STATE
CORONER
VICTORIA

CORONERS REGULATIONS 1996

Form 1

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15th August, 2008
Case No: 3683/03

RECORD OF INVESTIGATION INTO DEATH[1]

I, AUDREY JAMIESON, Coroner

having investigated the death of **WILLIAM GRANT KEAYS** with Inquest held at the Coroners Court, Coronial Services Centre, Southbank, on 5, 6 and 8 December 2006, 22 May 2007 and 4, 5 and 6 June 2007,

find that the identity of the deceased was **WILLIAM GRANT KEAYS**

and that death occurred on **2nd November, 2003** at Mercy Hospital For Women from:

1(a). HYPOXIC BRAIN INJURY
1(b). INTRA-UTERINE ASPHYXIA

SUMMARY OF CIRCUMSTANCES:

William Keays[2] was born by way of emergency ceasarian section on 1 November 2003, at Waverley Private Hospital. He was stillborn. His Apgar scores at 1 minute (0), 5 minute (0) and 10 minute (1). Resuscitation measures achieved a cardiac output after approximately 12 minutes of age. William was transferred to the Mercy Hospital for Women, Neonatal Intensive Care Unit but died a few hours later, at 12.42 am on 2 November 2003.

The death of William was deemed *reportable*[3] under the *Coroners Act 1985* ("the Act").

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[1] The Record of Investigation / Finding does not purport to refer to all aspects of the evidence obtained in the course of the Investigation. The material relied upon included statements and documents tenderd in evidence together with the Transcript of Proceedings and submission of Counsel. The absence of reference to any particular aspect of the evidence, either obtained through a witness or tendered document does not infer that it has not been considered.

[2] Karin and Jim Keays indicated a preference for their child to be referred to as "William" during the Inquest. For consistency, I have also done so throughout the Finding.

[3] "reportable death" means a death-
(a) where the body is in Victoria; or
(b) that occurred in Victoria; or

The preliminary investigation into the circumstances of William's death raised issues about the peri-natal[4] management of Karin Keays. Matters of particular concern to William's parents, Karin and Jim Keays, included the advice given to them regarding:

- the need for and risks of induction,
- the risks of delivery at a hospital other than a a tertiary hospital, and
- advice of the risks of the use of Syntocinon particularly if continuous monitoring is not used.

In relation to the management of labour augmented with Syntocinon, the issues identified included:

- continuous use of electronic monitoring,
- the role of the midwife including her interpretation of the CTG and observations during labour,
- the availability of the obstetrician, and
- the obstetrician's observations during labour and his timing of decisions.

An Inquest was held under section 17(2)[5] of the Act.

(c) the cause of which occurred in Victoria; or

(d) of a person who ordinarily resided in Victoria at the time of death-

being a death-

(e) that appears to have been unexpected, unnatural or violent or to have resulted, directly or indirectly, from accident or injury; or.....

[4]Pertaining to or occurring in the period shortly before and after birth, variously defined as beginning with completion of the twentieth to twenty eighth week of gestation and ending 7 to 28 days after birth. (Source: On-line medical dictionary : *myDr.com.au*)

[5] s.17. **Jurisdiction of coroner to hold inquest into a death**

(1) A coroner who has jurisdiction to investigate a death must hold an inquest if the body is in Victoria or it appears to the coroner that the death, or the cause of death, occurred in Victoria and-

(a) the coroner suspects homicide; or
(b) the deceased was immediately before death a person held in care; or
(c) the identity of the deceased is not known; or
(d) the death occurred in prescribed circumstances; or
(e) the Attorney-General directs; or
(f) the State Coroner directs.

(2)A coroner who has jurisdiction to investigate a death may hold an inquest if the coroner believes it is desirable.

BACKGROUND CIRCUMSTANCES:

Mrs Karin Keays was gravida 3 par 2 - both being full-term pregnancies. The first pregnancy in 1995 was uncomplicated and concluded with a spontaneous labour and normal delivery of a healthy girl weighing 9½ pounds. The second pregnancy in 2001 concluded with a spontaneous labour at 42 weeks and a normal delivery of a healthy girl weighing 4320 grams. Her third pregnancy had progressed without complication. Her due date was 27 October 2003.

