

OF INTEREST

IN THE HIGH COURT OF SOUTH AFRICA
(EASTERN CAPE DIVISION, BHISHO)

CASE NO. 305/2018

In the matter between:

AT obo ST

Plaintiff

and

MEMBER OF THE EXECUTIVE COUNCIL
FOR THE DEPARTMENT OF HEALTH,
EASTERN CAPE PROVINCE

Defendant

Summary: Delict- medical negligence -failure to monitor plaintiff and foetus during labour resulting in hospital staff missing indications of foetal distress and evolving hypoxia/ischaemia leading to severe bradycardia - failure to apply established interventions to mitigate foetal distress caused by prolonged pushing and premature bearing down conducing to developing hypoxia/ischaemia - application of traumatic fundal pressure superimposed on pre-existing hypoxia/ischaemia terminating in severe bradycardia and final acute profound brain injury – whether negligence of hospital staff was causally connected to damage - factual causation established.

JUDGMENT

HARTLE J

Introduction:

[1] The plaintiff claims damages from the defendant based upon the alleged negligence of staff members in the employ of the Department of Health at the Bambisana Hospital (“the Hospital”) arising from the management of her labour and the birth of her baby girl, ST, who was born with hypoxic ischemic encephalopathy (“HIE”).

[2] The conduct of the staff members upon which the plaintiff relies as constituting the grounds of negligence, and thus falling short of the standard of care reasonably expected from medical practitioners and nursing staff with appropriate obstetric and neonatal skill and knowledge, are set out in paragraphs 10 of her particulars of claim. In this regard it is pleaded that the hospital staff, at the relevant times of providing medical services to the plaintiff during her labour and to her baby postnatally:

- “10.1 failed to monitor (ST’s) foetal heart (rate) timeously;
- 10.2 failed to regularly monitor the plaintiff or her foetus either properly or sufficiently regularly and consequently the plaintiff had foetal distress;
- 10.3 failed to apply intrauterine resuscitation measures as reasonably required in the circumstances;
- 10.4 failed to admit the plaintiff timeously to the hospital, when it was medically advised to do so;
- 10.5 failed to diagnose or determine (the) onset of foetal distress, hypoxia and/or hypoxic ischaemic encephalopathy and/or meconium aspiration syndrome and/or superadded hypoglycaemia.
- 10.6 failed to provide any or adequate treatment to the plaintiff and/or her foetus so as to prevent the development of foetal distress and/or hypoxic ischaemic encephalopathy and/or meconium aspiration syndrome and/or superadded hypoglycaemia.
- 10.7 failed to properly examine and monitor plaintiff in terms of the Maternity Care Guidelines of South Africa;¹

¹ These are the Guidelines for Maternity Care in South Africa (“The Maternity Guidelines” or “the Guidelines” as was referred to by the expert witnesses) published by the National Department of Health comprising a manual for clinics, community centres and district hospitals. The 4th Edition (2015) was included in the bundle of literature relied upon by the parties and referenced during the trial proceedings. None of the expert witnesses who testified at the trial or provided professional reports conducing to the determination of the issue of the claimed negligence suggested that the Guidelines are idealistic, unattainable or pose standards of care that are beyond the pale of the reasonable medical practitioner or nurse involved in administering maternal and neonatal care in the public hospital sector.

- 10.8 failed to take any or adequate steps to prevent the plaintiff's labour from being extended unreasonably;
- 10.9 failed to take any or adequate steps to have the plaintiff timeously transferred to a higher-level facility and/or it and/or its employees failed to take any or adequate steps to facilitate the timeous delivery of the plaintiff's foetus;
- 10.10 failed to diagnose at the time of delivery or immediately thereafter that the foetus had suffered from hypoxia and/or hypoxic ischaemic encephalopathy and superadded hypoglycaemia, and failed to implement the appropriate treatment protocols."

[3] The plaintiff amended her particulars of claim in March 2020 to introduce two further grounds, 10.11 and 10.12, which refer firstly to a failure on the part of the hospital staff to have made use of sedation to prevent her from bearing down prematurely and for extended periods during her labour and, secondly, the application by the nurse who delivered ST of inappropriate fundal pressure during her labour, which omission and commission respectively she alleged compromised the wellbeing of her unborn baby.

[4] The defendant, whilst admitting that ST was born at the hospital under the watch of the employees who were responsible to render medical services to the plaintiff and her unborn child at the requisite level of care and skill, and for whose acts and/or omissions she is vicariously liable, denied all allegations of negligence and causation. Also placed in contention on the pleadings was the plaintiff's allegation that ST was born with foetal distress, hypoxic ischemic encephalopathy ("HIE"), microcephaly, impaired motor function and superadded hypoglycaemia giving rise to spastic quadriplegic cerebral palsy and developmental delay.

[5] The parties agreed to a separation of quantum from merits and an order was made to this effect during the case management processes.

[6] The question to be decided by this court is whether the employees of the defendant, more particularly the nurse and her assistant involved in the management of the plaintiff's labour in the active phase, and the doctor/ staff

who treated ST after her birth, were negligent in their treatment of them on any of the grounds of negligence pleaded by her, and whether such negligence (if proved) gave rise to the baby's condition of, *inter alia*, hypoxic ischemic encephalopathy ("HIE") or, otherwise put, did the harm as a matter of fact result from the alleged negligence.

The factual premise for the claim and the issues for determination:

[7] I begin with the facts that are uncontroversial:

- 7.1 The plaintiff was 19 years old at the time of her confinement and a *primigravida*.
- 7.2 She had received antenatal treatment at the Bambisana Clinic from January 2016 until she went into labour on 2 May 2016.
- 7.3 She had had an earlier admission to the hospital during her pregnancy, ostensibly because she imagined a lack of foetal movement, but this concern proved to be unjustified and, so it was agreed, had no bearing on the unfortunate outcome in this matter.
- 7.4 She was admitted at the hospital on 2 May 2016 at approximately 16h00. She presented with labour-like pains which had started around 13h00 that day. She was examined and diagnosed to be in the latent stage of labour.
- 7.5 The management of the plaintiff's labour and the monitoring of the foetal condition in this early stage of labour from the point of her admission to hospital until the next assessment appears to have

been without any concerns.² Indeed, a cardiotocography (“CTG”) done on admission was regarded as normal;³

- 7.6 The plaintiff was diagnosed as being in the active stage of labour just after 20h00 by which time her cervix had dilated to 4cm.
- 7.7 The management of her labour from then until ST’s delivery was overseen by a professional nurse, Sister Tshanyingca, and documented by the latter in clinical notes and in a partogram plotted by her. (Sister Tshanyingca was also responsible for completing the Summary of Labour chart applicable to the plaintiff’s birth process from the active phase of labour and related documentation recording her condition immediately after delivery, as well as the First Examination of Neonate⁴ and Assessment of the Newborn charts pertaining to the treatment of ST postnatally.)
- 7.8 ST was born, according to the hospital’s records, at 00h45 on 3 May 2016.
- 7.9 She was delivered vaginally by Sister Tshanyingca.

² Professor Anthony who testified as an expert for the plaintiff’s case however expressed the opinion that the monitoring of the plaintiff and her unborn baby on the whole was substandard and non-reassuring of the foetal condition.

³ The nurse’s clinical notes of the first assessment undertaken on the face of it do not evoke concern. These, recorded at 16h12, note (in summary) that the plaintiff was admitted at 16h05 on 2.05.16 with a history of labour-like pains. On examination she was found to be having contractions with the foetus lying in a cephalic presentation. The estimated foetal weight was about 3kg. Contractions were palpable with one contraction occurring every ten minutes. The foetal head was palpable 4/5ths above the pelvic brim and the foetal heart rate was documented at 142 beats per minute. On vaginal examination the cervix was 2cm dilated and a show was evident at the time of examination. Latent labour was diagnosed, and a review planned for four hours later. The plan of management was to start a CTG and report any abnormalities to the medical officer on duty. There is no indication as to why the staff thought it necessary to start a CTG, usually reserved in government hospitals for high-risk labour, except for the risk factor indicated on the initial assessment of labour chart that the plaintiff was a primigravida.

⁴ Professor Cooper, paediatrician with sub speciality in neonatology briefed by the defendant, in his report dated 10 July 2019 noted regarding the maternity case record provided to him to furnish his opinion that this page was blank when he was asked to review the matter. Dr Koll, obstetrician and gynaecologist, also appointed by the defendant, in a report dated a few days before (28 June 2019) also coincidentally remarked that this chart forming part of the maternity case record was not filled in. The chart that was presented during the trial is dated 3 May 2016 (no time reflected), purports to have been completed by Sister Tshanyingca, omits any detail opposite the subject “assessment”, and is not countersigned or checked by any counterpart. A note at the foot of the page urges the person recording the examination to complete the relevant notification form if any birth defects are noted. The impression created by the maternity records that were provided is that no such report was made.

- 7.10 She had a low Apgar score of 4/10 in the first minute and was required to be resuscitated.
- 7.11 Her Apgar was noted by Sister Tshanyingca to have increased to 7/10 in 5 minutes.
- 7.12 ST's condition was diagnosed by a doctor after the delivery as Hypoxic Ischemic Encephalopathy ("HIE") on scale 13.

[8] No indication of any foetal distress to ST was noted by Sister Tshanyingca in either her clinical notes or on the Assessment of the Newborn chart, despite the common cause fact that ST was born flat with no respiration, a low Apgar score and was required to be resuscitated. In fact, the question posed on the form whether there were problems with the delivery was left blank. The reality of ST's compromised birth was however coincidentally noted in the Summary of Labour Chart to be a birth "complication" coinciding with her explanatory comment that "mother of the baby was not co-operating at all during labour and delivery", but she answered "no" to the question whether there were any birth injuries. Despite this, on the First Examination of Neonate chart (on the face of it completed on 3 May 2016 by Sister Tshanyingca),⁵ a list appears in the "sick column" to the effect that the baby was dysmorphic, jittery, had caput, suffered bradycardia, exhibited shallow chest movement, had a slow respiratory rate, made grunting noises, had hypertonic muscle tone, weak Moro reflex ("fisting"), her grasp and suck reflexes were absent, and she had a high-pitched cry.

[9] The doctor who assisted her with the resuscitation of the baby after the delivery⁶ wrote (retrospectively) at 2h30 on 3 May 2016 as follows:

“ - called for a flat neonate

⁵ See footnote 4.

⁶ It transpired from the nurse's evidence that this was one Dr Yama.

- Mother started to push before time and was not cooperative;
- Episiotomy was done ... and fundal pressure applied to deliver the neonate;
- O/E 00:50 (24:50) (baby was) pink with irregular respiration, normal pulse (136), suctioning and ambubagging continued until baby had regular breathing with sats 95% - 99%.
- Blood sugar 7.6 mmol/l, reflexes: weak, tone slightly floppy, fisting and hyperextended LL (lower limbs).
- NPOZ (on oxygen) in theatre
- Assessment – HIE with > 10 (13) due to poor Maternity effort.”

[10] By the time the trial ensued it appeared to have been accepted that ST had suffered a HIE injury, but causal negligence remained in dispute.

[11] Several experts filed professional reports and in some areas of expertise joint minutes were filed. The experts’ conclusions in respect of the issues of negligence and causation were based at face value on the information recorded in the maternity case records described above which were mostly written in the hand of Sister Tshanyingca.⁷

[12] As will become clearer below the plaintiff’s case is that these records kept by Sister Tshanyingca were, firstly, not a true reflection of her professed management of the plaintiff’s labour and delivery insofar as her involvement was concerned,⁸ and, secondly and in any event, neither were they adequate or in conformity with the Maternity Guidelines concerning their keeping, leading ineluctably to the conclusion of a non-reassuring foetal condition in the first and

⁷ Certain of the experts did however personally consult with the plaintiff before filing reports. Dr Kara, a specialist paediatrician consulted with her and assessed ST on 17 August 2018. Dr E Mugerwa-Sekawabe, specialist obstetrician, saw the plaintiff on 17 October 2018. Professor Christianson, a paediatrician and sub-specialist geneticist briefed by the defendant, also personally consulted with the plaintiff on 27 November 2019 as did Dr C B Bowen on 3 October 2019. The latter is a gynaecologist and obstetrician appointed by the plaintiff.

⁸ One of the features of the plaintiff’s narrative not in common with the records maintained by Sister Tshanyingca, for example, is the alleged application of fundal pressure, but the note of the Dr Yama who treated ST after her delivery records that the nurses applied fundal pressure during the birth process. Other differences which emerged from the plaintiff’s testimony was that she was largely left to her own devices and unattended by the nursing staff (and pushed prematurely in their absence) and that she was monitored on only three occasions whereas the records maintained by Sister Tshanyingca purport to present a different picture. There were further other subtle differences mentioned by the plaintiff regarding the management of her labour which contradict what was noted by Sister Tshanyingca.

second stages of the plaintiff's active stage of labour, underscoring the probability advanced by the experts on her behalf that the field was left wide open, as it were, for abnormalities in her labour and ST's foetal distress and evolving hypoxia to have gone undetected, unfortunately culminating in the damage-causing event.

[13] In respect of the question concerning what happened during the plaintiff's labour, therefore, there are mutually opposed versions regarding the factual premise upon which this court must firstly determine the grounds of negligence relied upon by the plaintiff more particularly concerning how the staff managed (or failed to properly manage) her labour and the supposed inappropriate application of fundal pressure administered by Sister Tshanyingca which was alleged to have compromised ST's wellbeing during the labour and birth.

[14] The second area of contention, as between the parties' experts, goes to the issue of causation and more particularly whether the ultimately accepted diagnosis of ST's condition of HIE has a connection with the alleged sub-standard monitoring and treatment of the plaintiff and ST (in accordance with the plaintiff's version) and/or the inappropriate intervention of fundal pressure (if found to have been applied by Sister Tshanyingca), which according to the plaintiff's experts must plausibly have contributed to ST's HIE.

[15] Concerning the birth injury sustained by ST it was agreed between the parties that a Magnetic Resonance Imaging ("MRI") of her brain, undertaken on 8 June 2018, demonstrated features of a global insult due to an acute profound hypoxic ischemic injury. The fact of this finding in itself is not contentious, but how the baby probably came to suffer such an injury, and indeed whether it could have been avoided, was the subject of dissenting expert opinion as the evidence will attest.

[16] The plaintiff's experts contend that the relevant pattern of the injury shown by the MRI is entirely consistent with the premise on which her case rests, but the defendant submits that because of the unique pattern demonstrated by the scan, ST's brain injury must have occurred suddenly and therefore have been unavoidable or unpreventable, putting paid to the premise asserted by the plaintiff that any negligence on the part of the attending nurse and her assistant could causally have contributed to the unfortunate outcome. Put differently, the defendant's case is that the injury by its very nature, because of its radiological typification and the known neuroimaging features of such an injury, could not plausibly have arisen from any of the grounds of negligence relied upon by the plaintiff, even if found proven.⁹

The Joint Minutes:

[17] The obstetricians and gynaecologists, Dr D Bowen (on behalf of the Plaintiff) and Dr Koll (on behalf of the defendant), agreed that there was no reason to suspect antenatal problems attributable to the injury. They further agreed that the plaintiff's labour, since she was admitted in active labour, progressed satisfactorily and that the only CTG, undertaken at 16h20, did not show any worrying features. They further agreed that the plaintiff's second stage of labour was uneventful and that the baby was delivered quickly.

