STATE CORONER'S COURT
OF NEW SOUTH WALES

Inquest:	Inquest into the death of Karl Guy Meyers
Hearing dates:	15-16/10/15
Date of findings:	17 March 2016
Place of findings:	State Coroners Court, Glebe
Findings of:	Magistrate Harriet Grahame, Deputy State Coroner
Catchwords:	Coronial Law-Cause of death; Removal of a nasogastric tube (NGT)
File number:	2013/00317306
Representation:	Ms Williamson, Coronial Law Advocate – Advocate assisting the Coroner Mr Sergi of Counsel instructed by Ms Henry of Curwoods Lawyers –Representing The Western Sydney Local Health District (WSLHD)
Findings:	**The identity of the deceased** The identity of the deceased is Karl Guy Meyers. **Date and time of death** Karl died around 10.50pm on 19 October 2013. **Place of death** Karl died at Westmead Hospital, Westmead NSW. **Cause and Manner of death** Karl died from the complications of the multiple injuries he

	received in a motor vehicle accident.
Recommendations:	There are no formal recommendations in this matter.

IN THE STATE CORONER'S COURT
GLEBE
NSW
SECTION 81 CORONERS ACT 2009

REASONS FOR DECISION

1. This inquest concerns the death of Karl Guy Meyers

Introduction

2. Mr Meyers was an 82 year old gentleman who lived at the Cardinal Gilroy Retirement Village in his own self-contained unit at Merrylands NSW.

3. Every second Monday he went with his daughter, Noreen Harwood on a shopping expedition to Westfields Shopping Centre, Mount Druitt.[1]

4. On 14 October 2013 Mr Meyers's daughter Noreen Harwood and her partner Phillip Gilman collected Mr Meyers from his home to go shopping. Phillip was driving Noreen's red Dodge Avenger (BEB-35W). Mr Meyers sat in the back, behind the driver and they proceeded towards Mount Druitt, down the M4 (westbound) towards the Wallgrove road exit.[2]

5. Unfortunately the vehicle was involved in a collision at the intersection of Wallgrove Road, Eastern Creek and the off ramp of the M4 motorway, westbound.

6. The off ramp from the M4 is two lanes with the traffic heading in a westerly direction. The off ramp intersects Wallgrove Road, which travels north to south. Traffic from the off ramp can only turn right and is governed by a traffic signal.[3]

7. At this intersection, traffic from Wallgrove road is travelling south in two lanes and is also controlled by a traffic signal. The signal has controls for vehicles continuing in a

[1] Statement of Noreen Harwood 21/6/14 [14]
[2] Statement of Noreen Harwood 24/10/13 [5]
[3] Statement of Constable Luke Fawcett [6]

southerly direction or arrows for vehicles to turn right on the M4 exit in a westerly direction.[4]

8. The car that Mr Meyers was travelling in collided with a medium sized table top truck (BX-07-BB) driven by Robert Carovski. The force of the collision hit the passenger side of the Mr Meyers's vehicle.

9. The circumstances of the collision are disputed with both drivers stating that they had a green light.

10. The truck had minimal damage, however the red Dodge had substantial damage and Rescue Services were required to cut the occupants out of the vehicle by dismantling the central pillars of the car. Phillip Gilman, Noreen Harwood and Mr Meyers were then taken in separate ambulances to Westmead Hospital.

11. Mr Meyers was seen at Emergency and initially admitted to the High Dependency Unit (HDU), under the care of the Hospital's trauma surgeons. Later he developed respiratory distress and was transferred to the Intensive Care Unit (ICU). By 17 October he had been transferred back to the HDU, where he stayed until he was transferred back to the ICU shortly before his death around 10.50pm on 19 October 2013.

