Bundaberg Hospital *Commission of Inquiry*

STATEMENT OF MARK JONATHAN RAY

MARK JONATHAN RAY makes oath and says as follows:-

1. I was born on 13 June 1968 and I live in Brisbane at an address which I have provided to the Commission staff.

2. I am a Fellow of the Royal Australian College of Surgeons with fellowships in general surgery and vascular surgery. I am currently employed as a visiting medical officer at the Princess Alexandra Hospital.

3. From July 2004 to January 2005, I was employed at the Royal Brisbane Hospital as an advanced trainee. I was formally described as a Senior Registrar or a Fellow in Vascular Surgery. There were two Registrars in our unit and there were four consultants who supervised, including Dr Jason Jenkins. Effectively, I was the first port of call in the Unit: where a problem emerged, it would come to me and I might involve one or other of the consultants, as the situation required.

4. There is a patient who I have treated and who I understand has been identified before the Commission as **P26**. I was working at the RBH at 10.00 or 11.00am on 1 January 2005 when I received a telephone call from Bundaberg Base Hospital concerning **P26**. I have not perused the chart or my notes in preparing this statement but I have a good recollection of events. I was so amazed by the phone call that, for a while, I thought that someone was playing a New Year's Day practical joke.

5. The call was from the orthopaedic PHO or Registrar at Bundaberg Base. He told me that there was a teenage boy in the surgical ward at Bundaberg who may need to come to Brisbane. He then described the immediate history for P26. He said P26 had been admitted to the Hospital about one week earlier. He said that **P26** had been involved in a motor bike accident and had lost much blood at the scene. **P26** was transferred to Bundaberg Base and he was promptly taken to theatre where surgery was performed.

6. The junior doctor said the initial surgery consisted of the exploration of

a laceration in the left groin and a repair of a femoral vein. I could tell from the description given that this operation had stemmed the loss of blood and effectively saved the boy's life.

7. A second operation was performed at Bundaberg on the same night because the leg was ischaemic and the pulse was faint. I understood that fasciotomies were performed to the leg and lateral thigh to relieve pressure. I understood that, at that stage, there was no mention of any injury to the femoral artery .

8. The junior doctor said that a third operation was performed in the early morning after that same night. The groin was re-explored and an arterial injury, namely a thrombosed common femoral artery was found. It was repaired with a prosthetic graft from the proximal common femoral artery to the proximal superficial femoral artery in an end-to-side fashion.

9. Over the ensuing week, the boy, **P26**, was placed in the surgical ward at Bundaberg and he had gradually deteriorated, at least over the last few days. He had been seen by the consultant surgeon at Bundaberg that morning when he had a temperature of 39 degrees. At that time, it was clear that **P26** was suffering from sepsis and a decision had been made by a consultant surgeon to remove the central line carrying antibiotics on the basis that the line itself might be the source of the sepsis. The doctor gave me the impression that it was this act which had led to his phone call. He said the boy was really sick.

10. As I say, I was amazed by the telephone call. I searched my memory because I was sure a regional hospital like Bundaberg Base would have called earlier at least for advice, but I realised that no such call had been made. I told the doctor that we needed to move **P26** to Brisbane as quickly as possible. I called Steve Rashford from QUEMS and explained the need for an immediate retrieval. I called Dr Jenkins and explained the scope of the emergency. I called Bundaberg Hospital to check again on the state of the patient and I called the ICU at the RBH so that they made a bed available.

11. **P26** arrived later that day. He was even sicker than I expected. He could not communicate with me in any reasonable way, or even smile. He was in great pain and he was quite septic. I could smell his left leg from the other side of the emergency department and I was horrified at what I saw when I came closer. He had fixed mottling of his forefoot and he had wounds from three fasciotomies, one over the antero-lateral compartment of the leg, one on the medial compartment of the leg and one on the lateral thigh. All of them were inadequate in length

and there was dead infected muscle that was bulging from the cuts. The leg was clearly grossly infected and it looked septic.

12. We gave him pain relief and IV resuscitation. Dr Jenkins came to see the patient in the Emergency Department and we agreed that **P26** should go to theatre as soon as possible and we should explore the fasciotomies formally. The ICU Consultant was present too and we gave **P26** inotropes which are powerful drugs to support his blood pressure.