⁹ This defence raised by the defendant is predicated on the majority finding by the Supreme Court of Appeal in *AN obo EN v MEC for Health, Eastern Cape* [2019] 4 All SA (SCA) in which it was accepted that an acute profound brain injury is a sudden injury as opposed to one developing over a period of time, occurring "without warning" and is to be distinguished from a partial prolonged hypoxic ischaemic injury which occurs progressively. The effect of this understanding is that by the very nature of an acute profound brain injury, it is not preventable. For this reason, a plaintiff will have difficulty establishing factual causation even if negligent conduct of the hospital staff in failing to monitor is found to have created a risk. See also *AP obo KM v MEC for Health, EC*, [2018] ZASCA 141 (1 October 2018) at [65].

[18] However, their points of disagreement¹⁰ were noted as follows:

- “4) **Dr Bowen:** The fetal heart was not monitored according to guidelines in labour. According to the partogram it was monitored only before each contraction and not monitored at all for 1hr between 23h00 and 00h00. The most important time for the fetal heart to be monitored is after a contraction to detect any worrying decelerations. These would unlikely be detected if monitoring was (not) done before a contraction as in this case. This renders interpretation of the well-being of the baby since admission very difficult as no monitoring was done at the time when problems may have been picked up.

Dr Koll: i) The fetal heart was monitored every half hour except for a single omission.

There were 2 recordings of a normal fetal heart after this omission and thus there is no causal relationship between this omission and the outcome.

ii) The fetal heart is routinely auscultated before, during and after a contraction.

How else would it be possible to know you were listening before or after? It is seldom (if ever) recorded as 3 separate recordings. The recording of the fetal heart was thus recorded as would be expected of a reasonable health care professional.

- 5) **Dr Bowen:** Of particular concern is the fact that this patient was assessed as pushing uncooperatively from 22h12. This means that she was pushing for 2 hours 30 minutes before the baby was born. It is known that fetal acidosis can occur after 60mins pushing. It is also noted in the South African guidelines that the fetal heart rate should be checked after every 2nd contraction when pushing is occurring. I accept that auscultation is enough unless heart rate abnormalities are heard when electronic monitoring should be instituted. Unfortunately, it appears that no effective monitoring of this fetus (ie heart rate check after a contraction) was performed so that it cannot be stated that the fetal heart rate was normal in labour. I am concerned that the nursing care of this patient was poor as she was not offered analgesia which, along with encouragement, may have prevented this early pushing. This again is mentioned as requisite care in the guidelines.

Dr Koll: The note at 22:12 states “patient is not co-operating at all”. There is no mention of pushing at that point. At 00:12 the record states “Patient is pushing and she doesn’t listen”. At 00:30 “Patient was pushing as from when she was 6 cm”. How hard, how long and what measures were taken to discourage the pushing are not recorded. The suggestion that she pushed continuously from 22:12 to delivery with no effort by the staff to discourage this is both speculative and unlikely. The recording of the fetal heart has been addressed.

6. **Dr Bowen:** Since at no point the fetal heart rate was monitored after a contraction according to the records it is not possible to say there was no fetal compromise during the labour and the poor condition of the baby at birth may well have been due to damage sustained during the labour. Of interest is that the Dr called to assess the baby noted that he thought there was HIE which he attributed to the prolonged maternal pushing.

¹⁰ One has to read these obvious points of disagreement in as qualifying the general statement in the previous paragraph of a satisfactory or uneventful labour.

Dr Koll: The issue of monitoring has already been addressed (twice). It is critical to appreciate that Prof Andronikou has reported an acute profound injury. This would have occurred shortly before the birth and in view of the rapid second stage would not have been preventable by doing an assisted delivery. It also means that monitoring during the labour becomes irrelevant. Even if fetal distress went undetected earlier (and there is no evidence to suggest fetal distress in the record), it would have caused a partial prolonged injury.”

[19] Professor John Anthony, obstetrician and gynaecologist who ultimately testified on behalf of the plaintiff and endorsed the points of contention noted by Dr Bowen filed a professional report on 26 September 2020. He and Dr Koll, who testified on behalf of the defendant, did not prepare a joint minute. I deal with his evidence later, but I set out below, by way of introduction, a summary of the conclusions listed in his report following a record-based review of the plaintiff’s case:¹¹

- “1. This was a low risk pregnancy
2. The plaintiff went into spontaneous labour at term
3. The fetal wellbeing on admission was apparently normal
4. Fetal monitoring during the labour was inadequately performed.
5. The labour progressed rapidly and the plaintiff was noted to be bearing down before she entered the second stage of labour
6. Prolonged bearing-down efforts during the second stage of labour are proscribed in guideline recommendations
7. Fundal pressure was used to effect delivery. This is a dangerous intervention associated with described adverse outcome
8. It is likely that the fetus suffered a short period of severe hypoxia during the second stage of labour while fundal pressure was deployed in association with prolonged bearing down efforts on the part of the mother
9. It is likely that the baby suffered hypoxic ischaemic damage during the second stage of labour
10. Any injury sustained during the second stage of labour would have been avoidable with proper attention to fetal monitoring and the use of established methods of intervention (where necessary) during the second stage of labour (e.g. instrumental vaginal delivery)”

[20] The joint minutes of Professor S Andronikou and Dr Westgarth-Taylor, radiologists for the plaintiff and defendant respectively, recorded their agreement, as stated above, that “(ST’s) MRI demonstrates features of a global insult due to an acute profound hypoxic ischaemic injury, in a brain of term

¹¹ He amplified his views when he testified with particular emphasis on what he was advised the plaintiff would say concerning the inappropriate application of fundal pressure during her labour.

maturity”. They add that there are no features to suggest any congenital infection or malformation. They also confirm that the cause or timing of the event cannot be established on an MRI. Dr Westgarth-Taylor qualified ST’s injury as being “mild”. The damage is to the putamina, peri Rolandic and hippocampi regions, the so-called grey matter areas of ST’s brain.

[21] Professor P Cooper (expert paediatrician for the defendant) and Dr Yatish Kara (expert paediatrician and neonatologist for the plaintiff) recorded their agreement in a joint minute as follows:

- “1. (ST) was born at Bambanisa Hospital on 3 May 2016 at 00.45 by vaginal delivery. She was resuscitated at birth. Apgar scores were 4/10 and 7/10, baby was recorded as being “flat”.
2. Weight was 2.9kg, length 50 cm and head size 36 cm. There was no reason to consider the child to have been growth restricted.
3. It is recorded that she had severe hypoxic ischaemic encephalopathy after birth. There were signs of respiratory distress after birth. There was no other known cause before the encephalopathy at birth other than hypoxia ischaemia but without the neonatal records it is not known whether investigations for other causes were done.
4. Dr Kara examined the child and recorded signs of spastic quadriplegia, GMFCS level 3-4, speech impairment, epilepsy and postnatal microcephaly.
5. MRI scan recorded features of acute profound hypoxic ischemic brain injury.
6. It appears that there was no concern over foetal condition on mother’s admission to hospital in labour. CTG done on admission was normal.
7. It is probable that the cerebral palsy was due to an intrapartum hypoxia ischemic event.”

[22] Their points of dissension are noted as follows:

- “8. Dr Kara does not necessarily accept Prof Cooper’s comment that the injury probably occurred in the last 45 minutes of labour. The MRI scan findings of basal ganglia and thalamic injury cannot time an injury to have occurred within a specific period unless there is evidence of a sentinel event. He states that in the absence of evidence of good foetal condition prior to a sentinel event (a sudden, unanticipated deterioration in foetal condition in a foetus previously considered to be in normal condition), the timing of the injury may extend over a period of hours, often many hours and not minutes (Volpe, *Neurology of the Newborn*, page 503, 6th edition 2017). Dr Kara states that obstetric experts must advise on the foetal condition during the labour. Only if the consensus is that the foetal condition was good prior to the last 45 minutes of labour, would he accept Prof Cooper’s comment.

Prof Cooper is of the opinion that Volpe is being misquoted by Dr Kara in this section. Volpe states on page 503 that “in 80% to 90% of cases in infants with hypoxic ischaemic disease, in which an overt fetal sentinel event is not present, the uncertainty in timing is often measured in hours, often many hours or more, and not minutes”. He is clearly including the partial prolonged type of injury as well. In the section on page 489 (Deep

Nuclear – Brain-Stem Neuronal Injury” he states that “In approximately 15% to 20% of infants with hypoxic ischaemic disease, involvement of deep nuclear structures (i.e., basal ganglia, thalamus and tegmentum of brain stem) is the *predominant lesion*” (Volpe’s italics). In the accompanying figure 18.3 on page 489 of Volpe illustrating these lesions, it is stated that these are “lesions in a typical case of a term new-born subjected to severe, terminal asphyxia”.

Dr Kara Responds – This child does not appear to have the deep nuclear brainstem type of injury that Prof Cooper quotes above. The injury pattern is that of a cerebral and deep nuclear injury (peri Rolandic and putamina) also described on the same page. Volpe comments on page 486, 489 and page 501 (table 19.1) that this pattern of injury results from moderate to severe, prolonged injury.

TABLE 19.1 Major Patterns of Selective Neuronal Injury and Characteristics of Usual Insult in Term New-borns

PATTERN	SEVERITY AND TIMING OF USUAL INSULT
Diffuse (cerebral cortex, deep nuclear, brain stem)	Severe, prolonged
Cerebral cortex-deep nuclear	Moderate, prolonged
Deep nuclear-brain stem	Severe, abrupt

Prof Cooper relies on the fact that the expert radiologist reported that the MRI features were those of an acute profound hypoxic ischaemic brain injury.”

[23] Dr Davies, a paediatrician with sub-speciality neonatology filed a report on behalf of the plaintiff date 3 January 2020 on the probable cause of neurological outcome in ST.¹² I summarise his conclusions reached below:

- “1. (ST) was born at term by vaginal delivery on 3 May 2016 at Bambisana Hospital.
2. Management of the antenatal period, the labour and the delivery are deferred for Expert Obstetrician opinion.
3. (ST) was born in a severely compromised condition which necessitated immediate resuscitation. Resuscitation was most probably appropriate, reasonable and within accepted standards and guidelines at the time and most probably did not further affect the outcome.
4. Moderate-severe neonatal encephalopathy (NE) of Sarnat Grade 2 – 3 was present after birth. NE has many causes but in this case was most probably due to hypoxia ischaemia.
5. MRI showed evidence of an acute profound hypoxic ischaemic injury and excluded other causes such as congenital abnormalities and infections.

¹² Neither his report nor the conclusions of Prof Christianson referred to in the next paragraph featured at the trial. The parties’ pretrial conference minutes do not reflect their collective thoughts on these contributions either, but they recorded the standard agreement that the documents are what they purport to be. I mention these experts’ views to present a comprehensive picture. They are evidently not contentious and significantly rule out causes other than intrapartum asphyxia as the cause of the HIE. Indeed, the focus turned to what had happened in the second stage of the plaintiff’s labour which it appears to have been accepted was when the damage causing event must have occurred.

6. It is not possible to determine exactly the timing of the hypoxic-ischaemia (antepartum, intrapartum and postpartum), however, on the basis of the need for resuscitation at birth, and the early development of moderate-severe neonatal encephalopathy (NE), it is probable that ST's current neurological handicap is a result of an intrapartum hypoxic ischaemic injury at term."

[24] The defendant sought the opinion of Professor A L Christianson, a paediatrician and sub-specialist medical geneticist. He filed a report dated 27 November 2019 in which the following concluding comments are made:

- "7.1 (ST), on my clinical assessment may have dystonic cerebral palsy, and does have mental retardation and epilepsy (6.8).
- 7.2 The Radiologists agree that (ST) had HICI of an acute profound nature.
- 7.3 There is a consideration that because (the plaintiff's) brother (ST's Maternity uncle) as disability, that (ST's) clinical problems may be genetic.
On (the plaintiff's) description of her brother's disability he is physically and ostensibly mentally able (Std 9 at age 15 years) but has a serious communication problem (uses sign language). It could not be ascertained if he was deaf. His clinical problem(s) therefore, subject to confirmation, do not appear similar to those of (ST). (ST), is not dysmorphic.
Thus, (ST's) clinical problems, in the first instance, do not appear to be genetic/syndromic. However, this is subject to confirmation that her Maternity uncle does not have physical and/or mental disability & the confirmation by a Paediatric neurologist that (ST's) physical disability is dystonic cerebral palsy."

[25] The professional nurses, Ms. Rensia Smit on behalf of the defendant and Ms. Lesley Fletcher on behalf of the plaintiff, also compiled a joint minute. They agreed that monitoring had occurred according to the standards prescribed by the Guidelines for Maternity Care in South Africa (2015) and that the plaintiff had been "uncooperative" ostensibly since she started bearing down before her cervix was fully dilated, at 5cm dilatation (sic).¹³ They were also in agreement that both the plaintiff's latent and active phases of labour were completed within acceptable time limits.

[26] They could not agree on the aspect of the speed of the plaintiff's cervical

¹³ Sister Tshanyingca appeared to have written down in her clinical notes a measure of 5cm in this regard. The specialists mostly read it as a six because on the face of it, it could be either a 5 or a 6. Drawn in her testimony on what she meant to write down Sister Tshanyingca said "6cm", but in relating about the critical moment from when the plaintiff started pushing, she said on one occasion that it was from 5cm, and on another, that it was at 6cm dilatation.

dilatation or the impact of the plaintiff's pushing. Ms. Smit expressed the view that the plaintiff's cervical dilatation was "faster" due to her premature pushing, but Ms. Fletcher opined that premature bearing down does not necessarily lead to a more rapid dilatation. In fact, she believed that it might slow down the rate due to oedema of the cervix.

[27] They were further *ad idem* as to the following features as recorded in their joint minute:

- "3.1 There was no recorded evidence on the steps taken to encourage maternal cooperation since according to the record, premature bearing down started at 5cm dilatation. A request not to bear down is insufficient if the urge to bear down is irresistible. At 22h12, uterine contractions were strong, occurring at a rate of 3/10 minutes and lasting for more than 40 seconds.
RS acknowledged that while it was noted that (the plaintiff) was not co-operating at all it was unfortunate that the nurses did not put in their statement what they specifically referred to.
- 3.2 There was no indication to use fundal pressure to accelerate delivery of the baby (foetal heart was apparently normal according to the final recording on the partogram at 00h12 (137 beats/minute) and 127 beats / minute at 00h30 as recorded on the clinical notes. Second stage of labour was not prolonged – commenced at 00h30 and the baby was delivered at 00h45 i.e. 15 minutes.
- 3.3 No recorded report by nurses on the use of fundal pressure – this was reported by the doctor.

 - R.S It was documented at several intervals that (the plaintiff) was not co-operating and was pushing prematurely, even when requested not to.
 - R.S agree no documentation to state if fundal pressure was done by the nurses only the doctors notes reported it."