On 10 October 2003, Mrs Keays attended the rooms of her Obstetrician, Dr Geoffrey Edwards for an antenatal visit. She was 37+ weeks gestation. Mrs Keays complained of feeling uncomfortable. Dr Edwards was of the opinion that clincally, the baby was large - *well over the 90th percentile*[6] *- the symphysiofundal height (sic) recorded at 44 centimetres with head fixed in the pelvic brim.*[7] Dr Edwards discussed with Mrs Keays the possibility of induction of labour.

On 21 October 2003, Mrs Keays attended Dr Edwards rooms with her husband, Mr Jim Keays. She was 39 weeks gestation. The possiblity of induction of labour was discussed.

On 31 October 2003, Mrs Keays attended Dr Edward's rooms for her final antenatal visit. She was 40 weeks + 4 days gestation. Dr Edwards wanted to admit Mrs Keays to Waverley Private Hospital (WPH) - an accredited private obstetric hospital; that evening for induction of labour. Mrs Keays was not willing to be admitted as her husband was interstate and not due to return to Melbourne until late afternoon. Mrs Keays also wanted to try to induce her labour by the administration of castor oil which she had used in her previous pregnancies. Dr Edwards requested Mrs Keays to be at WPH at 8.30am the following day.

Mrs Keays took a dose of castor oil that evening. Labour did not commence. The couple discussed the proposed induction. Both were apprehensive and unclear about the necessity to artifically progress the delivery of their third child.

THE SURROUNDING CIRCUMSTANCES:

On 1 November 2003, at approximately 6.30am, Mrs Keays telephoned Dr Edward's call service. He returned her call soon after. Mrs Keays advised Dr Edwards that she had a bad feeling about going through with the induction on that day - she wanted to delay the procedure. Dr Edwards reminded Mrs Keays of an earlier discussion that he would not be available until the following Thursday and that he felt that was too long a period to delay the delivery. He indicated that a colleague could be available for the delivery in the interim. Mrs Keays was not amenable to the involvement of another Obstetrician at the end of her pregnancy.

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[6] See Transcript of Proceedings @ p. 63

[7] See transcript of proceedings @ p.64

At approximately 8.30am, Mrs Keays was admitted to WPH for the delivery of her third child. She was 40 weeks + 5 days on admission. Registered Midwife (RM), Lorraine Goldsmith admitted Mrs Keays. Admission observations were normal. The baby was noted to be in the cephalic position and the head was engaged. A cardiotocograph (CTG) was performed and noted to be normal.

At 9.45am, Dr Edwards performed an amniotomy - the artificial rupture of the foetal membranes (ARM) as a means of inducing or expediting labour. He recorded *clear liquor ++, fetal heart OK , mobilize.*

Mrs Keays continued to drain copious amounts of clear liquor. The foetal heart rate remained normal. No contractions had commenced.

At 2.00pm Dr Edwards has recorded *not in labour, for IV Syntocinon FH✓.*

At 2.20pm RM Goldsmith commenced a Syntocinon[8] infusion - 10 units of Syntocinon in 1000ml infusion commencing at 40 mls/hour. Dr Edwards was no longer in the hospital.

At 3.00pm Mrs Keays' contractions had commenced but she was not in established labour[9]. RM Goldsmith increased the infusion to 80 mls/hour. At 3.30pm RM Goldsmith increased the infusion to 120mls/hour. Mrs Keays went into established labour sometime between 3.30pm and 3.45pm[10]. On partogram, 5 moderate contractions per 10 minutes were recorded. Mrs Keays was experiencing stronger pain than she had done so in her previous labours. She described the contractions as intense and *so unrelenting to be almost constant.*[11]

At 3.45pm the foetal heart rate on ausculatation was noted by RM Goldsmith to have dropped to 98 beats per minute (bpm). RM Goldsmith put Mrs Keays back up onto the bed and commenced continuous CTG.[12] A *little concerned*[13] at the tracing, RM Goldsmith placed Mrs Keays onto her left side and administerd oxygen to her via a mask. She then sat Mrs Keays upright again.