13. We extended the fasciotomies to expose all the muscle in the compartments and that muscle was clearly necrotic. We also opened up the groin and found a prosthetic graft inside that was patent. We removed it and used long saphenous vein to reconstruct the artery, and did that without any problems. The common femoral vein was absent. Both ends had been suture-ligated so really the full segment of common femoral vein was missing. I subsequently saw the surgical notes for Bundaberg which suggested that the femoral vein had been repaired but I think that must have meant that it was ligated.

14. At that stage, the injury made more sense. The common femoral vein had not been reconstructed by the surgeon. That means that you lose most of the venous drainage from the limb and the limb subsequently swells and the pressure within the muscle compartments rise.

15. There was and initial period of ischaemia meaning that the limb was without adequate circulation until the arterial injury was repaired. When blood is restored to an ischaemic limb, a reperfusion injury can commonly ensue where poisons and toxins that have accumulated in the ischaemic limb get released into the limb itself and into the systemic circulation. This has serious implications for the limb with further swelling and systemic sequelae as the toxins move to the rest of the body. Such events can cause failure of other organs in the body and can cause impairment in acid-base status and coagulation. This ischaemic and likely reperfusion injury together with obstruction of venous drainage of the limb must have resulted in a very swollen limb. It is for this reason that adequate fasciotomies are essential in order to release the high compartment pressures. I believe that inadequate fasciotomies in this setting resulted in necrosis of large volumes of muscle in his limb which subsequently developed secondary infection. This infection had then spread to his blood and systemic circulation and resulted in a sick, septic and acidotic patient.

16. Dr Jenkins made a decision to preserve his limb that evening. That gave us an opportunity to discuss the gravity of the situation with his family directly and see whether the limb could be salvaged in the light

of day. That evening, however, he was quite sick in ICU and required escalating doses of ionotropes to support his blood pressure. His kidney function had also deteriorated. The following morning, after discussions with his family, Dr Jenkins performed a through-knee amputation as a life-saving procedure. We felt that **P26** was so sick that he may lose his life without an amputation. The leg was submitted for histopathology which confirmed extensive necrosis of the leg. I have kept photographs of the specimen.

17. I would like to make some simple, clear points. It should be understood that the initial surgery performed in Bundaberg saved the life of **P26**. That is clear. I understand, however, that there are no vascular surgeons at Bundaberg Base Hospital and I felt that the case should have been discussed with the Vascular Unit at the RBH once it was recognized that there were problems after the initial surgery. I was on call on the night of his first admission and received no such call. The case of P26 would have been challenging to manage for vascular surgeons but I feel would have been better managed within the Vascular Unit at the RBH.

18. The first problem then is that **P26** should have been moved to Brisbane after the initial operation. The second problem was that the second and third operations performed in Bundaberg were not performed well. The fasciotomies were inadequate and the "repair" to the femoral vein did not restore it's continuity. Moreover, the use of the prosthetic material was not in accordance with good practice. When you have a contaminated wound such as a motor bike injury, there is a very high likelihood of infection and subsequent danger to life and limb. Patients can have an arterial "blow-out" where the anastomosis disintegrates and arterial haemorrhage can follow. We would usually try to harvest a vein from another site rather than using prosthetic materials. If it's the case in Bundaberg that a person was not competent in harvesting veins and reconstructing the artery, they might use the prosthetic material as a temporary measure but we would expect some telephone consultation at the least.

19. The third problem was the delay in failing to move **P26** from Bundaberg to Brisbane and the failure to recognise that this boy was very sick. The thing that disturbed me was that **P26** had been seen by the consultant surgeon in Bundaberg earlier on the day I saw him. The consultant had, notwithstanding the boy's temperature, stopped the antibiotics and ascribed his temperatures to his venous line..

20. I did not lodge a formal complaint after this incident. I spoke with Dr Jenkins and I was aware that he had had previous problems with the

particular surgeon in Bundaberg. I did not feel that it was my place to take the matter further. Furthermore, my appointment at the hospital terminated two weeks later whilst P26 was still an inpatient. I had assumed that a formal complaint would be made in due course at a unit level.

Affidavit sworn on Monday 8th August
at 1545 in the presence of:

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Deponent Solicitor/Justice of the Peace