[28] Professor Smith, a neonatologist who testified on behalf of the plaintiff, filed an initial report dated 14 September 2020 in which he expressed the following views concerning the plaintiff's labour, the baby's condition, and the possible mechanism of injury to ST:

- 28.1 The antenatal period of the plaintiff's pregnancy followed an unremarkable course.
- 28.2 When the plaintiff was admitted on 2 May 2016 in the latent phase of labour the foetal condition was "probably reassuring", based on

the CTG trace around 16h20. (A reassuring admission trace is in keeping with a non-hypoxic, non – (brain) injured foetus at the time).¹⁴

- 28.3 The plaintiff's labour progressed in a normal manner and foetal reviews revealed no obvious foetal heart rate abnormalities, save for the midwife's recordal that the plaintiff was not co-operating "at all" at 22h12 (when her cervix was 7cm dilated); at 00h12 that the plaintiff was pushing and "not listening" (at 9cm dilatation) and at 00h30 that "she is pushing from (5/6cm)."¹⁵
- 28.4 The feature of the plaintiff's pushing or "early urge to push" is a normal variation and not necessarily associated with complications.
- 28.5 With regard to the referral by the "paediatric doctor" (sic)¹⁶ in his note to the use of fundal pressure, he noted the arguments for and against the safety and effects of such intervention and possible neonatal consequences, concluding with reference to published papers and the stance of the World Health Organisation ("WHO"), that the use of fundal pressure in delivery is to be discouraged.
- 28.6 He noted that ST was appropriately grown for her gestational age but was delivered in a severely compromised condition having regard to the clinical presentation at birth. With reference to the further facts that she failed to establish independent spontaneous

¹⁴ There was one dissenting view that the foetal heart rate pattern indicated on the CTG trace at 16h20 was non-reassuring ("abnormal and ignored"). This was expressed by Dr E Mugerwa-Sekawabe, specialist obstetrician and gynaecologist, in a report dated 17 October 2018 filed on behalf of the plaintiff but it is not clear why. His/her report was not included in the trial bundle but was briefly referred to in the examination of Dr Koll. The general impression of the experts who testified at the trial however is that there was nothing of concern regarding the foetal status at this juncture. Prof Anthony appeared to accept that the heart rate recorded at this stage was "apparently normal", but his abiding concern was that absent compliance with the Maternity Guidelines in respect of how it was supposed to have been assessed, that none of the readings noted down were reassuring of the foetal wellbeing. It is significant to note incidentally that he testified before Sister Tshanyingca, so his comments were premised throughout on the case that was portrayed in the maternity case records save what was additionally put to him by counsel.

¹⁵ I have elsewhere indicated that what Sister Tshanyingca wrote in her notes looked like a "5" but can also be read as a "6".

¹⁶ This was probably the medical officer on duty in the early hours of the morning when ST was delivered who was identified as Dr Yama.

breathing after birth, required resuscitation and presented with further compromising features at 5 minutes after birth, he was satisfied with the diagnosis that she had developed an early onset neonatal encephalopathy (“NE”) of *moderate degree*¹⁷ which he considered to be causally associated with the condition of spastic quadriplegic cerebral palsy and epilepsy which ST has since her birth suffered from.

- 28.7 He considered that ST’s clinical outcome was in keeping with the injury pattern as per the MRI.
- 28.8 The type of injury under scrutiny, that is to the central grey nuclei, the putamina (basal ganglia (BG) and peri-Rolandic cortex and hippocampi) can occur in his view in the presence *or* absence of a sentinel event during labour.¹⁸
- 28.9 The BG injury and radiologically termed “acute profound HI brain injury” are not necessarily synonymous and a visualized MRI pattern should preferably solely reflect the pattern’s description and severity, rather than link a causative mechanism of injury to the pattern.¹⁹
- 28.10 He identified with reference to Mallard,²⁰ Haan and Gunn *et al* the possibility of repeated and prolonged periods of asphyxia (oxygen deficiency) or ischaemic (blood flow) insufficiency during labour in the near-term foetus (referred to as “subthreshold

¹⁷ This is consistent with Dr Yama’s HIE score of 13 noted after ST’s delivery. Dr Westgarth-Taylor also qualified the injury as mild. None of the experts who testified disagreed with this assessment of the severity of the injury.

¹⁸ This presents a departure from the defendant’s point of view that an acute profound brain injury can only be attributable to a sudden and catastrophic “sentinel” event.

¹⁹ In practice the radiologist suggests the mechanism of the injury in describing the pattern, or rather the description of one or other of the known brain injury patterns (acute or partial prolonged) have come to be synonymous with typical mechanisms in each scenario.

²⁰ Frequent Episodes of Brief Ischemia Sensitize the Fetal Sheep Brain to Neuronal Loss and Induce Striatal Injury, Mallard, Gunn et al, 1993, Repeated Asphyxia Causes Loss of Striatal projection Neurons in the Fetal Sheep Brain, Mallard *et al.* 1995

hypoxia/ischaemia”)²¹ as also being causative of a BG injury (which is an exception to the general tendency of a watershed distribution after global asphyxia insults in the near-term foetus)²² in the absence of any intrauterine “sentinel”/catastrophic event. He explains that the striatum (putamina) is within the territory of the middle cerebral artery and is not a watershed zone. Thus, it is likely that the pathogenesis of striatal involvement in the near-term foetus is related to the precise timing of relatively prolonged episodes of asphyxia and not to more severe local hypoperfusion (ischaemia). Speculatively, the apparent vulnerability of striatal medium-sized neurons to this type of insult may be related to a greater release of glutamate into the extracellular space after repeated insults compared with a single insult of the same cumulative duration.

28.11 Commensurate with this premise expanded upon by him, he considered that ST’s injury was either due to the consequence of repeated and prolonged hypoxia (oxygen sufficiency) or ischaemia (blood flow insufficiency) during labour since there was no

²¹ The plaintiff’s experts in advocating that subthreshold hypoxia/ischaemia can cause BG injuries relied on literature to support their view concerning how ST’s brain injury probably arose. I therefore guardedly refer to the theory behind the concept as *their* theory. It is however convenient to refer to the collective views promoted by them as the “subthreshold hypoxia theory” which seeks to challenge the view held by the defendant that an evolving insult can only cause damage to the white matter regions of the brain and on an MRI will show up as a partial prolonged injury. By parity of reasoning the defendant espouses the view that it is strictly an insult that arises rapidly and prevents oxygen flow to the brain for a sustained period (usually arising from a sentinel event) that produces the acute profound picture on an MRI scan depicting damage to the grey matter areas of the brain. The plaintiff’s experts promote the understanding that evolving compromise to the foetal oxygenation can make it more susceptible to a final acute profound injury. When such damage manifests itself it is obviously then not as a result of a sudden event or insult as is understood in the classic sense of an acute profound injury and the neuroimage will confirm damage to the grey matter area rather than, as is the current perception, to the white matter area. The timing of such process is also distinctly different then. It is longer if you include the period of compromise leading up to the final insult, but the accruing of the final insult itself (as the event that causes the grey matter damage) might occur very rapidly (in less time than the 10 minute “rule of thumb” for classic acute profound damage to accrue) exactly because the foetus is more susceptible to such damage. This in a nutshell is the “theory” that the plaintiff’s experts expanded upon in their testimony.

²² This is a reference to the partial prolonged brain injury type. The understanding of our courts is that injuries coming along over a while will cause damage to the white matter of the brain. By contrast an acute profound insult happens suddenly and causes damage to grey matter.

intrauterine “sentinel”/catastrophe event, or that there was another explanation for the injury.

28.12 Prof Anthony’s view of substandard foetal heart rate monitoring which would entail that the foetal distress occasioned by the plaintiff’s prolonged bearing down and the application of the fundal pressure applied during the second stage of labour was missed, might well be that “other explanation”.

28.13 He put forward the external fundal pressure (a potentially dangerous procedure) that was purportedly applied to the plaintiff’s abdomen during the second stage as a possible iatrogenic-induced sentinel event consistent with the views of Schiffrin. (The latter has described cranial compression ischaemic encephalopathy (“CCIE”), as a condition which follows excessively strong, prolonged, and frequent uterine contractions, prolonged labour, difficult labour, difficult delivery, mal-positioning of the presenting part, and head compression (as may be caused by external fundal pressure) resulting in moulding of the foetal skull, which can increase the external pressure on a foetus’s head to the point that the pressure collapses the blood vessels in the foetus’s head, thereby preventing sufficient blood and associated oxygen from being circulated to the brain. The mechanical effects on distorting foetal cranial volume and pressure may result in ischemic and haemorrhagic foetal neurological injury, without being associated with systemic foetal hypoxia and acidosis. Schiffrin maintains that central nervous system lesions support a notion of injury that derives from mechanical forces on the foetal head during labour resulting in diminished cerebral perfusion.)

28.14 The underlying pathophysiological concepts, namely, that excessive external pressure on blood vessels can collapse them and

cause ischemic injuries; that during a contraction the intrauterine pressure on a foetus increases; and that in response to this rise in external pressure a foetus raises its own internal blood pressure to ensure that blood circulates to tissues and organs are widely accepted in the medical field, taught in medical schools, and published in peer-reviewed journals.

28.12 Finally, he concluded that the absence of the provision of therapeutic hypothermia after ST's birth, aimed at ameliorating or preventing brain injury following intrapartum asphyxia, was overlooked, which in his view would also have amounted to sub-standard neonatal care.²³ This goes along with his view that brain injury is an evolving process. Both experimental and clinical studies show that brain cell death does not necessarily occur during hypoxia or ischaemia, but rather may precipitate a cascade of biochemical processes leading to delayed cell death hours or even days afterwards (the secondary phase), hence the importance to stabilize and monitor the newborn, timeously and adequately following birth in an asphyxiated status.

[29] Professor Smith filed a supplementary report dated 8 October 2020, amplifying his earlier report after being informed of the premise that the plaintiff would say that the attending nurse had applied knees and fists to her abdomen during the delivery and after having had sight of the opinion of Professor Anthony in which he identifies the alleged inappropriate fundal pressure (together with the other features of the plaintiff's mismanagement previously referred to) as a probable cause of the injury in all the circumstances.

²³ This submission was not really belaboured, the parties appearing to accept that the resuscitation efforts of ST were reasonable. The plaintiff's case presented through the cross examination of Professor Cooper was however to the effect that this extended period of bradycardia before ST breathed on her own vitally counted toward the hypoxia/ischemia period of compromise that conduced to her unique brain injury.

In this regard he explains the significance of the mechanical force exerted on the foetal head and on the intracranial pressure and blood flow during labour when the term foetus is in a cephalic presentation whether as a result of the mother's contractions or iatrogenically, including for example the application of excessive fundal pressure. The consequences of these forces will show that the foetal heart rate remains normal up to a certain pressure threshold above which decelerations occur. Two important things emerge from this. The first is his explanation accounting for the probable mechanism of the final acute insult (*in casu*) by virtue of the decreasing cerebral blood flow at the opposite end of the significantly increased intracranial pressure (when the traumatic fundal pressure was applied) and the second is his assertion that this risk would probably have been detectable in the corresponding foetal heart rate decelerations as a reaction thereto. He emphasizes that decelerations cannot be fobbed off as reflex or innocuous. Instead, in the context of the duty to monitor, the objective is to recognize and detect foetal heart rate changes as a vital indicator of foetal compromise. All of these observations of his are correlated with reference to documented literature.

[30] In his addendum he again touches on the subthreshold hypoxia theory and its relevance to the diagnosed injury. He observes that fundal pressure itself (leave aside the mention of the use of fists and knees) is a dangerous intervention associated with described adverse outcomes. His amplified conclusion is that the combination of the plaintiff's prolonged bearing down efforts, uterine contractions and superimposed external abdominal pressure through unconventional, untested, and dangerous techniques, resulted in the birth of ST as a compromised baby.

[31] These efforts, contractions and the application of the external pressure would, according to him, probably have resulted in compromised blood flow to

ST's brain which would have been detectable with foetal monitoring as changes (decreases) in foetal heart rate would have occurred.

The lay testimony:

[32] The plaintiff herself testified and the only other lay witness to testify was the midwife who delivered ST, one Sister Tshanyingca.

The plaintiff's evidence:

[33] The plaintiff provided a narrative of the defining events from her perspective. She developed labour pains on 2 May 2016 around 13h00 and arrived at the hospital at about 16h00. She was given a vaginal examination and a "belt" was put on her stomach. (This correlates with the clinical notes that a CTG was used at her first assessment, the purpose of which she accepts was to monitor the foetal heart rate.)²⁴ She was admitted to the labour ward (ostensibly the antenatal ward) and told that she would give birth at around "8pm". She progressed from what she described as being "in labour" or "not severely in labour" to "near labour" around 20h00, from which point she was in pain and had the feeling to push, which she did. There were no nurses present at the time in the ward whom she could call upon to be of assistance to her.

[34] The pain and urge to push persisted and patients sharing the ward with

²⁴ According to her this monitoring device was also in use when the fundal pressure was applied during the second stage of her delivery. This was co-incidentally confirmed by Sister Tshanyingca who volunteered under cross examination that she had used the CTG during the second stage of the plaintiff's labour, albeit with no paper. What is not clear is whether the CTG monitoring was indicated as necessary for any particular risk factor or if it was just randomly used, whether at 16h20 or later by Sister Tshanyingca.

her called for help on her behalf. Nurses came and she was examined vaginally and informed that she would give birth at “8am” the following morning.

[35] Despite what she had been informed regarding the anticipated time of delivery she experienced the ongoing sensation of “being in labour”, feeling the urge to push and around midnight fellow patients again intervened on her behalf to call the nurses.

[36] She was taken to the labour ward. (I assume this to mean the delivery ward.)²⁵ She was instructed to push, but at the time no longer had the energy to do so. At this juncture the nurse conducted a digital vaginal examination and also used a horn like device to listen to her baby’s heartbeat, which she informed the plaintiff was “solid”.

[37] Since she could not push, one of the nurses put her fist on her stomach and applied pressure to assist her. The baby did not come out. Another nurse (by a process of deduction this must have been Sister Tshanyingca) came and put pressure on her stomach by using her knees. Nothing happened as a result, but she felt pain. She was then cut underneath. (It is common cause that a bilateral episiotomy was performed on the plaintiff by Sister Tshanyingca). This was followed by the same nurse again exerting pressure on her stomach with her knees after which the baby was expelled.

[38] When she was delivered, ST did not cry, and her arms were “straight”. A doctor was called but she could not discern what treatment was administered to her baby during this interlude. She only saw ST again the following day when

²⁵ In her testimony she clearly distinguished between the two wards. One was evidently the antenatal ward which she shared with other patients who intervened on her behalf. The other ward was the labour ward where she was taken to be assisted in giving birth around midnight where she was alone with two nursing sisters.

she was encouraged to nurse her, but the infant struggled to feed and so was put on a drip for two days until she could be nurtured at her breast.

[39] She also noticed that ST cried a lot with an unfamiliar or strange cry.

[40] Although she did not notice anything critically abnormal at first, she had been warned by the doctor (the one who had arrived after the delivery) that ST would suffer delays and disability because she had been “born badly”. At the age of two months ST started to have epileptic seizures.

[41] Under cross examination she dismissed the assertion put to her that she had been “regularly examined” by the nurses after her admission to hospital at 16h00 on 2 May 2016. Instead, she insisted that this had only happened on three specific occasions.

[42] The first time she was examined was on her arrival at the hospital by the nurse on the “morning shift” who put a belt on her stomach (CTG) and inserted fingers. It was these nurses who she says speculated that she would give birth at “8pm”.²⁶ Later, when there was a change of staff for the night session, she was examined for a second time after the nurses were called by patients in the ward to assist her in response to her loud cries and screams. She was examined for a third time before being transferred ultimately to the delivery ward, this time also after patients in the ward had summonsed the nurses on her behalf.