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[8]Syntocinon can be used to bring on (induce) labour. Syntocinon is a man-made chemical that is identical to a natural hormone called oxytocin. It works by stimulating the muscles of the uterus (womb) to produce rhythmic contractions. (Source: On-line medical dictionary: *myDr.com.au)*

[9]See Transcript of proceedings @ p.287

[10]See Transcript of proceedings @ p. 253

[11] Mrs Keays letter to the State Coroner dated 2 January 2004 - p.6, para 3

[12] The WPH Policy at the time (see Exhibit 10) stated *Continuous CTG may be indicated if the induction is for a complication of pregnancy* and was otherwise silent on the need for continuous CTG monitoring. Dr Edwards' usual practice is for continuous CTG monitoring where Syntocinon is in use when labour is established or when a foetal heart abnormality is detected.(See Exhibit 5 @ p.5 - statement of Dr Geoffrey Edwards.) Dr Edwards preference is now for continuous CTG monitoring for patients on Syntocinon - FAD sheet altered on 2 December 2004 - see Exhibits 12 &13

[13] See Exhibit 11 - Statement of Lorraine Goldsmith @ p. 2

At 4.10pm RM Goldsmith noted late decelerations on the CTG. She turned the Syntocinon infusion off. At 4.20pm RM Goldsmith notified Dr Edwards.

Dr Edwards arrived back at WPH sometime between 4.40 - 4.50pm. He observed:

> *At this time the CTG was noted to be flat and non reactive and there had been four decelerations recorded to 90 beats per minute in the previous 30 minutes of the trace. I performed a vaginal examination and applied a fetal scalp electrode. I noted the cervix was 4cms dilated with the head well applied to the cervix. The cervix was effaced and labour established. Contractions continued regularly without Syntocinon.*[14]

Dr Edwards recommenced the Syntocinon infusion. Immediate further deceleration occurred. Syntocinon was discontinued. Dr Edwards determined that immediate delivery was indicated and requested arrangements be made for emergency caesarian section.

At 5.02pm the oncall anaesthetist, Dr Nick Balis, was paged. The oncall theatre staff were also notified to attend immediately and Dr Dennis Hain, paediatrician contacted to attend for neonatal management.

> *The CTG continued to record a grossly abnormal trace with worsening decelerations and non reactivity.*[15]

At approximately 5.30pm, Mrs Keays was transferred to the operating theatre. Dr Balis administered a spinal anaesthetic. At 5.45pm, Dr Edwards performed an emergency caesarean section.

William was delivered at 5.53pm. The presence of fresh meconium was noted. There was no evidence of cord prolapse or placental abruption. William was assessed with a 1 minute Apgar score[16] of 0 and a 5 minute Apgar score of 0. Dr Hain managed the resuscitation of William with the assistance of Dr Balis. Dr Hain recorded that William was severely asphyxiated at birth and required full resuscitation including suction, intubation, cardiac massage and the administration of intracardiac adrenalin, intravenous Gelofusin, sodium bicarbonate, 10% dextrose and adrenaline. NETS[17] was contacted and arrived 1 hour and 45 minutes after William was born. NETS transferred William to the Mercy Hospital for Women to the Neonatal Intensive Care Unit. Despite ongoing resuscitation attempts, William died at 12.42am on 2 November 2003, that is approxiamtely 7 hours after his birth. His birth weight was recorded as 4.2 kilograms.

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[14] See Exhibit 5 @ p.4

[15] See Exhibit 5 @ p.4

[16] APGAR SCORE = a numerical expression of the condition of a newborn infant, usually determined at 60 seconds after birth, being the sum of points gained on assessment of the heart rate, respiratory effort, muscle tone, reflex irritability and colour. (Source: *Dorlands Illustrated Medical Dictionary* - 30th Edition, 2003,Philadelphia: Saunders)

[17] NETS - New Born Emergency Transport Service

Mrs Keays had also been transferred to the the Mercy Hospital for Women. She was returned to WPH after William's death.

