer / Responsible Officer
[redacted]

On behalf of

[redacted]
Chief Executive Manchester University NHS Foundation Trust