[43] Regarding the urge to push, she acknowledged that she had been told by the “nurses” to breathe but not to push, but she did not accept in this respect that

²⁶ See record of proceedings dated 13 October 2020, page 19, lines 20 – 24. I think she meant to say 8am the following morning because she repeated this explanation later. Perhaps there was some confusion in the translation. This might explain why on her version she was left unattended except for the ostensibly rote 2 hourly assessments.

they had spoken to her “often” during the birth process about breathing and not pushing. Self-evidently she did not appreciate the significance of the notion put to her by Mr. Van Der Linde, who appeared for the defendant, that she had been “pushing far too early”.

[44] She also explained, in response to Mr. Van Der Linde’s assertion put to her that Sister Tshanyingca would say that she was pushing and not listening to what the nurses were saying with regard to what was expected of her, that she only “pushed when they were not there”, meaning that she pushed in their absence in response to the severe pain and sensation that she was about to give birth.

[45] She evidently had no sense of when exactly her cervix had supposedly dilated to 8cm but challenged that part of Mr. Van Der Linde’s assertion put to her that Sister Tshanyingca had been with her virtually all the time according to the defendant’s instructions since that milestone had been reached. She also seemed to have little appreciation for the suggestion put to her that she had been “uncooperative” during the labour according to the defendant’s instructions, but firmly disavowed that she had been found (supposedly by Sister Tshanyingca) in the toilet pushing. Indeed, she responded that: “there is no such, she was not even there, she only came when she was called”, meaning at the time she was taken to the delivery ward in order to be assisted in giving birth there.

[46] In response to the direct question of Mr. Van Der Linde whether the heart rate of the baby had been listened to every half hour, she reiterated that this had only happened on the three occasions referred to above. Indeed, the notion that she and the patients in the antenatal ward were subjected to regular checks at all times was disavowed by her firm statement that: “There were no nurses”. She suggested that they had only once monitored her contractions and again rejected

the statement put to her that Sister Tshanyingca had been with her “virtually all the time” since she was 8cm dilated.

[47] Of her experience in the labour/delivery ward itself she remembers that she was taken there around 12 midnight, and that there were two nurses present. (She did not know their names.) She repeated that by this time she was “tired of pushing” and therefore unable to although one of the nurses (one of the two present) had urged her to do so.

[48] Concerning the sequence of events that occurred at this point, she testified as follows:

“When I arrived at labour, I was unable to push. One of the nurses exerted pressure, (two) fists on my stomach, said, telling me to push but I was unable to push but the baby even then did not come out. I said a nurse came and exerted pressure on her knees and even then, the baby did not come out. Then I was cut underneath and the one who exerted pressure on her knees came back again and she did the same, as such, then the baby came out.”

[49] Regarding the final moment leading up to the delivery, she clarified that the second nurse who had come to assist the one waiting at the foot end to receive the baby was the one who put fists on her stomach while she was lying on the delivery bed. She did so at the point in her perception when they saw that “nothing was happening”. This nurse alternated with the other nurse who used her knee to exert pressure on her stomach whilst keeping her other knee on the delivery bed.

[50] She explained it thus:

PLAINTIFF: What was happening, My Lady, was that the one who would be using knees would climb on top of the bed, put the knee on the bed and the knee on my tummy, seeing that the baby was not coming out, she would step down to go to my left and the other one, who was (using) fists would come and exert pressure to her fists on my tummy. That is what was happening.

ADV V/D LINDE: It was the same nurse who was standing to deliver the baby, who got onto the bed and put the knee in your tummy?

PLAINTIFF: Yes.

ADV V/D LINDE: Well, the nurse who stood at your legs where the baby was to be born is Sr Tshanyingca?

PLAINTIFF: I do not know who she was because they were changing each other by the time that exercise was done.

ADV V/D LINDE: But the sister who climbed on the bed and put the knee on your tummy was the same sister who delivered the baby?

PLAINTIFF: The one who put the knees on my tummy, yes, it was that sister.

ADV V/D LINDE: So, she was putting her knee on your tummy, while there was no sister to make sure that the baby comes out or to watch the baby coming out?

PLAINTIFF: Yes, there was a sister that was there by the time this one climbed on top of the bed and exert pressure with her knees.

ADV V/D LINDE: So this sister who got onto the bed with her knee in your tummy left a position where she was watching for the baby to be born and some other sister took her position?

PLAINTIFF: Yes, that is correct.

ADV V/D LINDE: Well Sr Tshanyingca will deny that this ever happened, but ... right, now was this sister who got onto the bed and pressed her knee in your tummy, was that the first sister to exert pressure on your tummy to get the baby to be born, according to you?

PLAINTIFF: She did that after she has observed that I am unable to push, as she suggested to me that I must push.

ADV V/D LINDE: Alright, now when she had finished putting her knee on your tummy and the baby still was not born, did she go back to her position, you know, between your legs?

PLAINTIFF: Yes and the second one came and put her fist on my tummy.

ADV V/D LINDE: So they exchanged places and the one who was standing between your legs, while the other one was on the bed with the knee in your tummy, then came to the bed?

INTERPRETER: Yes.

ADV V/D LINDE: Is that correct, I did not hear an answer from the plaintiff?

PLAINTIFF: Yes, that is correct.

ADV V/D LINDE: So did the, the sister who put her fists in your tummy, was that one or two fists?

PLAINTIFF: She put two fists on my tummy.

ADV V/D LINDE: Did she also get onto the bed?

PLAINTIFF: No, she was standing on the floor.

ADV V/D LINDE: And was the baby then born?

PLAINTIFF: Yes, they cut me underneath and being, that sister used her knee and the baby came out, after I was cut.

ADV V/D LINDE: Was it the same sister the used the knee the first time?

PLAINTIFF: Yes, that is correct, it is the same sister.

ADV V/D LINDE: Did she again climb onto the bed?

PLAINTIFF: Yes, she climbed again on the bed.

ADV V/D LINDE: And the sister who had put her fists into you, did she again exchange places with that sister?

PLAINTIFF: Yes, they did exchange.

ADV V/D LINDE: And these two sisters knew what, both saw what the other one did?

PLAINTIFF: Repeat yourself again.

ADV V/D LINDE: The one sister saw what the other one did, when they put their knees and their fists into your tummy?

PLAINTIFF: Yes.

ADV V/D LINDE: Just to make quite sure, the second time that the sister who

worked with the knee, put her knee in your tummy, was after you were cut?

PLAINTIFF Yes, that is correct.

ADV V/D LINDE: Now that sister first cut you and then climbed onto the bed and put her knee into your tummy?

PLAINTIFF Yes, that is correct.

ADV V/D LINDE: And as I pointed out earlier, Sr Tshanyingca will come and give evidence and will say that nothing of this happened.

PLAINTIFF Okay.

ADV V/D LINDE: She will say that you were cut on both sides and the baby was born without any external pressure.

PLAINTIFF She would be not correct by saying so.”

[51] She claimed to have told her attorneys at the outset about her experience in the hospital and the exact manner in which she had given birth. She could not give an account for why they had not made mention in her particulars of claim of this feature, namely the external pressure purportedly having been applied to secure the birth of her baby. She was further clear that she had also informed the doctor who she consulted with in respect of the court case (It was Dr Bowen who she saw on 3 October 2019, so Mr. Van Der Linde put it to her) about this external pressure having been applied.²⁷

[52] Under examination by the court, she clarified that one of the nurses in attendance during the delivery, (she identified this nurse as the same one who kneed her) had remarked, before putting her knee on her stomach, that her baby’s head was swollen.²⁸

²⁷ The report of Dr Kara, paediatrician who the plaintiff consulted with on 17 August 2018 confirms a mention of such external pressure having been applied. Dr Kara noted in his history taken from the plaintiff that “a nurse pressed on her tummy (with her knee) and another nurse delivered the baby”. Ideally this should have featured in the initial grounds of negligence pleaded, but this is not, in my view, the fault of the plaintiff who would have had no technical knowledge of or appreciation of what was or was not stated in her particulars of claim. Indeed, in my experience few litigants do, especially so in complex medical negligence claims. The mention of external pressure also coincidentally features in the expert report of Professor Christianson who assessed the plaintiff at the Department’s behest on 27 November 2019. Exact detail is absent, but he records as follows:

“At about midnight she was having strong pains. She called a Sister who assisted her to deliver. *Her abdomen was pushed* on and she was cut below (episiotomy). She delivered at about 01h45 on 3 May 2016.” (Emphasis added).

There is indeed no mention in Dr Bowen’s report of a history taken from the plaintiff entailing any external application of pressure to her abdomen. The same applies to the report of Dr E Mugerwa-Sekawabe.

²⁸ This provides corroboration of a perceived difficulty recognized by Sister Tshanyingca, co-incidentally followed by her cutting an episiotomy.

[53] She also confirmed that a drip had been set up when she went into the labour ward and that the belt to monitor the baby's heart rate (CTG) had been placed on her stomach before the nurse exerted the pressure on her stomach with her knee. She could not say if the nurses had in fact monitored the baby's heart rate during this process, but certainly no one had discussed the issue of the baby's wellness with her at that point.

[54] Both these steps taken, that is setting up the drip and the electronic monitoring of the foetal heart rate, in my view support the probability that complications were anticipated, or recognized, by the nursing staff during the plaintiff's labour.

[55] It is perhaps apposite at this stage to refer to the relevant sections of the Maternity Guidelines that explains why. The Guidelines incidentally spell out the standardised care expected from doctors and nurses in respect of the management of mothers in labour and the delivery of their babies at state hospitals that were applicable at the relevant time.²⁹

The Maternity Guidelines:

[56] The chapter dealing with the general care of women in labour³⁰ provides as follows, firstly regarding what is expected to be recorded on a partogram from the active phase of labour.

²⁹ See AN obo EN v MEC for Health, Eastern Cape [2019] 4 All SA (SCA) at para [35]. These comments applied in respect of an earlier edition of the Guidelines but the basis for a reliance on standards of care underwritten by the Department of Health as constituting an acceptance by the defendant of the requisite standard of the reasonable health care practitioner to which her employees must aspire pertains equally now. See also footnote 1.

³⁰ See Chapter 5 commencing at page 46.

“Partogram

During the active phase of labour, all observations, fluid intake and output, and medications must be entered on the partogram. Latent phase observations may be entered on the partogram, or on a separate observation sheet.

ROUTINE MONITORING IN THE FIRST STAGE OF LABOUR**Latent phase (cervix <4cm dilated):**

- Temperature, heart rate, respiratory rate and blood pressure 4 hourly.
- Uterine contractions and fetal heart rate 4 hourly.
- Vaginal examination 4 hourly.

Any change in phase of labour, or abnormal observation, warrants more frequent observation or action.

Active phase (cervix $\leq$ 4cm dilated, <1cm long):

- Maternity condition
 - Heart rate, BP, respiratory rate hourly.
 - Temperature 4 hourly.
 - Urine volume and test for protein and sugar when urine is passed.
- Fetal condition
 - Fetal heart rate half-hourly, before and immediately after contractions, ideally using a hand-held Doppler device.
 - Colour and odour of the liquor 2 hourly if the membranes have ruptured.
- Progress of labour
 - Duration and frequency of uterine contractions half-hourly, per 10 minutes.
 - Vaginal examination 2 hourly noting cervical dilation, sagittal moulding and caput.
- Treatment given
 - All medications.
 - All fluids, by whatever route.
- Summary of findings
 - Identified problems.
 - Management plan.

The partogram: alert and action lines

Record all findings of maternal and fetal condition, and progress of labour, on the partogram. As soon as the active phase of labour is diagnosed, place the first entry for the active phase at the point where the recorded cervical dilatation is exactly on the alert line. Alternatively, on a blank partogram where there are no pre-drawn lines, draw an alert line at a slope of 1cm/hour from the first cervical dilatation in the active phase.

The action line is drawn 2 hours to the right and parallel to the alert line, and represents the extreme of poor progress where ‘action’ is mandatory (e.g. transfer from a CHC to hospital, oxytocin infusion, caesarean section).

Examples of completed partograms are shown in figure 5.8, page 68.”³¹

[57] Concerning analgesia to be given in labour the Guidelines provide as follows:

“Analgesia in labour

³¹ The example provided reflects only single recordings of the foetal heart rate taken *after* contractions. The defendant’s argument that only one recording taken after suffices, provided it entails a proper risk assessment of the foetal heart rate condition in relation to the mother’s contractions, seems justified when such an example is put up as the appropriate standard in the Maternity Guidelines itself.

Pain relief should be offered to all women in labour:

- Support and companionship have been shown to reduce the need for analgesic medication in labour. Promote companionship in labour.
- Pethidine 100 mg with promethazine 25 mg intramuscularly 4 hourly is acceptable in both the latent and active phases, even up to full dilatation of the cervix.
- Inhaled Entonox® (a mixture of 50% nitrous oxide and 50 oxygen) by mask is useful in the late first stage (≥ 8 cm cervical dilatation).
- Epidural anaesthesia is generally not available in CHCs and hospitals. Some institutions may however have the necessary skills and equipment to provide this form of pain management.”

[58] The management of the second stage of labour is prescribed as follows:

“MANAGEMENT OF THE SECOND STAGE OF LABOUR

The second stage starts when the cervix reaches full dilatation (10 cm) and ends with delivery of the baby. Time (up to two hours) can be allowed for the head to descend onto the pelvic floor if fetal distress and cephalo-pelvic disproportion (CPD) have been ruled out. The bladder should be empty or emptied, using a catheter if necessary. The observations of the active first stage of labour should continue. *Efforts at bearing down are only encouraged when the fetal head starts to distend the perineum and the woman has an urge to push.*

When the woman is ready to push (bear down):

- Always communicate clearly with the woman to gain co-operation.
- Be supportive and encouraging.
- Put the woman in a suitable position: propped up, sitting, squatting, kneeling, semi-Fowler’s or wedged supine. Avoid the flat supine position (lying flat on the back), as the pregnant uterus will compress the aorta and inferior vena cava.
- Encourage pushing/bearing down only during contractions.
- Listen to the fetal heart after every second contraction.
- Protect the perineum when the fetal head crowns.
- Dry the baby and place the baby on the woman’s abdomen, skin to skin, for her to hold immediately after delivery for at least an hour. Postpone all routine neonatal procedures that are not lifesaving (e.g., washing, weighing and non-urgent medical procedures.)
- Help the mother to initiate breastfeeding within an hour after birth (which can decrease the risk of Maternity haemorrhage, new-born hypoglycaemia and increase exclusive breastfeeding) unless there is a medical indication not to breastfeed.
- Assess the baby’s Apgar score at 1 minute.
- Wait 1-2 minutes before clamping the umbilical cord, but clamp and cut the cord earlier if the baby needs urgent resuscitation.
- Record the times of onset of the second stage, onset of bearing down efforts and delivery, as well as the status of the fetal heart rate during the delivery.

Episiotomy

Routine episiotomy is discouraged. Consider episiotomy only for the following reasons:

- Thick or rigid perineum preventing delivery and prolonging the second stage.
- *Fetal distress in the second stage of labour.*
- Maternity conditions where rapid delivery is required, e.g. cardiac diseases.
- Breech or forceps delivery.