Mr and Mrs Keays discussed with Dr Edwards the prospect of an autopsy being performed on William. Mrs Keays did not want an autopsy performed on Wiliam. Dr Edwards offered no information on the possible benefits of an autopsy.

SECTION 19(1) *CORONERS ACT 1985*

As a Coroner I am required to find, if possible, the identity of the deceased, how the death occurred, the cause of death and the particulars needed to register the death - the place and date of death. As a Coroner I am also able to comment on any matter connected with the death including public health or safety[18], to report to the Attorney General on the death and to make recommendations to any Minister or public statutory authority on any matter connected with the death, including public health or safety or the administration of justice.[19]

William's identity, date and place of death required no formal coronial investigation.

INVESTIGATIONS:

(a) A section 29 Objection to Autopsy was lodged by Karin Keays. The application was accepted by the then State Coroner, Graeme Johnstone.

Accordingly, Associate Professor David Ranson, Forensic Pathologist at the Victorian Institute of Forensic Medicine, performed only an external examination and reviewed the available documentation including the Medical Practitioners Deposition, the Police Report of Death to the Coroner - Form 83 and prepared a report for the Coroner.

Associate Professor Ranson commented:

> *The cause of death on the perinatal death certificate appears to cover many of the major issues in this case and it would appear the child had a severe hypoxic injury during delivery associated with the subsequent development of metabolic acidosis and ischaemic encehalopathy following the child's resuscitation.*

(b)The placenta was sent for histological examination and showed no abnormality.

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[18] Section 19(2) *Coroners Act 1985*

[19] Section 21(1) and (2) *Coroners Act 1985*

(c) The Clinical Liaison Service (CLS)[20] reviewed the clinical management of Mrs Keays, including the delivery of William, on behalf of the Coroner. CLS initiated the request for statements from Dr Edwards and RM Goldsmith and upon receipt and review of these statements sought an independant expert opinion from an Obstetrician through the Royal Australian and New Zealand College of Obstetrics and Gynaecology (RANZCOG). Dr Bernadette White provided a report to the Coroner dated 21 December 2004. CLS reviewed Dr White's report and concluded its involvement in the investigation.

(d) Dr White subsequently provided two additional reports, dated 2 August 2005 and 11 January 2006, at my request.

THE INQUEST:

Witnesses providing oral evidence included Mrs Karin Keays, Dr Geoffrey Edwards, RM Lorraine Goldsmith, Dr Peter Renou, Dr Bernadette White, Mr Jim Keays and Dr Ian Barrowclough.

Dr Hain was present for some of the Inquest and represented but ultimately excused without giving oral evidence. Dr Nick Balis communicated with the Court during the course of the Inquest resulting in a disruption to the proceedings. Ultimately, he was not required to give oral evidence.

During the course of the Inquest additional issues to those previously identified, were canvassed and included:

- the standard of documentation completed by RM Goldsmith,
- the appropriateness of RM Goldsmith's actions/interventions and responses to the abnormal CTG trace,
- applicability and/or appropriateness of hospital policy and College Guidelines in particular in relation to continuous CTG monitoring with the use of Syntocinon, and
- matters specific to private hospitals.

I declined a request by Ms Hartley that I hear *viva voce* evidence by way of video-link from Mr John Richard Pogmore, Consultant Obstetrician & Gynaecologist from the United

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[20] The Clinical Liaison Service (CLS) assists the State Coroner's Office in ensuring that the true nature and extent of deaths caused during specialised clinical care provision are fully elucidated and that any remediable factors are identified to prevent any future occurrences.

The Clinical Liaison Service is a unique initiative of the State Coroner's Office and the Victorian Institute of Forensic Medicine (VIFM) to improve patient safety. The need to establish this service is supported by an expanding body of research evidence indicating that addressing the contributing underlying system factors may prevent a significant proportion of preventable injuries and deaths.

The Clinical Liaison Service draws on the distinct experiences and expertise of medical, nursing and research personnel to evaluate clinical evidence for the investigation of healthcare deaths reported to the State Coroner's Office. This approach allows for greater inter-sectoral collaboration between the Coroner's office and healthcare sector .