The role of the Coroner

12. The role of the Coroner is to make findings as to the identity of the nominated person, and in relation to the date and place of death. The Coroner is also to address the issue of manner and cause of the person's death.[5]

13. In this case, it is clearly established that Mr Meyers died at Westmead Hospital on 19 October 2013. He died in the ICU, having received significant treatment over the previous 5 days. The inquest has been convened to investigate more fully the

[4] Statement of Constable Luke Fawcett [7]
[5] Section 81 *Coroner's Act* 2009 (NSW)

medical cause of his death and to shed light on the circumstances surrounding his death.

14. It is useful to note at the outset that the role of the Coroner is not to apportion guilt or to determine questions of civil liability. The task for a Coroner is to discover the cause of death, rather than to make findings about whether the surrounding conduct fell short of any particular standard. It should be remembered that competent medical practitioners may sometimes approach the management of complex medical problems in different ways. Clinicians make decisions as information becomes available and without the benefit of hindsight.

15. The Coroner also has the power to make recommendations concerning any public health and safety issues arising out of the death in question.[6]

The issues

16. The main issue identified prior to the inquest commencing was the decision to remove the nasogastric tube (NGT) and the effect of that decision on Mr Meyers. The report of Professor Raftos, an expert engaged by the Court stated, "if the nasogastric tube, which had been used to ensure that the stomach was empty of the backup of gastrointestinal fluids caused by the ileus had been left in place until the ileus had resolved or he had been mobilised, then he would, on the balance of probabilities, have survived".

17. The inquest was slated to commence on 17 August 2015. Shortly prior to the commencement of the inquest, the Western Sydney Local Health District produced an expert report under the hand of Dr Mary Langcake. However, she was unwell and the matter was adjourned until 15 October 2015. Orders were made for a joint report and it was foreshadowed that the expert evidence would be given in tandem. This proved a most useful approach.

[6] Section 82 *Coroners Act* 2009(NSW)

18. To some degree the provision of the Langcake report broadened the scope of the inquest. It was Dr Langcake's view that leaving aside the nasogastric tube issue, Mr Mayers's injuries were of themselves life threatening. She also had different views on the correct diagnosis of Mr Meyers's medical issues and took a different approach to Professor Raftos on the treatment that he should have been afforded. In her view the treatment offered was both coordinated and appropriate under the circumstances. Dr Langcake gave strong evidence and the addition of her considered opinions certainly broadened the field. At the conclusion of the expert evidence it was established that the issues involved were not clear cut and that there would have been more than one reasonable approach to the management of Mr Meyers's complex medical issues at the time Dr Hsu was called upon to make his clinical decision to remove the NGT.

The accident

19. Mr Meyers was injured as a result of a collision. He was a passenger. Both drivers claim to be in the right. Various witness statements have been obtained and inquiries made in relation to this incident.

20. Constable Luke Fawcett, the Officer in charge in this matter informed the Court that summary charges of negligent driving (occasioning grievous bodily harm) and negligent driving (causing death) have recently been laid against Robert Carovski, the driver of the truck. It is alleged that Mr Carovski failed to stop at a red traffic signal, causing the accident.

21. Whatever the final outcome of the charges, which are likely to be heard after the conclusion of the inquest, it is clear that Karl Meyers received significant injuries as a result of the collision.

What injuries did Mr Meyers receive in the accident?

22. When Mr Meyers was assessed at Westmead, his injuries included

    - Displaced fracture of the anterolateral and posterolateral aspects of the right third and fourth rib, creating a small flail segment

- Mildly displaced fractures of the posterolateral aspect of the right fifth rib
- A small apical pneumothorax
- Minimally displaced fracture of the lateral aspect of the left fifth rib
- Comminuted fractures of the left superior pubic ramus and right pubic body with extension into the anterior aspect of the right acetabulum
- Minimally displaced fracture of the right inferior pubic ramus[7]

23. Given his age and pre-existing conditions, the issues were serious and there was always a risk of complications developing.