- Previous third degree tear.
- Preterm delivery where the perineum is tight.

Local anaesthetic (lignocaine 1% solution, maximum 20 mL) must be infiltrated into the perineum before cutting the episiotomy.³² Perform a mediolateral episiotomy, where the cut is started in the midline at the fourchette, bearing down laterally at about 45 degrees. Avoid median or lateral or bilateral episiotomy.”

(Emphasis added.)

[59] A further aspect of significance concerns foetal monitoring that is under scrutiny here. The Guidelines provide in this respect that:

“FETAL MONITORING

- For low risk labour, listen to the fetal heart with, ideally, a hand-held Doppler device, or a fetal or normal stethoscope, before and immediately after contractions.
- *CTG is used for high risk labour only (figure 5.2)* and must be available in all hospitals. CTG monitors are not recommended for intrapartum use in CHCs.
- After CTG interpretation, write a note about the findings in the woman’s notes, so that a record of the CTG is still available even if the CTG tracing is lost.
- All CTG tracings must be kept safely in the woman’s file and be stored with the file after delivery.

Figure 5.2 Common indications for CTG monitoring in labour

Common indications for CTG monitoring in labour

- Previous caesarean section
- Suspected intrauterine growth restriction
- Multiple pregnancy
- Pre-eclampsia
- Antepartum haemorrhage
- Prolonged rupture of the membrane (<24 hours)
- Suspected chorioamnionitis or offensive liquor
- Meconium stained liquor
- Poor progress in labour
- Oxytocin infusion.”

(Emphasis added.)

[60] Under “Emergencies during labour” the Guidelines provide for how foetal distress is to be managed as follows:

“FETAL DISTRESS

Fetal distress is suspected when the fetal heart rate is abnormally high or low, or if decelerations are heard, or a CTG tracing is suspicious or pathological.

³² There is no indication of any medication having been administered during the plaintiff’s labour except Ringer’s lactate IV, which suggests that the episiotomy was cut without local anaesthetic. The corollary is that the staff failed to record it. Neither Sister Tshanyingca nor the plaintiff were drawn on this aspect during their testimony. Oxytocin was given to the plaintiff by Sister Tshanyingca in the third stage of her labour when the placenta was delivered, but this too is only recorded in passing on the Summary of Labour chart.

Management of fetal distress

- Explain the problem to the woman
- Perform a vaginal examination for cervical dilatation and to exclude cord prolapse:
 - If the cervix is fully dilated, deliver normally or by vacuum extraction.
 - If there is cord prolapse manage appropriately (see below).
 - If delivery is not imminent, proceed as below.
- Place the woman in the left lateral position.
- Stop oxytocin infusion if applicable.
- Give oxygen by face mask at 6 L/min for 20 – 30 minutes.
- *Start an IV infusion of Ringer's lactate* to run at 240 mL/hour for 1 – 2 hours, unless the woman is hypertensive or has cardiac disease.
- Give salbutamol 250 µg (½ of a 500 µg ampoule diluted in 20 mL saline) IV slowly.
- Transfer from CHC to hospital and monitor with CTG.
- If a pathological tracing persists, arrange emergency caesarean section.

CORD PROLAPSE

In cord prolapse, the umbilical cord comes out of the cervix in front of the fetal presenting part, with the membranes ruptured. Frequently, the cord may appear at the vulva.

If the fetus is alive (fetal heart heard) and viable:

- Call for help.
- Explain the problem to the woman.
- Perform vaginal examination.

If the cervix is fully dilated and the fetal head has engaged in the pelvis immediately deliver the baby by vacuum extraction or forceps delivery if necessary.

If the cervix is not fully dilated, arrange for urgent caesarean section or for transfer from CHC to hospital, and proceed as follows:.....³³

[61] It is perhaps relevant to note that the Maternity Guidelines do not spell out specifically what steps are required to be taken, or how to manage, a case of precipitated labour as a standalone obstetric emergency during labour.

[62] Finally, it is significant to note the purpose of the Maternity Guidelines, which is *inter alia* to promote patient safety and better outcomes for mother and child in childbirth. They comprise “the basic minimum that needs to be known by all professional nurses and doctors”. The aim by their use is to lower high

³³ This exposition does not appear to be relevant for present purposes. It was common cause that the plaintiff's cervix was fully dilated, and the foetal head already engaged in the pelvis before the episiotomy was cut so if a prolapsed cord scenario had presented itself, delivery by forceps or vacuum extraction would on probability have been the indicated course to adopt.

maternal and perinatal morbidity and mortality rates and to improve the quality of care for women, their babies, and their families.³⁴

The testimony of the attending nurse:

[63] Sister Tshanyingca is a professional nurse who was newly qualified at the time of ST's delivery.³⁵

[64] She testified that she encountered the plaintiff for the first time in the antenatal ward on the evening of 2 May 2016 when she reported for duty. She was aware that the plaintiff had been admitted at 4pm in the latent phase of labour, 2cm dilated and that her situation was required to be reviewed at "past eight".

[65] She herself examined the plaintiff at the scheduled assessment time and found her to be 4cm dilated and thus at the onset of the active phase of labour. The results of her examination were recorded in the maternity record. Asked to describe the plaintiff's condition at that particular juncture, she ventured that:

"... the time when we arrived she was just lying in the bed, not having any pain and not having strong contractions or anything.³⁶ And then as the time goes by – as the labour was progressing, and she – she became very irritable, not cooperative, she had an attitude – like I would say it like that. And she – she was not listening at all. She was not listening to instructions.

ADV V/D LINDE: So how did you deal with Ms Tuki in those circumstances?
MS TSHANYINCA: I – I talked to her and – and tried to reassure her and –

³⁴ See the foreword to the Maternity Guidelines by the National Minister of Health. See also the comments of the court in AN obo EN v MEC for Health, Eastern Cape, Supra, at para [35] regarding the significance of the Guidelines, albeit these relate to the 2007 edition. See also footnote 1.

³⁵ She qualified on 3 March 2015.

³⁶ The plaintiff's testimony was that by this time she was already feeling the sensation to push. There is however no mention of this by Sister Tshanyingca in her notes at 20h12, neither is there a note at 21h00. 21h00 is the time by when, according to Sister Tshanyingca's estimate given later in her testimony, the plaintiff started to push.

and talked to her like what she needs to do and what she need not to do.”

[66] She claims that after her first initial examination of the plaintiff she checked in on her every half hour and “would write on the maternity record after”.

[67] Despite her revelation that the plaintiff had not been cooperating, Sister Tshanyingca confirmed that in her view there was nothing that concerned her or was alarming regarding the plaintiff and the progress of her labour.

[68] Asked regarding how the foetal heart rate was monitored, she claimed that she did so before and after contractions every half hour. Asked if she had written her findings down in her maternity records she tentatively replied: “Ja, I think so. Yes.” Regarding which of the baby’s heart rates, the “before” or “after” contractions she had recorded, she emphatically stated that it was the “after” contraction indicated, but then added that sometimes it was the “before” contraction result in instances where the plaintiff was not having any contractions at the times of checking on her,³⁷ and in other cases the post contraction result.

[69] She described the plaintiff’s labour as normal:

“Her – her labour was – was very normal. She – she progressed in a normal way that will – that is expected of a normal person without any – any problems. Because from – from being 4 centimetres she was 7 centimetres, and then she was 9 centimetres, and then she was fully dilated after every two hours apart.³⁸ And then she delivered in an expected time.”

[70] She was assisted in the delivery by a nursing assistant but qualified that

³⁷ The unfortunate inference to be drawn from her explanation in this regard is that she checked by rote.

³⁸ This information volunteered by her seems to confirm that she only checked on the plaintiff two hourly which must explain why the clinical notes were made at 20h12, 22h12, 00h12 and then at 00h32, albeit the final entry was made retrospectively. This would also accord with the plaintiff’s version of only two examinations after her admission, until she was ultimately taken to the delivery ward.

this person (who she later identified as Sister Scwubo) was there only to take the baby when it came “out”.³⁹ She herself had been alone in the delivery area.

[71] The plaintiff delivered vaginally. She cut an episiotomy. She volunteered that the reason for this was to make more room for the baby to come out but offered no explanation why that was necessary at all especially since on her version the plaintiff was indeed pushing. (The details provided by her of the delivery itself were scant and indeed gave no hint of what justified her comments written in the Summary of Labour afterwards that the plaintiff “was not cooperating at all during labour and delivery” or the annotation by Dr Yama that ST had HIE “due to poor maternal effort,” both of which entries coincidentally support the plaintiff’s opposite version that by the time she got to the delivery ward she could no longer push anymore.) She concluded with the succinct statement that the plaintiff pushed and gave birth to her baby.

[72] The patient delivered a “flat baby” with an Apgar score of 4 and no respiration, but a pulse and heart rate were in evidence.⁴⁰ She told the nursing assistant to call the doctor who arrived immediately. She had started resuscitating the baby “obviously after birth”, and then the doctor took over.

[73] When they were done assisting the baby, she repaired the episiotomy and gave the plaintiff oxytocin for the uterus to contract.⁴¹

³⁹ She only revealed the identity of this person when pertinently asked. The same applies to the details of Dr Yama who assisted with the resuscitation of ST after her delivery.

⁴⁰ She did not clarify what this rate was, although on the Assessment of the New-born Chart she puts this at >100/min which would have scored two points contributing to the total Apgar score. On the First Examination of Neonate chart, she however selected the choice of “bradycardia” opposite the checkpoint of “Apex Beat” among the options listed. The latter indication is entirely consistent with the HI encephalopathy, but it does call into question whether her first Apgar assessment was not overstated. The experts agreed that her Apgar assessment at five minutes was somewhat optimistic given the baby’s clinical condition but did not interrogate her assessment at one minute.

⁴¹ The Summary of Labour chart completed by her suggests that the repair was done by one “O M Dina” rather than by herself. She was however not challenged on the apparent contradiction.

[74] Regarding the plaintiff's version put to her by Mr. Van Der Linde that she had had no energy to push out the baby in the delivery ward, she remembered the exact opposite in fact:

"I cannot say anything about that. Because she was – she was pushing the whole time. She was pushing the whole time. I do not even remember her having a problem with pushing."

[75] She denied that she had told the plaintiff after a cervical examination that the baby's head was swollen.

[76] She also disavowed that anyone had applied pressure to the plaintiff's stomach to assist the delivery, either by fist or knee.

[77] Asked to revise what she had meant in her testimony about the plaintiff being uncooperative during her labour she explained it thus:

"Ja. As I said earlier, she was – she – she had... She was not listening to the instructions – first of all. You would say do not push. Do not push now. It is not the time to push. And then pant when the – when the contractions come just pant, not push. And then she will just push. And then at one time she went – she just went to the toilet, and then we found her there pushing. And then when we – we asked what are you doing here? She said cannot you see that I am pushing? So that – that – that is what I meant about uncooperative, because she was like – just like not listening."

[78] She explained the significance of the partogram according to her understanding and confirmed that she was solely responsible for what is recorded in this critical document. She qualified that there was nothing "concerning" about it because the plaintiff had progressed well on it. (Under cross examination she expressed the view that, quite the opposite, the plaintiff "had a bit of precipitated labour in a way.")⁴²

⁴² I refer to my observation above that the Maternity Guidelines do not pertinently set out what the staff are to do in the case of precipitated labour. The partogram template also does not accommodate such a scenario in the way that a slow labour is given recognition to on this graphic tool. It is more probable than not that a rapid second stage of labour ensued rather than a slow one.

[79] She identified the entries in the maternity records which she had made concerning the plaintiff on 2/3 May 2016 (she incorrectly recorded the month as April) as well as the clinical notes scribed by her concerning her own involvement in the process. These are as follows:

“20H12 Patient reassessed. BP 126/72. P 84. T - 36.7°C. Urine – 20 ml & no abnormalities noted.⁴³ FHR – 147 b/pm. Contractions – moderate. 2 in 10 minutes. Pp 4/5↑ pelvic brim. Cx – 4cm dilated. Membrane still intact. Assessment – in active phase of labour. Plan: - monitor feto-Maternity condition and labour progress. Plot partogram. Insert IV-line, R/Lactate⁴⁴ and review in 2 hours at 22h12.

22H12 Patient assessed BP115/67. P 68. T - 36.7°C. Urine 45ml. Blood ++. Contractions strong. 3 in 10 mins. FHR – 142 b/m. PP3/5↑ pelvic brim. Cx os 7cm dilated, membrane draining clear liquor. Patient is not co-operating at all.⁴⁵ Caput 1+. Assessment in active phase of labour. Plan: - monitor feto-Maternity condition and labour progress and review in 2 hours.

00H12 Patient assessed BP130/80. P97. T 36,7°C. R-22. Urine 10mls. Blood +++FHR – 137b/m. Contractions 3 in 10 minute. PP2/5↑pelvic brim. Cx os-9cm dilated. Membranes draining clear liquor. Patient is pushing and she doesn't listen. Plan: - monitor feto-maternal condition and labour progress and review in 2 hours.

00H32 Patient became fully dilated and pp 1/5↑ pelvic brim. PB 126/77. P87. T – 36.7°C. R – 22. Urine 40mls blood +++. Patient is pushing as from when she was 5cm. FHR – 127 b/p. Contractions strong 4 in 10 minutes. Caput ++, cx 10cm. At 00H45 delivered a flat baby. Female infant with apgar of 4/10 and resuscitation done baby suctioned on the mouth then nose and was stimulated on the back. Then there was no improvement, then ambugagged while waiting for the doctor. Baby came pink and was sneezing but breathing still slow and irregular. Resuscitation continued then Dr arrived and took over. B/M – 2.9kg HC – 35cm L – 50cm. Third stage of labour managed. Post vital signs BP 108/62. P69. T36.7°C. R-18.”

⁴³ Nothing is stated about her perceived lack of cooperation at this assessment although on the plaintiff's evidence she was already pushing from around 20h00.

⁴⁴ Apart from confirming later, in a response to a question from the court, that she applied a drip, she was not examined on why she did so. If one measures this step against the emergency management protocols stated in the Maternity Guidelines, the inference is tempting that she recognized a risk. The converse of that is that she randomly or indiscriminately used this facility.

⁴⁵ Here concerns are noted, but bizarrely they are deferred to the next 2 hourly assessment.

[80] As an aside, it is difficult to decipher the partogram, but based on how the experts helpfully interpreted what was written down by her regarding ST's foetal heart rate, these vitals hovered between 130 and 150bpm with no recordal at 23h12 but a recording of 137 bpm at 00h12 when the plaintiff was 9cm dilated. (According to her clinical note however, the foetal heart rate was 127 at 00h32, 13 minutes before ST's birth.) The significant fact is that in the period that vitally matters, from 23h12 to 00h45 when ST was delivered, there is no record whatsoever of any foetal heart rate on the partogram at all despite the plaintiff's contractions being strong and more frequent during this time and requiring more intense monitoring. This is in fact represented by Sister Tshanyingca's graphic representation of the plaintiff's contractions as a solid block from 22h12 until well after ST's birth.

[81] An early deceleration at 20h12 was noted by her which would suggest that a CTG was used at this juncture and must in the assessment of someone probably have been rendered necessary.⁴⁶ Under cross examination Sister Tshanyingca volunteered that a CTG was used, albeit without paper, but those later interpretations were self-evidently not noted on the partogram or in her clinical notes.

