

## Computed Tomography Post Mortems (CTPM)

### Overview and Scrutiny Committee: Tuesday 4<sup>th</sup> September

#### **Background**

1. This report is for Overview and Scrutiny Committee on 4<sup>th</sup> September as a result of a petition which was presented to City Council at the meeting of 5<sup>th</sup> December 2017 by Councillors Jon Hunt and Zaker Choudhry. The petition has been co-ordinated by Birmingham Community Forum. The petition triggered the threshold of 5,000 signatures for reporting to Council Business Management Committee. It was therefore reported to the January 2018 meeting to allow Committee to decide whether an Overview and Scrutiny Committee or City Council should debate the petition
2. The Coroner for Birmingham and Solihull is an independent judicial officer responsible for investigating all violent and unnatural deaths, deaths where the cause is unknown and deaths where the person died in custody or in state detention. In about a third of these deaths, the Coroner orders a post mortem (PM) as part of the investigation, to establish the cause of death. the Coroners and Justice Act 2009 empowers the Coroner to order a PM and section 14(2) enables the Coroner to specify the type of examination required.
3. In 2016 of 5080 death referrals the Coroner, 1685 (33%) required a post mortem (PM) examination. The figures for 2017 were around 1750 PMs (35%) from a total of 5150 death referrals.
4. PMs are currently undertaken by pathologists (for a statutory fee) with assistance from Council employed mortuary technicians. Bodies are delivered to the central mortuary by a contracted company, they are stored on site, the PM is carried out as soon as possible, and the deceased again stored until released to the family by the Coroner. (PMs of young children and forensic PMs required by the police are undertaken off site).
5. The PM's currently undertaken in Birmingham, are the traditional PMs which are invasive, requiring significant dissection of the body. Various cultural and faith communities, as well as other sections of society, would prefer (and would like to insist) that the body is not disturbed after death.
6. A non-invasive option exists, called, Computed Tomography Post Mortem (CTPM). With CTPM the body is passed through a scanner which produces images enabling the cause of death to be identified in around 70% of cases if angiography (use of dye in blood vessels) is used.

#### Advantages of CTPM over traditional invasive Post Mortems:

- The PM is undertaken without opening the body, although if angiography is used (as it will be in the majority of cases) dye has to be injected into the blood system)

- There are fewer Health & Safety issues to the attending staff if the body is not invasively post mortemed
- To many people the idea of a scan is far more acceptable than the traditional PM which is in many people's view disrespects the deceased
- CTPM is usually suitable for use in about 70% of cases, but it depends on the cause of death as to when it can be used successfully. If the cause is not identified the scan may enable a partially invasive PM to be undertaken rather than a full PM
- It reduces the use of some consumables required for a traditional PM
- In some circumstances it is better at identifying the cause of death rather than an invasive PM

#### Disadvantages of CTPM over traditional PM:

- The equipment required is very expensive; consequently the additional cost of each PM is significant. A new CTPM scanner costs in the region of £1m.
- The scanning requires additional expert staff – radiographers, radiologists, IT support etc. which adds to costs
- If the CTPM fails to identify the cause of death an invasive PM will still be required – this may introduce delay
- If angiography is not available the rate of positively identifying the cause of death is greatly reduced
- A pathologist is still required to interpret results and some pathologists are not prepared to work with CTPM, only with traditional PMs
- Contrary to popular opinion there is likely to be no time saving with CTPMs over traditional PMs

#### Current Position

7. Sandwell MBC had a CTP facility which served the Black Country Coroner. The Black Country authorities (with the exception of Walsall) paid the full cost of the CTPM for their residents using the facility, however this cost was heavily subsidised by the CTPM provider, which was a private company called Igene. The charge to users from outside Sandwell was £500 + VAT plus the cost of transportation of the body to and from the facility. Earlier this summer the CTPM provider cancelled the contract with Sandwell because it was uneconomic. Therefore there is no longer a CTPM facility in the West Midlands.
8. If a family wants a CTPM, based on the circumstances of the death and with the agreement of the Coroner, the case can be referred to the John Radcliffe Hospital in