A brief outline of Mr Meyers's treatment

24. On 14 October 2013 Mr Meyers was triaged at the Emergency Department at Westmead Hospital and admitted as a patient.

25. I do not intend to recount Mr Meyers's medical treatment in any detail, it is set out in the medical records which have been tendered. It is clear that doctors were called upon to manage a variety of issues including severe pain, immobility and respiratory difficulties. The management of Mr Meyer's health was complicated by the effects of the opiates he received and his initial unwillingness to have an epidural. His pre-existing condition also needs to be considered. While he was described by his family as active and well, he was over 80 years of age, somewhat obese and had a history of hypertension.

26. Mr Meyers was initially treated with intravenous fentanyl patient controlled analgesia for the significant pain he suffered. As a result of the opiates and his immobility Mr Meyers became constipated and he began to suffer increasing respiratory distress because of the pain of his rib injuries. Mr Meyers was transferred to the ICU on 16 October 2013. His breathing was assisted by the use of high flow oxygen via nasal prongs.

[7] As summarized by Associate Professor Raftos in his report of 1/10/14

27. As early as 15 October 2013 there were concerns that Mr Meyers was suffering from an ileus and a nasogastric tube was inserted for the first time. Dr Rogers records Mr Meyers's abdomen as distended and tympanic on the evening of 15 October[8]. According to the notes, the diagnosis of ileus was confirmed radiologically and he was treated with regular aperients and agents to stimulate gut motility. While Mr Meyers was prescribed both Maxolon and Ondansetron, nausea does not appear to have been a particularly significant problem. It is referred to from time-to-time in the notes, but the medication chart reveals only a dose of Maxalon on 14 October 2013 on his arrival at Hospital and a single dose of Ondansetron on 18 October 2013.

28. On the morning of 16 October 2013 the nasogastric tube was removed. Later Mr Meyers's condition deteriorated and a PACE (Patient with acute care condition for elevation, also referred to in Hospital records as a Pre-arrest Criteria for escalation) call was made. The nasogastric tube was reinserted, among other interventions.

29. As Mr Meyers's respiratory difficulties stabilised, to some degree, he was transferred back to HDU on 17 October 2013. The following morning he was reviewed and around 3.20 pm on 18 October 2013 the NGT was again removed pursuant to Dr Hsu's earlier instruction.

30. On 19 October 2013 Mr Meyers experienced a massive episode of vomiting and he aspirated. Medical records describe "acute desaturation and respiratory distress". Records indicate that around 8pm on 19 October 2013, an ALS (Acute Life Support, also referred to in Hospital records as Advanced Life Support) call was made. A NGT was inserted and a large quantity of faeculent smelling gastric contents was removed. Mr Meyers was intubated. His condition was by then critical. Treatment continued but Mr Meyers appears to have suffered a cardio-respiratory arrest and he died at around 10.50 pm that evening.

31. It has been reported that members of his family were shocked as it was thought that Mr Meyers had been slowly improving.

[8] Statement of Dr Rogers [11] onwards and medical notes.

32. The post mortem examination conducted by Dr Liliana Schwartz recorded Mr Meyers's cause of death as "complications of multiple injuries"[9]

The use nasogastric tubes

33. A NGT may be used for feeding or as a "sump drain". When used for drainage, it is generally accepted that it should be larger than a fine bore tube to be effective[10]. It is also accepted generally that there may be risks associated with the use of NGTs. Dr Hsu referred to a number of risks including the possibility that the presence of a NGT could increase the risk of vomiting.[11]Dr Langcake also outlined a number of possible difficulties including discomfort, interference with the operation of the oesophageal sphincters and interference with pulmonary function.[12]

34. There was clear disagreement between the experts about whether the presence of a NGT would necessarily prevent aspiration. In Professor Raftos's view it would, in Dr Langcake's view the issue is not as clear cut. [13] She gave an example from her own practice where a NGT was inadequate to deal with the vomited contents. [14]It appears the issue is one where differing opinions exist among the experts.

35. What is clear is that the possibility of aspiration was a significant one in Mr Meyer's case. His limited mobility and the effects that the opiate medication and trauma appeared to be having on his gastro-intestinal function should have triggered a careful consideration of the risk that fluid could accumulate in his abdomen, which could in turn increase his risk of aspiration.