Kingdom. Mr Pogmore prepared a report dated 21 May 2007 that is, during the course of the Inquest, having been provided with some of the Transcript of Proceedings. I have considered his report and noted submissions made by Counsel as to the weight I should attach to his opinions having regard in particular to the principals of natural justice, procedural fairness and my right to inform myself in any manner I reasonably think fit.[21]

COUNSELS' SUBMISSIONS:

Comprehensive written submissions were received from Counsel representing all of the interested parties. Oral submissions were also made. I do not propose to summarise them. After considerable delay and informal approaches to the Court, a Directions Hearing was held on 13 May 2008, where I granted leave to the Solicitors for the family to file and serve further written submissions in response to the submissions of the other interested parties.

On behalf of the family, Ms Hartley invited me to make adverse findings against, Dr Edwards, Nurse Goldsmith and WPH. Mr Cash and Ms Ellis resisted such findings against their respective clients.

The standard of proof for coronial findings is the civil standard of proof on the balance of probabilities approached cautiously in accordance with the enunciations of Dixon J in *Briginshaw*[22]. Adverse findings should not be made against a professional person in their professional capacity unless there is a comfortable level of satisfaction that negligence or unprofessional conduct has been established as contributing to the cause of death.[23]

Advice about induction:

I accept the evidence of Dr Edwards that some discussion about the risks of induction did occur. Dr Edwards' memory of the extent of the information he imparted to Mr and Mrs Keays is however reliant on his "usual practice" and not reflected in his clinical notes and although I accept that it is not possible to transcribe the whole of a discussion held during a consultation, it is possible to adopt other means of documenting an accurate reflection of what took place. Dot points or a check-list, ticked off on as matters become relevant and are discussed or computerised clinical notes are but some possible means. It almost seems trite to have to comment on the importance of contemporaneous notes - and how to take them, to a doctor with in excess of 20 years of experience.

I also accept the evidence of both Mrs and Mr Keays that they did not fully understand if induction was indicated or appropriate in the circumstances. Mrs Keays' call to Dr Edwards on the morning of 1 November 2003, supports this. Her feelings of discomfort were not the driving force behind her consent and as such I accept that the prospect of Dr Edwards

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21 section 44 *Coroners Act 1985*

22 *Briginshaw v Briginshaw* (1938) 60 CLR @ 361-362

23 See also Anderson v Blashki (1993) 2 VR 89; Secretary to the Department of Health and Community Services v Gurvich (1995) 2 VR 69 and Chief Commissioner of Police v Hallenstein (1996) 2 VR 1. Although the formal requirement of contribution has since been removed fron the Act, it is my view that some causal connection is nevertheless required to be established.

absence over the forthcoming days when Mrs Keays may have gone into spontaneous labour, was an influencing factor in her decision to proceed as per Dr Edwards' recommendation. Whatever the extent of the discussion that Dr Edwards had with Mrs Keays and subsequently with both Mr and Mrs Keays it was not sufficiently delivered by Dr Edwards so as to take into account their individual needs and concerns. The information imparted by Dr Edwards did not adequately inform the Keays of the procedure to which they were consenting.

In short, I accept the submissions of the family that the advice about the need and risks of induction was of a lesser standard than would be reasonably expected of an Obstetrician in the same position of Dr Edwards.

Advice about the services available at WPH:

Similarly, there was a lack of advice given to Mrs Keays about the risks of delivery at a non tertiary hospital. A general discussion about risks versus benefits between private and public hospitals does not appear to have occurred between doctor and patient. Doctors have a general duty to inform their patients of risks so that they can make informed choices. This should extend to the level of services at a particular facility and what systems are in place should an emergency situation arise. I do not accept that because it is not a matter of practice for doctors to have this conversation that it is not best practice to do so.

Individuals should not however be devoid of the reponsibility to seek out information. Mrs Keays was no stranger to the private health system. She, like many others, can access private healthcare by personal means and choice. Having made the choice to give birth to her children at a private hospital she had a duty to inform herself of the differences between them regarding available resources/personnel. With the benefit of retrospection it is not difficult to appreciate that Mrs Keays may have chosen to give birth to William at a tertiary/public hospital. There is no doubt that the availabilty of specialist personnel on site provides a greater sense of confidence for the patient at risk.