[82] As to the plaintiff's version put to her that she had only examined the plaintiff thrice, she defended her position thus:

“No. That is not true, because every time – it is... She was examined cervical – cervical dilated – cervically like she was examined four times by me. And the foetal heart rate – I think it has to be eight times. Let me see here. About eight times, yes.”

⁴⁶ Professor Anthony explained that the categorisation of the decelerations as early, or late, or variable, or no decelerations, would only be applicable in the case of electronic monitoring. I also refer to the Maternity Guidelines which provide for the unique scenarios where such monitoring would be vitally necessary. Evidently the use of a CTG requires an interpretation after the fact and judging from the earlier tracing of 16h20 (when paper was ostensibly available) this is the procedure that was adopted by the day nurse at least.

[83] She claimed to have specifically recalled the plaintiff's delivery *in casu* among several others because the data was "just normal", as she described it, whereas, evidently to her surprise, the plaintiff delivered a baby that was "not healthy".

[84] Under cross examination she agreed that she was aware of what the Maternity Guidelines state her conduct should be at all times concerning how mothers and their fetuses should be monitored and treated during the labour process. She further agreed that she was aware of her obligation to write down whatever she did to a patient. She also knew it to be her obligation to write clinical notes of her examinations and to repeat in them whatever is done on a partogram.

[85] She at first maintained that she had complied with the Guidelines in respect of her monitoring of the plaintiff at every hour, but later conceded that she had not assessed the latter's condition, more particularly her heart rate, blood pressure and respiratory rate, hourly as she ought to have.

[86] Regarding her understanding of how the partogram is supposed to work and prompt one into acting when the action line is crossed, or to be vigilant when the alert line is crossed, she seemed to confuse the lines and their significance, correcting her apparent uncertainty about the line's objectives only in re-examination.

[87] She absolutely refuted that she or anyone else had applied fundal pressure to the plaintiff's abdomen during the delivery of her baby.

[88] According to her such intervention could in any event only be performed

by a doctor, or a specialized nurse (which she acknowledged was not within her purview), in cases of “difficult labour”. Further, such intervention would be limited to putting the hand “to assist the baby when it is fully dilated to go, to be delivered with hands on where the baby is”. Such pressure would be applied on the abdomen at the end of the foetus in order to push or assist the birth process, so she explained.

[89] She agreed that immediately after ST was delivered, she had sent her assistant to call the doctor and night superintendent and that both had “come quickly”.⁴⁷ She also agreed that the doctor had probably recorded in his notes what she had reported to him happened during the delivery (notably in the presence of the night superintendent) but stopped short of conceding that she had told him that she applied fundal pressure because she was firm she did not. She could not explain why he would have made such an incorrect statement in his recordal of the situation.⁴⁸

[90] As an aside, given the expectation in the Maternity Guidelines on the part of Dr Yama to have filed an appropriate note after his involvement it can safely be accepted in my view that what he recorded cannot be glossed over as conjecture on his part as to what might possibly have gone wrong during the plaintiff’s delivery or how exactly Sister Tshanyingca had managed the situation. There was as much as an obligation on him to accurately record what he had been informed by her as to the background especially with relevance to the foetal condition as there was on her to have given him an accurate report of

⁴⁷ The night superintendent was also not identified, neither was Sister Tshanyingca drawn on this person’s involvement.

⁴⁸ The gender of Dr Yama was not clarified but it was generally assumed that it was a male doctor hence this judgement’s reference to him as such. I apologise if this is not the case.

the situation.⁴⁹

[91] When it was put to her that she was not telling the truth and had in fact told Dr Yama that she had applied fundal pressure, which is why he wrote it down, she replied:

“I am sorry, (I) did not. *We*⁵⁰ did not apply fundal pressure. I did not even know that he wrote that because he was not there when the baby was delivered or anything.”⁵¹

[92] She provided a further reason why she refuted Mr. Wessel’s assertion that she was not telling the truth and had not applied fundal pressure which suggests a reason in itself why she did not want to associate herself with the use of such a delivery technique:

“MS TSHANYINCA: Why I am saying no is that by the time I started my training fundal pressure was already discouraged. It was done before by the nurses and all that. But by the time I was starting my training and what, and working, the fundal pressure was always like discouraged to be done by nurses and not specialised people. So I cannot do that. So that is why I am sure that I did not do it.

ADV WESSELS: You see sister, that gives us the reason why you did not write down that you applied fundal pressure. Because you knew that it was prohibited for you to do it. But you did tell the doctor that, that you did it.

MS TSHANYINCA: No.

ADV WESSELS: All right.

COURT: If you want to shake your head you also need to say what it is that you want to express in words please.

MS TSHANYINCA: No.

ADV WESSELS: Then I ask you again, is there any reason why the doctor would have, would have made this very important false statement in the official records?

MS TSHANYINCA: I really cannot say. Maybe he would have assumed that it was a difficult labour and on his perspective of view when the difficult labour they do what, a fundal pressure in their

⁴⁹ See Chapter 3 of the Maternity Guidelines at 27-28 under the rubric “Referral notes using the SBAR Form”. Dr Yama’s qualification of his note as being retrospective suggests that he was properly following the required protocol of the Department with regard to the obligatory record keeping.

⁵⁰ The emphasis is mine. This is a further indication that Sister Tshanyingca was not a lone operator in the delivery.

⁵¹ In light of my observation above regarding the expected and professional protocol on the part of Dr Yama in recording his involvement post-delivery once his assistance was called upon, it is extremely mischievous to suggest that what he wrote down was based on his own assumption of what might have happened rather than what he was informed by the attending nurse. It is also extremely unlikely that Sister Tshanyingca would not have seen his clinical notes which in all probability would have been placed on the file.

perspective of it. But I do not know.

ADV WESSELS: But why, why would he assume that it was a difficult labour? Because if he looked at the ...[intervenes].

MS TSHANYINCA: ...[indistinct] difficult delivery. I am sorry.

ADV WESSELS: Well, if you look at the clinical notes you would have seen that according to your notes it was not a difficult delivery.

MS TSHANYINCA: Yes. But, but when you have to do an episiotomy, especially bilateral episiotomy, that means there was, you needed more room for the baby to come out.

ADV WESSELS: Yes. And the person to then ask what happened here during this labour would have been you. Correct? The person that the doctor would have asked what happened in the final stages of delivery would have been you.

MS TSHANYINCA: And the patient.

ADV WESSELS: And the patient?

MS TSHANYINCA: Yes.

ADV WESSELS: Did he ask the patient what happened?

MS TSHANYINCA: I do not know. But I...

ADV WESSELS: Well, you were there.

MS TSHANYINCA: Yes, I was there.

ADV WESSELS: And you told us that you can remember clearly everything that happened there that night.

MS TSHANYINCA: Yes.

ADV WESSELS: So tell us, did he ask the patient?

MS TSHANYINCA: Yes. He talked to the patient.

ADV WESSELS: Yes. And did the patient told him that fundal pressure was applied?

MS TSHANYINCA: I do not know.

ADV WESSELS: You were there sister. Can you not remember?

MS TSHANYINCA: No.

ADV WESSELS: Yes. Well, I want to put to you that, and we will perhaps hear from the doctor, that this entry that we have on page 132 could only have come after he asked you what had happened during this labour.⁵²

MS TSHANYINCA: But I could have written it in the maternity record if I did it anyway, because I wrote ...[indistinct].

ADV WESSELS: Well, you did not write it in the maternity record, because you knew it was prohibited for you to do it and if you wrote it in the maternity record, that could mean trouble for you.

MS TSHANYINCA: No, that is not the case. You write everything that you did to the patient. And I wrote everything that I did to the patient."

[93] It is coincidentally significant from the exchange above that Sister Tshanyingca gave away her *own* perception that it was a "difficult labour" despite her clinical notes not endorsing any problem at all to suggest a reason

⁵² Dr Yama was not called to testify. I draw no adverse inference against the plaintiff in this regard because of the reason furnished above regarding the standard of professional record keeping and the reasonable assumption that he was compliant with the reporting protocols. Both the witness and Dr Yama are bound to do what is prescribed in the defendant's Guidelines. Both were at the time in the employ of the defendant.

for cutting an episiotomy.

[94] On that issue of a reason, Sister Tshanyingca agreed, after dithering several times before in her reply, that the assumption could fairly be made, since she had performed such an intervention, that the baby was obstructed from coming out. Despite this concession she yet failed to take the court into her confidence regarding what the obstruction was or to account for how she dealt with the admitted obstacle. (Indeed, neither did she even record the episiotomy in her notes.) She agreed that cutting an episiotomy was not something done routinely.

[95] Regarding her failure to record in the medical records strictly according to the Maternity Guidelines what had happened between 20h12 and 22h12 and asked where she was during this interval, she volunteered to explain what had happened as a matter of fact (despite it not being written down anywhere in the formal records) as follows:

“MS TSHANYINCA: The foetal heart rate of the patient was checked and... *Ja.* Foetal heart rate of the patient was checked. And because the patient would say:

“I feel like there is something that is coming out.”

So I ...[indistinct] the patient and then I saw that it was five centimetres. But I was not going to record that, because there is nowhere that I am going to put on the partogram.

ADV WESSELS: Sorry. You did not record that because?

MS TSHANYINCA: There is nowhere where I would have recorded a cervical dilatation in an hour.

ADV WESSELS: Well, why did you not record it in the clinical notes? That is why the clinical notes are there or the page for the clinical notes.

MS TSHANYINCA: I did not do it.”

[96] Sister Tshanyingca was at a loss to provide a logical explanation why, since the plaintiff had according to her being pushing from 5cm prior to being fully dilated, she did not record this significantly dangerous development

anywhere in her notes, except retrospectively:

“ADV WESSELS: Now, you do not have any entry here that she at any stage was at six centimetres when you assessed her.

MS TSHANYINCA: Yes. It was the time when we find her in the toilet. And then we said what, what is she doing in the toilet. And then:

“I am pushing.”

And then I said:

“Okay. Come to the bed so that I can assess you.”

And I assessed and then I saw it is five centimetres. And then there was nowhere that I could write that on the thingy because there is no, on the partogram there is no place. I have to recheck for the partogram after two hours. Two hours is not already finished.

ADV WESSELS: But you could write on the clinical notes at any time.

MS TSHANYINCA: Yes.

ADV WESSELS: Not so? So why did you not write it on the clinical notes? Do you have an answer?

MS TSHANYINCA: No.”

[97] Her reply in respect of what she did to ameliorate the accepted danger for the baby by the plaintiff pushing too quickly before she was fully dilated is also instructive:

“ADV WESSELS: What did you do try and get the plaintiff to stop pushing? And before you answer that, is it correct that pushing is an involuntary movement by the mother? She does not do it on purpose. It is an automatic reaction. Correct?

MS TSHANYINCA: Yes. I ...[intervenes]

ADV WESSELS: Sorry. Yes? You want to say something more?

MS TSHANYINCA: No, I think... No. I do not want to say anything.

ADV WESSELS: All right. So, now you have a situation that this patient is pushing when she should not be and it can be dangerous for the foetus. What did you do to try and prevent her from pushing?

MS TSHANYINCA: I talked to her and reassured and then I told her not to push and what to do when the contractions come. Like I said earlier that I told her that she should pant not to push when the contractions come. Because obviously the contractions are going to come. They are involuntary as you said. But he must not like push, but must pant. *Ja.*

ADV WESSELS: Yes. Now you know that this pushing is caused by anxiety and by pain.

MS TSHANYINCA: Yes.

ADV WESSELS: Yes. So what did you do to alleviate the anxiety and pain that the plaintiff was ...[intervenes].

MS TSHANYINCA: I consoled her. I talked to her. I really talked to her.

ADV WESSELS: You really talked to her?

MS TSHANYINCA: Yes.

ADV WESSELS: You did not give her pain killers?

MS TSHANYINCA: No, I did not give anything.

ADV WESSELS: On page 49 of the guidelines it says:

“Pain relief should be offered to all women in labour.”

That is under the heading ‘analgesia in labour’. So the guidelines tell that a woman is in pain in labour she must be offered analgesia. You did not give it to her.

MS TSHANYINCA: It is prescribed by the doctor. But anyway, there was not a direct indication or painkillers, because the only thing that we would give it is betadine and betadine has got its side effects too to the baby. And the only thing for pain killers at that time ...[indistinct] it was going to be betadine or something.

ADV WESSELS: Well, betadine is not the only way of killing pain. There are other sedative products available that you can give.

MS TSHANYINCA: Panado.

ADV WESSELS: Not so?

MS TSHANYINCA: No, I do not know any other. Or we did not have in our institution any other pain relievers.

ADV WESSELS: Do you not know of any analgesics that can be given for pain other than betadine?

MS TSHANYINCA: I do. I do know.

ADV WESSELS: What are they?

MS TSHANYINCA: It is betadine, it is... What else? It is Panado ...[indistinct]. No, I cannot remember now.

ADV WESSELS: You cannot remember. But sister, on the partogram there is even provision for pain relief to be filled in.

MS TSHANYINCA: Yes.

ADV WESSELS: It is so prominent an issue. When you have filled in every time that she was examined ‘nil’. So it is obvious that you did not even consider alleviating her pain by giving her pain killers or getting the doctor to prescribe something for this woman who was pushing for more than two and a half hours before she was fully dilated, when you know that it could be dangerous for the foetus.

MS TSHANYINCA: ...[indistinct]

ADV WESSELS: What did you say?

COURT: Sorry. I did not hear your reply. Just repeat. I did not hear your reply.

MS TSHANYINCA: No, I said I do not know what to say.

ADV WESSELS: Sister, I want to put to you that you were not very concerned about the welfare of this patient that was under your control.

MS TSHANYINCA: But I just said earlier that because you evaluate. The patient was already six centimetres when she started to be like very, very, very not cooperating in a way. So by that time six centimetres is four centimetres to 10 centimetres. So you cannot give analgesia on that time, because by the time you want her to push she will be like drowsy and like... I do not know how to put it. But you cannot give ...[indistinct] when the baby is like far. You can give if it is two centimetres, three, four, five. But at six centimetres you cannot give, on active phase you cannot give betadine. And then you will need to, the patient to push again and... I do not know. So... *Ja*. And there is also side effects of this thing. So you outweigh the risk.

ADV WESSELS: Yes. But sister, you did not think that perhaps you should just refer this to a doctor.

MS TSHANYINCA: No.”

[98] When it was put to her that the plaintiff was still 4cm from full dilatation when she began pushing (on her now corrected version that this happened from 6cm dilatation), which allowed ample time still for her to receive pain medication, she justified her decision not to give analgesia on the basis that the plaintiff was “obviously” dilating quicker than expected.

[99] Asked what time it was when the plaintiff reached “6cm” dilatation she answered indirectly that she thought it was an hour from when “we’ reviewed her.”⁵³

[100] Evidently, she tried to justify this time based on her unique manner of calculating the plaintiff’s progress in the dilatation of her cervix. She was adamant that she was not guessing in this regard. Rather, so she sought to clarify, she was certain that she knew the exact time the plaintiff was 6cm dilated (which is not recorded anywhere) “because (she) wrote it at the end of (her) notes, viz at 00h32 that “She started pushing at six cm. So... Ja.” Pressed again to establish how she knew the exact time, she settled for it being in “her memory”, this despite no contemporaneous recording having been made by her and four years having lapsed since then.