Oxford. John Radcliff's charge in 2016 was £450 +VAT. The cost of the CTPM and transportation of the deceased to and from the facility is met by the family. In 2015, Four (4) CTPMs were carried out (Two of these were carried out in Oxford) and in 2016, Two were carried out. This increased to Eight (8) in 2017 out of a total of 1800+ Post Mortems. The Eight that were carried out were either done in Sandwell or Oxford

### **Birmingham and Solihull CTPM Options**

9. The company that had previously worked with Sandwell (Igene) has approached the Birmingham and Solihull Coroner with an outline proposal to install the CTPM scanner from Sandwell in Birmingham's mortuary.
10. Queen Elizabeth Hospital has also been in discussion with the City Council about ways in which it could build a purpose-built CTPM facility on its site which would be for the use of the Coroner.
11. The Igene proposal and the QE proposal offer different advantages and disadvantages and both propose different business models to fund them. However in both cases, every body that is scanned incurs a cost that is over and above the current cost of a post mortem and which has to be funded. In the QE proposal there is a greater capital cost than in the Igene proposal, which is based on the use of our current mortuary.
12. This is because the fixed costs of the mortuary and its staffing would remain as the facility would still be required for the storage of the deceased and the undertaking of invasive post mortems. The only saving that a CTPM has over a traditional PM is the consumables used, this amounts to a few £s per case.
13. Regardless of which business model is considered to be the best, the fundamental decision will be whether the City Council pays for the entire cost of every scan, whether families pay for the entire cost, or whether there is a middle option by which the Council and the family share the cost. Depending on which model is preferred, the revenue costs could be as much as £1m per year. In the Igene model the company would retain ownership of the equipment, but in the QE model the City Council would purchase the equipment.
14. Both business models would benefit from maximising the use of the scanner by inviting neighbouring authorities to submit bodies for PM and offer the potential for Birmingham to be able to underwrite some of the costs.
15. If a CTPM scanner is not installed in our own mortuary, we will incur the additional cost of transporting bodies between the CTPM facility and the mortuary. Based on 2017 figures it could be as much as £246,000 p.a if CTPM were available at the QE hospital

## **Pathologists**

16. In 2016 the Chief Coroner acknowledged in his annual report that there is a national shortage of pathologists to undertake Coroner PMs. Currently in Birmingham & Solihull there are sufficient pathologists available to provide Coroner PMs five days a week. It is however envisaged, due to the age profile of the pathologists and lack of new pathologists entering the field (there is no priority training for this in the health service), that in the medium term, Three to Five years, this will no longer be the case. This may result in delays in undertaking post mortems when pathologists are unavailable.
17. The Senior Coroner has expressed her view that a CTPM facility is required in Birmingham as she believes that in many cases it is now the most suitable examination to provide a cause of death and would be suitable for use in approximately 70% to 75% of PMs that the Coroner orders. This will also meet the future needs of the Coroner's service for the citizens of Birmingham and Solihull.
18. The shortage of pathologists is a national issue and there may be other solutions available in the future. The Chief Coroner reiterated in his Annual report to the Lord Chancellor for 2016-17 that action is required to address the pathologists' shortage and repeats his proposal that pathology services for coroners be organised regionally. He suggests some Twelve to Fifteen regional centres of excellence should be created, providing mortuary, post mortem examination and post mortem CT scanning facilities. This could be a consideration for the West Midlands as a whole.

## **Business Case**

19. Detailed business cases for both proposals (Igene and Queen Elizabeth) are being drawn up by officers. The business case will include a consideration as to whether Birmingham should in fact build a new mortuary and Coroner's Court building. The Mortuary and Court both require considerable capital investment by way of repairs and maintenance. Now is the right time to factor the decision about CTPM facilities into the bigger decision whether to relocate the mortuary and court, or invest in the existing buildings.
20. There is a need to market test the viability of CTPM in Birmingham in respect of its cost effectiveness given that relatively few CTPM's have been requested in the last few years and only Eight were requested in 2017

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