The use of a NGT in Mr Meyers's case

36. In Mr Meyer's case a NGT was inserted on two separate occasions by staff in the ICU. It appears to have been considered an appropriate response to a diagnosis by ICU staff of

[9] Limited Autopsy Report for the Coroner, Exhibit 1, Tab 1
[10] Dr Langcake- 16/10/15 T3@9, Dr Hsu – Day 1 T30@11-35, T35@10-15, Dr Raftos – Day 2 T3@25
[11] Dr Hsu 15/10/15 T 34@3
[12] See Exhibit 4, Joint statement of issues and contentions, page 3
[13] See for example her evidence relation to her involvement in the review of surgical cases with CHASM, at 16/10/15 T21@35 onwards.
[14] Dr Langcake 16/10/15 T21@13-19

ileus or bowel obstruction. Dr Hsu observed in his evidence that the diagnosis of ileus appears to have been initially made in the ICU.[15]

37. It was Dr Hsu's decision to remove the NGT the day before Mr Meyers's death.

Was Mr Meyers suffering ileus or a pseudo colonic obstruction (PCO)?

38. The question of exactly which condition Mr Meyers was suffering from was also the subject of some disagreement. Ileus and PCO have some similar features and it was Dr Langcake's evidence that they are often conflated by junior medical staff and even radiology staff.[16]

39. There are certainly medical notes which record a diagnosis of ileus, including notes attributed to Dr Hsu. However in his oral evidence Dr Hsu stated that his diagnosis at the time was "ileus pseudo-obstruction potentially"[17] It appeared to be his oral evidence that Mr Meyers was suffering an ileus *or* a pseudo colonic obstruction (PCO).[18] His prescription of Neostigmine was clearly consistent with a diagnosis of PCO.[19] In his oral evidence Dr Hsu explained that he believed Mr Meyers was suffering from reduced bowel motility as a result of the opiates prescribed for the pain he was suffering.

40. The health issues facing Mr Meyers were complex. Pain management was necessary in part to address the risk of pneumonia and respiratory failure caused by his lack of mobility due to ongoing chest pain. Dr Hsu stated that he was of the view that the distended abdomen did not indicate a bowel obstruction.[20]Equally the fact that there was fluid being collected through the NGT was not in itself indicative of ileus.

41. Professor Raftos was, on the other hand, certain that Mr Meyers was suffering an ileus. He based his opinion on the clinical notes he reviewed and on the recorded observations of a distended abdomen. He was of the view that a large bore NGT should have been inserted and maintained.

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[15] Dr Hsu Day 15/10/15 T26@45
[16] Dr Langcake 16/10/15 T15@34
[17] Dr Hsu 15/10/15 T27@1
[18] Dr Hsu 15/10/15 T27@1
[19] Dr Hsu 15/10/15 T27@31-T28@29
[20] Dr Hsu 15/10/15@19 and elsewhere

42. In contrast, Dr Langcake's review of the medical records came to a different result. In her view the massive abdominal distension observable and the radiology showing distension of the colon is more consistent with PCO than ileus.[21] In her view the course of action taken by Dr Hsu was appropriate and based on sound clinical findings. The use of Neostigmine appeared to be having some limited result. She noted the two small bowel movements, the toleration of fluid and the absence of nausea around the time the decision was made.

43. There was also disagreement between the experts in relation to whether or not Mr Meyers should have been receiving nutrition. While Professor Raftos was of the view that Mr Meyers should not have been fed, it was Dr Langcake's view that small amounts of fluid may be beneficial and assist with the gastro colic reflex.[22]

44. At the end of the day, each expert appeared to base his or her own opinion on sound clinical experience and a careful review of the medical records.