[101] When it was put to her that - based on a normal rate of cervical dilatation of 1cm per hour she should have expected when she made her entry at 00h12 that the plaintiff’s cervix had dilated to 9cm and that she was probably going to be fully dilated and in the second phase of her labour in one hour (an anticipation she fully reckoned with), it was odd that she had instead noted:

⁵³ The plaintiff was assessed at 20h12 according to the case records so this would mean, quite implausibly, that she went from 4 to 6 cm in a span of 48 minutes and this on the witness’ version warranted no separate entry in the clinical notes.

“review in two hours’ time”, she sought to justify the proposed management plan as follows:

“MS TSHANYINCA: Because this is the normal way that it is done. But from seven centimetres, from seven to eight centimetres you are literally staying with, like literally close monitoring, close monitor the patient. So from seven centimetres... From seven centimetres up until she delivered she was close monitored.

ADV WESSELS: Well, why did you say ‘review in two hours’? You should have just said ‘close monitoring’, because this is what is necessary and do close monitoring.

MS TSHANYINCA: Oh, but ...[intervenes]

ADV WESSELS: Is it just an automatic entry that you always make, you write ‘review in two hours’, without thinking you are writing?

MS TSHANYINCA: As long as the patient is not 10 centimetres dilated you review in two hours’ time. Cervical dilatation is done in two hours’ time. As long as it is not, it is not 10 centimetres dilated. But you close monitor the patient for anything that could happen.”

[102] As for the entries recording blood in the plaintiff’s urine (expressed in increasing plusses over the three assessments reflected in the clinical notes), she offered the opinion that “the blood is expected when the patient is pushing”. She could offer no further retort to the alarm expressed by Mr. Wessels who appeared for the plaintiff that this might be an indication of pressure on the plaintiff’s blood vessels and that there was bleeding because of the prolonged pushing.

[103] The increasing caput (up to two plusses) was also brushed off by her as not being of any significance in her monitoring of the plaintiff’s labour or the wellbeing of her baby. (She certainly did not explain the caput with reference to the plaintiff’s pushing on her version, or the episiotomy she cut.)

[104] Regarding her entries on the partogram concerning the foetal heart rate and when she took these in relation to the plaintiff’s contractions, she was ambivalent but fairly conceded that the purpose of assessing the foetal heart rate was to call attention to decelerations that are severe or prolonged that could be an indication of foetal distress. She also revealed that the recordings noted by

her of the baby's heart rate were actually taken with a CTG. She explained however that there were no strips indicating this because there was "no CTG papers available in the hospital". (This revelation appeared to surprise counsel and indeed is an outrageous proposition. I add that it was also not put to the plaintiff's experts, who testified in sequence before her, that a CTG had indeed been used, albeit without tracing paper.)⁵⁴

[105] When it was suggested to Sister Tshanyingca that electronic monitoring was reserved for high-risk labour, she discounted that the plaintiff's labour posed such a scenario. When pressed to explain why she then did not auscultate using a handheld device rather than putting her on a CTG machine without paper she added that she used a feto- or stethoscope as well. Asked why she used both, the explanation provided by her got curiouser and curiouser:

"MS TSHANYINCA: To check if the readings that were set by CTG machine is correlating with the one that you are going to get when you are listening to the listening to the stethoscope or with the stethoscope.

ADV WESSELS: And then the guidelines say after CTG interpretation write a note about the findings in the woman's notes so that the record of the CTG is still available even if the CTG tracing is lost. So it is important that what the CTG shows is written in the record, not so?

MS TSHANYINCA: Yes.

ADV WESSELS: You did not do that.

MS TSHANYINCA: I was looking for the heart rate. So I did write the foetal heart rate.

ADV WESSELS: Well, you did not write the foetal heart before and after a contraction.

MS TSHANYINCA: I wrote before the contractions.

ADV WESSELS: Did you write the heart rate before the contraction

⁵⁴ Several concerns arise which the plaintiff's experts would no doubt in the course of preparing for trial have investigated had this revelation come earlier, such as, for example, the reason why there supposedly was no paper, a vital accessory to the CTG's efficacy, or the possibility that a recording saved in the CTG's memory might still exist. This is an issue which could have been addressed with the management of the hospital. The experts would also have had an entirely different premise at their disposal for their case reviews. Tracings were available at the 16h12 assessment. There was evidently also no stinting on CTG assessments at the plaintiff's earlier admission to hospital so the CTG as a tool was available to the hospital for its use and there was no issue then or in respect of the 16h12 assessment concerning its functionality in any respects. Indeed, Sister Tshanyingca confirmed the CTG's availability and that this is how she gained her median rate by looking, inter alia, at numbers shown on the CTG machine's screen. Without a proper interpretation after the fact of these assessments, which may very well have excluded a consideration of ST's heart rate in relation to the plaintiff's contractions that were increasing in number and frequency, this suggests a failure to appreciate the real significance of a CTG assessment and a derogation of her responsibility especially to determine whether there were any decelerations and what the impact of those in the whole scheme of things in fact were.

each and every time ...[intervenes].

MS TSHANYINCA: Yes.

ADV WESSELS: That you wrote it down?

MS TSHANYINCA: Yes.

ADV WESSELS: Yes. All right. But to write it down before the contraction will not tell you whether the foetus is in a reassuring condition, because the problem may arise with decelerations after the contraction or during the contraction. And a deceleration is when the heart rate drops after the contraction and does not return to normal immediately after the contraction. You know that sister, do you not?

MS TSHANYINCA: But... Yes, we do it. That is why you do it for one minute longer.

ADV WESSELS: Yes. That is why you got to do it for one minute. You got to do the, test the heart rate after the contraction to see if there are decelerations. Correct?

MS TSHANYINCA: Yes.

ADV WESSELS: Yes. You did not do that. You took the heart before the contraction. So you never measured the heart rate to see if there were decelerations.

MS TSHANYINCA: But the CTG would show when there is a... You could see on the CTG.

ADV WESSELS: Yes. But the heart rate even of a normal foetus is not a flat line before the contraction and is on the same flat line after the contraction. Correct? It varies. That is where you get the variability in the heart rate.

MS TSHANYINCA: Yes. Depending on the machine... Of the details.

ADV WESSELS: Sorry. I did not hear that.

MS TSHANYINCA: Depending on the... Yes. You get variation, yes.

ADV WESSELS: Yes. So the foetal heart rate before the contraction and after the contraction over a period of four hours is unlikely to be exactly the same. There is going to be variation. Because if there is no variation that baby is going to die. Correct?

MS TSHANYINCA: No, I do not understand.

ADV WESSELS: Sister, you said you only took the heart rate before.

MS TSHANYINCA: Yes, and after.

ADV WESSELS: Are you now saying you took it after as well?

MS TSHANYINCA: Yes. You do listen before and after and then you write the in-between. That is why some they will record 147 to 150. But I wrote 147 because it was the most when I hear with the stethoscope. It was for 147, 147.

ADV WESSELS: So you only wrote down before, before the contraction?

MS TSHANYINCA: Yes.

ADV WESSELS: Sister, you know, just to get it clear. Did you auscultate ...[intervenes].

MS TSHANYINCA: Yes.

ADV WESSELS: ...the heart rate by way of a handheld device as well as the CTG machine without paper?

MS TSHANYINCA: Yes.

ADV WESSELS: I see. I have never heard of that being done. And can you tell me why you did that?

MS TSHANYINCA: Because when there is papers you are going to have a printout.

ADV WESSELS: Yes.

MS TSHANYINCA: You do not need to ...[intervenes]

ADV WESSELS: On the paper you have a printout.

MS TSHANYINCA: And then when there is no paper you want to make sure if there is the minute of the CTG, foetal heart rate is the same that is going to be, that is with the one that you are going to get with the stethoscope. That is that.

ADV WESSELS: But you know that you got to record, it is very important that you record on the partogram the reading before and after the contraction. Correct?

MS TSHANYINCA: Yes.

ADV WESSELS: You did not do that.

MS TSHANYINCA: Okay.

ADV WESSELS: Sister, I want to put to you that it is unlikely that any sister will both use the CTG and auscultate and then not write down the findings which are very important. And that you did not do it in that manner.

COURT: Do you wish to comment ...[indistinct]?

MS TSHANYINCA: No."

[106] She could barely give account of what each foetal heart rate recorded on the partogram represented to her at each relevant juncture that she made entries. The single reading of 147 bpm at 20h12 she described as an "in-between" one. She took it with a CTG and a fetoscope but wrote 147 because it was the "most" she could hear with the handheld monitoring device. (Her anomalous description above refers.) At 21h12 two rates appear which she claimed were written down incorrectly, one being the fetoscope tally and the other the CTG which were "not the same" and which is why she wrote it twice. Asked why she did not write this in the clinical notes she replied that it was because she wrote it on the partogram. Reminded that she is supposed to write it in the clinical notes as well, she justified that the maternity records "(go) as a collective thing". Mr Wessels appeared to give up on pressing her any further as to each individual reading recorded by her. She also seemed to fail to appreciate, in justifying under cross examination what she wrote down (at least in respect of the items he held up to scrutiny), that each column on the partogram represents two sub columns of thirty-minute periods each thus defeating her assertion that she measured and wrote down the maximum foetal heart rate as it were every half

hour.

[107] she also failed to refer to any recordings of the heart rate when the contractions intensified to four or five in ten minutes when the need for monitoring must obviously have become more compelling.

[108] Neither could she convincingly explain why she had recorded on the partogram data suggesting strong contractions experienced by the plaintiff one hour *after* the birth of ST, yet she steadfastly insisted that the partogram was an accurate record of what had transpired during her management of the plaintiff's labour and ST's birth.

[109] She could not say why she has not used the nurse's assessment template, electing instead to make clinical notes on the pages usually reserved for doctors.

[110] She denied that foetal stress had been a feature of the plaintiff's labour at all which is why, so she explained, she made no note to this effect.⁵⁵ In response to Mr. Wessels' assertion put to her that "this baby obviously had foetal distress, she firmly disagreed.

[111] When Mr. Wessels pointed out the obvious clinical features of ST at birth of foetal distress she again insisted: "No. During labour there was no foetal distress".

[112] She conceded that she was "rotating" in the ward at the moment the

⁵⁵ Provision is made on the Assessment of the Newborn chart to indicate "Problems with delivery". Sister Tshanyingca left this blank, she also purposely selected "no" in relation to the question whether there was foetal distress. Had her answer been in the affirmative, the chart on which she wrote would have required that the baby be assessed for neonatal encephalopathy. She was in any event assessed on this basis, but the more worrying fact is that the records maintained by the witness cannot be reconciled with the neonatal records. This calls into question the reliability of any of the records kept by her.

plaintiff became fully dilated hence she did not contemporaneously record this significant event, this despite her intimation elsewhere that she had remained with the plaintiff in the last crucial moments before she delivered and had “close monitored her” (Sic). She incidentally confirmed that the plaintiff’s delivery was the only one happening at the time.

[113] According to her assessment, the plaintiff started to bear down at 00h30. She could not appreciate that there was no real distinction between the concepts of bearing down and pushing (which she put down to English not being her first language) or that there was a conflict with her earlier testimony to the effect that the plaintiff had been pushing since she was 5/6cm dilated. (On this explanation of hers the plaintiff became fully dilated at 00h30 and proceeded straight to the expulsive phase and/or was pushing already when this moment arrived.)

[114] Whilst maintaining that she had other patients and duties to attend to when she was not assessing the plaintiff, she insisted that she stayed with her from the time when she was 7cm dilated because she was purportedly not co-operating and was pushing as a result of which she was “really close monitoring her” (Sic). She appeared to forget her earlier evidence that the plaintiff was supposedly pushing even before 22h00 when she assessed and pronounced her 7cm dilated (her entry in the clinical notes at 22h12 refers), leaving the period (of monitoring) before 22h00 unaccounted for.

[115] In respect of the plaintiff’s premature pushing, she was adamant that she had counselled her, continuously she said, not to push but rather to pant. When it was pointed out to her that she only made a note at 00h12 that the plaintiff does not listen, she purported to explain that when she wrote this, she meant that it was because she “was doing the same thing over and over again”. She explained it thus:

“Like I would say do not push now and then when the contractions start then she will start pushing. And then I will see that she is pushing. And then I will see that she is pushing and I will say I said do not push when the contractions come, pant. And then she will start panting.”

[116] When the apparent danger of allowing the plaintiff to push for two and a half hours without getting her pain medication or calling a doctor to treat her for what could be a very dangerous condition for the baby, she was certain that there was no risk:

“MS TSHANYINCA: The condition of the baby assess was known so there was nothing that was... I was going to call doctor about because the foetal heart rate was normal and the cervical dilatation was going well. And the pelvis was well adequate so I did not call the doctor because there was nothing that was warranting me to call the doctor. Other than that she was pushing. And that I was managing to say do not push. And then I stopped her and then yes.

ADV WESSELS: Were you not worried that this pushing could lead to some damage later on?

MS TSHANYINCA: No. I was not.”

[117] She agreed that in the third stage of the plaintiff’s labour the cord was normal and the placenta also normal and complete. Also, in the fourth stage, there was no concern that the plaintiff’s uterus had ruptured. She agreed that there could therefore be nothing that happened that could be described as a “sentinel event” accounting for ST’s (in her view surprising) poor outcome. (It would have been apposite at this point to volunteer information about the baby been obstructed from exiting the birth canal as both justifying the need to cut an episiotomy and offering a plausible reason for her being born “flat”, but this subject (of the actual delivery itself) was dealt with pithily and only because she was constrained by Mr. Wessels’ cross examination to deal with the probability that the episiotomy was cut because of a conceded obstruction and the plaintiff not being able to make any effort herself to push out the baby, this probably explaining why she told Dr Yama that the mother had been uncooperative.)

[118] She furnished the name of her nursing assistant (Sister Scwubo) and

confirmed the latter's current employment in a public hospital.

[119] Under re-examination she was asked by Mr. Van Der Linde to explain carefully how she had monitored the foetal heart rate, step by step. Despite being given this opportunity to make good on her earlier confusing narrative, her explanation still fell short of providing the necessary assurance that ST's heart rate was properly assessed or could have been normal at all times:

“MS TSHANYINCA: Okay. Foetal heart rate I monitored that with a CTG as well as a stethoscope. The CTG did not have the papers as I explained. Our CTG did not have any papers. So I would go with a CTG and then I would listen with a stethoscope just to see if the thing that I am getting on the CTG is the same as the one that I am going get on the stethoscope.

ADV V/D LINDE: When did you start? At what stage do you start that you start listening to the foetal heart rate?

MS TSHANYINCA: Before contractions and after contractions.

ADV V/D LINDE: The plaintiff spoke about a belt that was put on her.

MS TSHANYINCA: Yes.

ADV V/D LINDE: What is that?

MS TSHANYINCA: The CTG. For the CTG machine.

ADV V/D LINDE: All right. And then you described now how you have listened to it. And what did you record on the partogram?

MS TSHANYINCA: I recorded... Because the foetal heart rate that I got on stethoscope mostly before and not and after. Because normally the variation between the foetal heart rate and before contractions and after contractions would be like not be too much. And instead of, I got 147 to... 130 to 147 so I took 147 and I then I wrote that. Because it was collaborating with the one that I listened to with the stethoscope.