Mrs Keays did not however fall within that category. She was considered low risk at the time. Dr White stated:

> *Having had two normal deliveries in the past, and having had an uncomplicated antenatal course, Mrs Keays would undoubtedly have been classified as low risk in the management of the index pregnacy.*[24]

There was no apparent contra-indication for Mrs Keays' admission to a private hospital.

The weight of the expert evidence was that it was not essential[25] for Mrs Keays to undergo induction of labour at that time but that the decision *was reasonable from a medical point of view.* Mrs Keays was 5 days past full-term and had a history of large babies. Similarly, the method chosen - ARM - *was appropriate* and the delay of *just over 4 hours* before

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[24]See Exhibit 28 - Statement of Dr Bernadette White dated 21 December 2004 @ p.3

[25] See Transcript of proceedings @p.443 and Mr Pogmore's report of 21 May 2007.

commencing the Syntocinon infusion, *a reasonable period of time.*[26] Dr Bernadette White, Dr Ian Barrowclough and Dr Peter Renou held similar views about the decision, the methods and the use of Syntocinon.

I accept as a general principle that Mrs Keays should have been provided with a broader range of information regarding the differences between private and public facilities. This information should be provided by the Obstetrician as it is he/she that will be advising their patient which facilities he/she practises out of. I accept the submissions of the family that this information should be available to the public so that informed choices can be more readily made.

I do not accept however that there was any known indicator about the condition of Mrs Keays' baby or an appreciable risk associated with the induction of her labour that, in all probability, would have led her to a tertiary hospital to give birth.

Nothing occurred within this part of the sequence of events that could have alerted Dr Edwards or RM Goldsmith to what was subsequently to occur.

The use of Syntocinon in the absence of a physician and continuous CTG monitoring:

Dr Edwards was not in the hospital when the Syntocinon infusion was commenced. This was Dr Edwards' standard practice. This is accepted practice albeit contrary to product use recommendations. It was also evident from the evidence that where Syntocinon is used to induce labour as compared to where it is used to augment labour due to medical necessity; that it is acceptable not to have continuous CTG monitoring. The use of any pharmacological product to induce labour carries associated risks. Where the risks are identified by the manufacturer and recommendations made for example, regarding the need for close monitoring and immediate availability of a physcian qualified to manage any complication then it defies common sense and good medical practice not to adhere to what has been identified by the manufacturer of the product. The best way to monitor for risks arising from the use of pharmacological stimulants is continuous CTG. This should be a universal practice, not left to the individual "FADS" of obstetricians.[27]

In relation to this particular case I am not able to find with any degree of certainty that continuous CTG monitoring would have prevented William's death. To do so as Ms Ellis submitted, would be to speculate *as to what the CTG trace would have been at a time earlier than that recorded.* Until Nurse Goldsmith detected, by auscultation, an abnormal foetal heart rate at 3.45pm, maternal and foetal observations had been within normal parameters. However, it is a logical consequence to surmise that in the absence of continuous CTG the opportunity for earlier detection of abnormality or impending difficulties was lost.

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[26] ibid

[27] See *Record of Investigation into Death* of Adil Yasin - Case No: 1765/03 - a matter involving the use of Prostin for induction of labour where I recommended the adoption of a universal practice of continued admission. RANZCOG were critical of my recommendation.

The timing of medical intervention can be critical to the outcome. A factor affecting the timing of medical intervention is availability of the appropriate resources.

I am satisfied on the evidence that RM Goldsmith responded appropriately to circumstances and to the changing circumstances. I am satisfied that she carried out her duties in accordance with a standard expected of her profession, by WPH and Dr Edwards. Once she detected an abnormality in the foetal heart rate she applied continuous CTG. After implementing the "usual" responses to the worrying changes, she has contacted Dr Edwards.