Would Mr Meyer's have died if the NGT have remained in place

45. Mr Meyers was an 82 year old man who had suffered significant injuries. He was always at risk of complications.

46. Dr Raftos was of the view that a NGT, if left in place, would have had the capacity to empty Mr Meyers's stomach and therefore he would not have been at risk of aspirating the regurgitated gastric contents of his stomach.[23] In other words he would have likely survived. However, it should be noted that the NGT that had been inserted appears to have been a fine bore and Dr Raftos was of the view a large bore was required.

47. Dr Langcake was of the view that there were risks associated with the use of a NGT, including an increased risk of aspiration and other complications. Dr Langcake stated that it is likely that the contents of the small bowel did regurgitate into Mr Meyers's stomach during the large vomiting episode around 8pm on 19 October 2013. However, a NGT, particularly the fine bore tube which had been inserted, would not have

[21] Dr Langcake 16/10/15 T15@35
[22] Dr Langcake 16/10/15 T4@39
[23] See Exhibit 4 Joint statement of Associate Professor Raftos and Dr Langcake

prevented either the vomiting or the aspiration. [24] Dr Langcake did not agree with Professor Raftos's view that a NGT on low suction would have kept the stomach empty of fluid and stressed that aspiration can occur even when liquid volumes are small.[25]

48. Dr Langcake was of the view that at the time the decision was made to remove the tube, "there were no clinical signs or symptoms warranting (its) continued use"[26] She noted that that the tube did not appear to have reduced the abdominal distension, Mr Meyers had not been vomiting and there were other risks such as pneumonia that needed to be taken into account.

49. Both experts gave sound and well-reasoned evidence. Dr Hsu was able to explain the factors behind his decision making process. At the end of the day, both approaches have merit and no criticism, made with the benefit of hindsight, can be levelled at the approach taken by Dr Hsu.

Conclusion

50. I am informed that there has been a careful multi-specialty review of Mr Meyers's death by the Westmead Hospital Mortality and Morbidity meeting.[27] Dr Hsu appears to have thought carefully about the complex patient management issues involved. It is important to learn from each experience and I am certain that r Hsu has benefitted from listening to both experts review this case. The risk of aspiration in a patient such as Mr Meyers was increased given his age, lack of mobility and gastro-intestinal issues. Careful and explicit consideration of the possibility of aspiration was clearly called for. Nevertheless, I am of the view that the evidence before me has not established to the requisite standard that the decision to remove the NGT caused Mr Meyers's death and I offer no criticism of the doctor involved.

[24] See Exhibit 4 Joint statement of Associate Professor Raftos and Dr Langcake
[25] Dr Langcake 16/10/15 T6@40 onwards
[26] See Exhibit 4, Joint statement of issues and contentions, page 4
[27] Dr Hsu 15/10/15 T53@20 onwards

Findings required by section 81(1) of the *Coroner's Act* (2009) NSW

51. Karl Guy Meyers died around 10.50 pm 19 October 2013 at Westmead Hospital, Westmead NSW.

52. The cause of his death was complications from the multiple injuries he received in a motor vehicle accident.

Recommendations

53. It appears that there are currently guidelines relating to the insertion and removal of NGTs, but no guidelines in relation to the use of NGTs. Dr Hsu was of the opinion that there was a "lack of good quality evidence to help determine those guidelines".[28] It was an opinion essentially shared by both Professor Raftos and Dr Langcake. Professor Raftos saw such a project as "fraught with problems"[29]

54. The use of a NGT involves a variety of considerations which will differ from patient to patient. It is well beyond the expertise of this Court to suggest a guideline should be drawn up against the expert evidence of both Professor Raftos and Dr Langcake.

55. I decline to make any recommendations in this matter.

56. Finally, I offer my sincere condolences to members of the Meyers family who have lost a valued family member in tragic and distressing circumstances.

57. I close this inquest.

Magistrate Harriet Grahame

Deputy State Coroner

17 March 2016

[28] Dr Hsu 15/10/15 T54@28 onwards
[29] See also Dr Langcake 16/10/15 T21@21