The standard of documentation:

I am satisfied, on the balance of probabilities, that RM Goldsmith was conscious of her duties and responsibilities and adhered to them save for her responsibilities to accurate and contemporaneous documentation. RM Goldsmith failed to discharge her duties in this regard in numerous ways including failing to set the date and time on the CTG machine, failing to record on the CTG when Dr Edwards ordered the reintroduction of Syntocinon and when it ceased, recorded details on the partogram particularly in relation to times, that were misleading and made retrospective entries on the CTG which were of themselves not immediately identifiable as being made retrospectively in that they were not backdated.

The consequences of RM Goldsmith's lack of attention to documentation caused considerable damage to the Keays who started to discover inaccurate and altered records during a time when they were attempting to come to terms with the unexpectant loss of their child. It is little wonder that they lost all trust in their health care providers.

In giving evidence to the Court, RM Goldsmith conceded the errors in her record keeping whilst Mrs Keays was under her care. A significant amount of time was spent on analyzing RM Goldsmith documentation and its potential significance to her actual management of the circumstances. Ultimately, I accept the *bona fides* of RM Goldsmith and the preponderance of the evidence. Her shortcomings in documentation did not contribute to the outcome and as such I make no adverse comment in relation to RM Goldsmith's involvement with Mrs Keays labour. My comments in relation to her documentation are unambiguos and may impact on her professional standing but should be regarded as only background circumstances for the purposes of section 19(1) *Coroners Act 1985*.[28]

The decisons of Dr Edwards:

I accept that Dr Edwards responded appropriately when contacted by RM Goldsmith. He did not disregard the concerns of his midwife. He trusted her. Dr Edwards left his home for WPH without delay but the mere fact that he was not on the premises meant that 20 minutes was lost before an experienced obstetrician could review the changing circumstances.

I accept the evidence of Dr Edwards and RM Goldsmith, that he was not affected by alcohol on his return.

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[28] See *Keown v Khan & Anor.* [1999] 1 VR 69

Dr Edwards undertook an examination to ascertain the welfare of William. He did recommence the Syntocinon and although there was some conflicting evidence from Dr Edwards and RM Goldsmith as to how long the infusion remained on, I accept that it was of a short duration. I accept that it was not appropriate in the circumstances to adopt this approach but I am not able to reach a conclusion that it contributed to the outcome. I accept the evidence that the pharmacological effects are short lived.

The evidence supports the appropriateness of Dr Edwards investigations before deciding to proceed to caesarian section including the application of the scalp electrode.The decision to proceed to emergency caesarian section was clearly then the only option[29]. The delay in getting the procedure underway is attributable to the fact that all appropriate medical and nursing staff required for the procedure had to be called into the hospital. There is no evidence that any one person contributed to any unnecessary delay.

Mrs Keays was in the operating theatre 1 hour and 10 minutes after RM Goldsmith telephoned Dr Edwards. Wiliam was born 23 minutes later. Dr Edwards conceded that had the caesarian section been performed 30 minutes earlier, William may have been born alive[30].

Dr Edwards' opinion about the viability of William relates back to the family's submission that the Syntocinon product information requires a physician qualified to manage any complication must be *immediately available* and does not mean available within a reasonable time[31] - it means on the premises. The presumption that follows is that Dr Edwards would have made a decision 20 minutes earlier to proceed to caesarian if he had been on the premises. However, the evidence does not necessarily support this simplified proposition. Dr White states from 62412 on the CTG trace to the time the scalp electrode is applied the tracing is abnormal but *it's not necessarily something you would say the baby has to be delivered instantly.*[32]

Dr Edwards' prescence from the time the Syntocinon infusion commenced at 2.20pm may have in fact made no difference to the timing of his decision.

Supervising the use of Syntocinon:

There are practical problems with adopting a strict interpretation to *immediately available.* The functioning of obstetric services in the private health system could be compromised, effectively removing a choice that currently exists for women and increasing the burden on public hospital resources. In the circumstances I do not intend to make a recommendation that cannot be implemented without serious compromises to the health system. This of course does not remove the responsibility of individual hospitals and Obstetricians to have

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29 See Transcript of proceedings @ p.488

30 See Transcript of proceedings at p.214

31 See Transcript of proceedings at p.181

32 See Transcript of proceedings at p.488

systems in place that ensure personnel are readily available at all times to respond to an emergency.

On the other hand, the provision of information about the risks of induction and the use of pharmacological agents in that process *per se* and continuous CTG monitoring can, and should be implemented.

Information obtained through Autopsy:

Where questions are raised about the standard of medical management and its relationship to the cause of death, an autopsy can provide the evidence needed to make definitive findings of fact. It is an investigative tool of preference if contributing factors to death are in dispute. In the absence of an autopsy, hypoxic brain injury and intra-uterine hypoxia have been attributed as the presumptive causes of William's death. They are based on the circumstances and in the absence of any other obvious cause. An autopsy may have provided a more definitive cause of death or provided more certainity about contributing causes to death through the process of exclusion.

Mr and Mrs Keays can now appreciate the benefit of an autopsy. They are aggrieved that they did not get this advice from Dr Edwards or any other independant doctor at the time. They were made aware of their right to object to an autopsy so some information was provided to them by the State Coroners Office but it is not possible to decern whether this extended to a discussion about the possible benefits and it is unlikely to have been given by a doctor.

In more recent times the information available to next-of-kin about the coronial process has improved as has access to counselling and support services. In my experience, a Forensic Pathlogist at VIFM can be accessed by parents in maternal death circumstances. However, despite the provision of these services, the decision to object to autopsy remains unchanged in many cases because parents must make this decision at a very critical time in their grieving process.

The implementation of changes since William's death:

The current policy for "Induction of Labour" at WPH recommends continuous CTG monitoring following the commencement of Syntocinon.

Dr Edwards amended his "FAD" card to reflect his requirement for continuous CTG monitoring where Syntocinon infusion is used.

The reporting of adverse events at WPH has undergone significant change.

RECOMMENDATIONS:

1. That the RANZCOG prepare an information booklet/sheet about induction of labour including the indications for, the methods adopted and in what circumstances and

recommend to its members the dissemination of this information through their own practises.

2. That the RANZCOG in consultation with the Department of Human Services and the Australian Private Hospitals Association prepare a booklet of information addressing issues women should consider in choosing the type of hospital to give birth.

3. That the RANZCOG play an educative role to its members by recommending that the dissemination of information about the differences in services between the public and private maternity facilities be adopted as standard practice by individual Obstetricians with private practices.

4. That the RANZCOG take a more proactive role in educating and encouraging its members to adopt a universal best practice of continuous CTG monitoring with Syntocinon induced labour.

CONCLUSION:

There were deficiencies in the information provided to Mrs and Mr Keays about induction and the availability of emergency resources at WPH. I am not however able to find a direct causal link between William's death and these deficiencies.

There is no causal link between RM Goldsmith's deficient documentation and William's death.

There was no deficiency with respect to the management of Mrs Keays' labour by RM Goldsmith, Dr Edwards or WPH.

In the absence of a definitive cause of death, it is not possible to state with any degree of certainty that the outcome would have been different if continuous CTG had been in place, Dr Edwards had been in closer proximity or if Mrs Keays had been in a public hospital.

I am unable to determine if William's tragic death was preventable.

FINDING:

I find that **William Grant Keays** died from hypoxic brain injury arising from intra-uterine asphyxia. The causative factors of his asphyxia are unascertained.

AUDREY JAMIESON
CORONER
15 August 2008

Appearances:

Senior Constable Eugene Kontos, SCAU - Assisting the Coroner
Ms Mary Anne Hartley of Counsel - Mr and Mrs Keays - (Zaitman Associates Lawyers & Consultants)
Ms Fiona Ellis of Counsel - Waverley Private Hospital and RM Goldsmith (Tresscox Lawyers)
Mr Sean Cash of Counsel - Dr Geoffrey Edwards (John W. Ball & Sons)
Mr David Brookes of Counsel - Dr David Hain (John Ball & Sons)

Distribution of Finding:

Mr and Mrs Keays
Solicitors for the interested parties
Chief Executive Officer, Waverley Private Hospital
Australian Private Hospitals Association
Royal Australian and New Zealand College of Obstetrics and Gynaecologists