ADV V/D LINDE: Well in this case, how did the foetal heart rate before and after contractions compare?

MS TSHANYINCA: It was normal all the time.”

[120] At the prompting of the court, she named Dr Yama as the person who assisted her with the resuscitation of the baby.

[121] She further confirmed that the last entry made by her in the clinical notes concerning the plaintiff's labour and delivery (at 00h32) was made after the birth of ST.

The resolve of the factual dispute:

[122] The estimate of a credibility of a witness is inextricably bound up with a consideration of the probabilities of a case.⁵⁶

[123] Mr. Van Der Linde suggested that the only discrepancy between the plaintiff's version and that of Sister Tshanyingca concerned the issue of the purported application of fundal pressure, but it is clear as I have noted elsewhere that the plaintiff claims that she and her baby's wellbeing were monitored only on three specific occasions; that she succumbed to the urge to push long before she arrived in the delivery ward (and in fact did so from around 20h00 already); that there was an absence of attention given to her except when nurses were summoned by other patients who she shared a ward with because of her screams and the obvious dilemma that she was in; and that when it came time to push out her baby she no longer had any energy to make the effort. This was followed by the cutting of the episiotomy and the application of fundal pressure as testified to by the plaintiff which caused the baby to come out. There are other nuanced differences in the plaintiff's experience of her labour and delivery of ST that do not accord with Sister Tshanyingca's narrative of what happened or with her record keeping that is supposed to represent an accurate and professional account of her management of the plaintiff's labour and assessment of her baby's wellbeing.

[124] It is trite law that where there are two mutually destructive versions, the Court must be satisfied that the version of the litigant upon whom the onus rests

⁵⁶ See: *NEG v Jagers* 1984 (4) 437 (E) at 440 F.

is true and the other false before the onus is discharged.⁵⁷ Ultimately the question is whether the onus on the party who asserts a state of facts has been discharged on a balance of probabilities and this depends on the mechanical quantitative balancing out of the pans and scales of probabilities but, firstly, on a qualitative assessment of the truth and/or inherent probabilities of the evidence of a witness and secondly an ascertainment of which of the two versions is the more probable.⁵⁸

[125] To come to a conclusion on disputed issues a Court must make findings on the credibility of a factual witness; her reliability; and the probabilities.

[126] In *Stellenbosch Farmers Winery Group Limited*⁵⁹ the court referred to the variety of factors that would inform a court's credibility finding of a particular witness, and, in turn, their reliability:

"The technique generally employed by courts in resolving factual disputes of this nature may conveniently be summarised as follows. To come to a conclusion on the disputed issues a court must make findings on (a) the credibility of the various factual witnesses; (b) their reliability; and (c) the probabilities. As to (a), the court's finding on the credibility of a particular witness will depend on its impression about the veracity of the witness. That in turn will depend on a variety of subsidiary factors, not necessarily in order of importance, such as (i) the witness's candour and demeanour in the witness-box, (ii) his bias, latent and blatant, (iii) internal contradictions in his evidence, (iv) external contradictions with what was pleaded or put on his behalf, or with established fact or with his own extra curial statements or actions, (v) the probability or improbability of particular aspects of his version, (vi) the calibre and cogency of his performance compared to that of other witnesses testifying about the same incident or events. As to (b), a witness's reliability will depend, apart from the factors mentioned under (a)(ii), (iv) and (v) above, on (i) the opportunities he had to experience or observe the event in question and (ii) the quality, integrity, and independence of his recall thereof. As to (c), this necessitates an analysis and evaluation of the probability or improbability of each party's version on each of the disputed issues. In the light of its assessment of (a), (b) and (c) the court will then, as a final step, determine whether the party burdened with the onus of proof has succeeded in discharging it. The hard case, which will doubtless be the rare one, occurs when a court's credibility findings compel it in one direction and its evaluation of the general probabilities in another. The more convincing the former, the less convincing will be the latter. But when all factors are equipoised probabilities prevail."

⁵⁷ See: *National Employer's Mutual General Insurance v Gany* 1931 AD 187 at 199.

⁵⁸ *Selamolele v Makhado* 1988 (2) SA 372 (V) at 374.

⁵⁹ *SFW Group Ltd v Martell et Cie* 2003 (1) SA 11 (SCA) at para [5].

[127] It was suggested on behalf of the defendant that there was something sinister in the late amendment of the plaintiff's particulars of claim to add as a ground of negligence that inappropriate fundal pressure had been applied to the plaintiff's abdomen in the second stage of her labour, but it is quite evident from the professional reports of both Dr Kara (who confirmed such fact in his oral testimony), and Professor Christianson, that she had herself volunteered the information that external pressure had been applied to her abdomen as a distinct feature of her narrative of the critical events from the outset. Indeed, fundal pressure as a midwife's concept and unique technique applied during labour, whether it is approved or not, or its significance, would in my view hardly have occurred to the plaintiff to contrive as an extra ground of negligence late in the game.

[128] The plaintiff's insistence that pressure was applied to her abdomen during labour was co-incidentally confirmed by Dr Yama's remark that fundal pressure was used. I refer again to the retrospective note made by him at 002h30 that a report had been made to him by Sister Tshanyingca of the application of fundal pressure during the plaintiff's delivery. He also noted that an episiotomy had been cut according to her report made to him, another feature that she failed to mention in her clinical notes, and which turned out to be consistent with her concession made during cross examination that some form of obstruction presented itself to her before she cut the plaintiff's perineum. The two interventions invariably go together, or rather the application of (permissible) fundal pressure might follow a difficulty in getting the baby out after an episiotomy has been cut to promote expulsion from the birth canal making it a palatable narrative written down by Dr Yama together with the view expressed by him in relation to his diagnosis of HIE that there had been poor maternal effort.

[129] I have mentioned elsewhere the fact that the Maternity Guidelines prescribe a formal obligation on the latter to have filed a note of his involvement post-delivery, which renders it is entirely improbable in my view that he would have speculated about what happened during the delivery. Indeed, in terms of the provisions of section 17(1) (e) of the National Health Act, No. 61 of 2003, it is a criminal offence if any person provides false information with the intention that it be included in an official hospital record.

[130] Further, the features of the situation to which Dr Yama's attention was drawn and requiring his assistance in large measure coincides with the plaintiff's version of the events given in her testimony. For example, it is no coincidence that he would have made the remark concerning her related poor maternal effort justifying an episiotomy and the application of fundal pressure against the background of her having openly admitted that when it came to the delivery of her baby, she simply had no energy left to push after having exerted herself on her version from around 20h00 already. The fact that this was a notable feature of her labour (despite Sister Tshanyingca's insistence at the trial that everything had been normal but for the plaintiff not having listened or cooperated by pushing when she was not supposed to), is entirely consistent with the need to have cut an episiotomy and applied fundal pressure to get the baby out when the plaintiff could not bring this pressure to bear herself. Both measures, that is cutting an episiotomy and applying fundal pressure, would have been justified as probable interventions (albeit the latter not an established or approved method of intervention) that Sister Tshanyingca would have been tempted to try in such a scenario.

[131] The suggestion that the plaintiff ought to have called Dr Yama to testify regarding his involvement in her labour and in effect to refute Sister Tshanyingca's denial that it represents a fair account of what she personally told

him falls flat when regard is had to the fact that the parties agreed that the medical records placed before court are what they purport to be. Moreover, the note appears to form part of the legitimate records of the defendant. The note says in clear terms what Sister Tshanyingca reported to him so why should it be rejected at the expense of the plaintiff now because it does not suit her version? It is an official note ostensibly maintained according to the protocol outlined in the Maternity Guidelines. Indeed, the suggestion that Dr Yama speculated or recklessly made a false entry is on Sister Tshanyingca's version extremely opportunistic and most unbecoming of a professional nurse who ought to appreciate the protocol concerning proper record keeping.⁶⁰

[132] Sister Tshanyingca described the plaintiff's version taken up with her during examination in chief regarding the application of external pressure to her abdomen as impossible but hardly to refute that it could not have happened as the plaintiff said. Rather she sought to justify her denial of it on the basis that she as a recently qualified nurse would *never* have been permitted to apply fundal pressure and that it was in any event proscribed. She absolutely agreed that it was a "no go" and an inappropriate intervention at her disposal to assist in getting the baby out. Therefore, the criticism by Mr. Van Der Linde that she was not cross-examined on why she stated that the plaintiff's version was impossible or that she was not given the opportunity to deal with the plaintiff's precise version of the application of fundal pressure, is without merit. Indeed, it

⁶⁰ This is dealt with in Chapter 3 of the Maternity Guidelines. The stated purpose of the requisite standard of recordkeeping is, *inter alia*, to present a historical record of clinical events to account for all care given to patients; to ensure that they are complete and accurate with regards to the information they contain; and to ensure that legal requirements are met in recordkeeping practices. The Guidelines ironically notes among the reasons stated for the Department's insistence on a decent quality of note keeping the rising demands on healthcare systems to deliver quality patient care as well as because of "the constant increase in medico-legal cases". A further important component of quality assistance is audits of clinical notes in patient records, as based on these standards. Audit tools are used (in their purposeful design) to assess notes and partograms. It would therefore be absurd to suggest, when it comes to a case review, that no value can be placed on Dr Yama's note which ostensibly complies with these important protocols. See also paragraph [129] above in which I highlight that this purported conduct of his of writing down something other than what he was informed is tantamount to him having committed a criminal offence.

seems entirely unnecessary in my view for Mr. Wessels to have put to Sister Tshanyingca the *minutia* of how the plaintiff says the pressure was exerted on her in order to counter her emphatic insistence that no such thing ever happened and that it was, by necessary implication, a figment of the plaintiff's imagination.

[133] Mr. Van Der Linde submitted that there are inherent improbabilities in the plaintiff's evidence as to how Sister Tshanyingca clambered onto the delivery bed in the manner in which the plaintiff described and of how the assistant nurse, playing no part and having no function of the delivery of the baby, came to the delivery table and stuck fists in her tummy. Firstly, regarding the latter, Sister Tshanyingca was coy about who this other person was (only revealing her identity right at the end when pertinently asked) and distanced her from having had any responsibility in the process at all on the basis that she was alone in the delivery area with the plaintiff when she delivered her baby. It is ironic that she sought to give such an impression because, if she was alone, this does not then explain how the assistant came to call on Dr Yama at her instruction to assist with the resuscitation of the baby (an event concerning which no time could be lost by obvious implication), meaning that she must plausibly have been present at the defining moment and ought to have been able to provide a valuable account of what actually went down. It also begs the question why in Sister Tshanyingca's testimony she sometimes referred to an "us" and a "we" as opposed to herself in the singular tense if she had instead been a lone operator.

[134] Concerning the supposed mechanism of how the baby was expelled according to the plaintiff, this fits in seamlessly with the background facts. There was firstly the claimed spontaneous remark by Sister Tshanyingca that the baby's head was swollen suggesting a risk and urgency that necessitated getting the baby out. The plaintiff could not have known this except if Sister

Tshanyingca, who was standing at the opposite end of her vagina and accordingly in a position to observe as much, had herself mentioned it. The plaintiff insisted that she had no energy to push. This is given credence by Sister Tshanyingca's evidence (and retrospective note) that she had prematurely pushed despite her cervix not yet being fully dilated from 5/6 cm already. Dr Yama's note of what he was contemporaneously told by Sister Tshanyingca referred to the plaintiff's alleged "poor maternal effort" which is more consistent with her having not pushed to deliver her baby than having pushed incessantly on the delivery bed as claimed by Sister Tshanyingca. She felt constrained to cut an episiotomy which she conceded had to do with an obstruction. That accords with the plaintiff's experience that she was tired and could offer no expulsive efforts of her own to force her baby out whereas the foetus' head in a cephalic presentation had crowned and was stuck in the bony structure that comprises the birth canal.⁶¹ The application of pressure to the plaintiff's abdomen in the manner described by her brought the baby forth after Sister Tshanyingca's second go at putting her knee on the plaintiff's abdomen. (Permissible fundal pressure, whether the technique is approved of or not, would ordinarily have had such an objective in mind, that is to get the baby out.) The baby was delivered after the application of pressure in a severely compromised state with no respiration that was only restored at 00h50 after the combined resuscitation efforts of Sister Tshanyingca and Dr Yama. There is therefore to my mind nothing inherently improbable in the strange concatenation of events that the plaintiff asserts happened, culminating in the application of external pressure to her abdomen.

[135] The plaintiff made a favourable impression upon the court and her version of what happened during the delivery of ST - which must by all accounts have been extremely traumatic and left an indelible imprint on her

⁶¹ This was how Professor Smith described the experience of a foetus in the birth passage.

memory, is fairly consistent with what she much earlier told Dr Kara and Professor Christianson (he noted less detail of the history but enough to suggest a fundal pressure intervention). It coincidentally also fits in with what Sister Tshanyingca reported to Dr Yama in the heat of the moment, as it were, when the baby's life was hanging in the balance after she had applied fundal pressure, which presents as a plausible intervention in her accounting to him in order to counteract the plaintiff's so-called poor maternal effort. Her version concerning the lack of attention given to her in the antenatal ward also conforms substantially with the nuances she related to the experts she consulted with.

[136] According to the reporting protocol Sister Tshanyingca had to give account to Dr Yama of the situation and background, and of what steps had already been taken, when she sought his assistance to resuscitate the baby who had come off worse after the measures adopted by her to get the baby out. What he on the face of it was told by her had happened coincidentally also fits in with Sister Tshanyingca personally and independently ascribing the "complication" with ST's birth on the Summary of Labour Chart to the mother not cooperating during labour and delivery.

[137] The minor discrepancies in the plaintiff's accounts regarding whether a single fist was used, and whether once or twice, and the exact sequence of events are in my view not material. The more important fact is that dramatic pressure was applied using fists and a knee in an escalated progression to achieve the expulsion of ST.

[138] I turn to deal with the issue of the claimed monitoring by Sister Tshanyingca and the reliability of her note keeping.

[139] There is a notable absence of contemporaneous detail in the clinical notes

that gives credence to any developing crisis that quite matches her description given ultimately and after the fact to justify what she saw as a complication of the delivery which, even on her version, she must have seen coming. Indeed, the risk of the scenario relied upon by her, namely that the plaintiff pushed aggressively until the end on her version, supposedly had its origin in her pushing from five/six centimetres dilatation already. That risk is not recorded or noted contemporaneously in the maternity records as a developing concern, neither is any attention given to its impact in relation to the foetal wellbeing or the care of the plaintiff.

[140] Sister Tshanyingca's notes are also essentially shy of the most critical feature which is that ST evidently suffered foetal distress (she must have suffered significant bradycardia in order to have sustained an acute profound brain injury) whilst under close watch by her at least from around midnight until the baby's delivery. This is acknowledged in the First Examination of Neonate chart ostensibly written by her, so it is unclear why she would have been hesitant to make such a concession during cross examination.

[141] Bradycardia is an undeniable feature of the diagnosis that she suffered HIE encephalopathy at birth.⁶² Her firm denial she did not notice or recognize its onset is further entirely improbable on her version.

[142] What additionally renders the account of her professed diligent monitoring especially unreliable is her late revelation that a CTG was used but without paper and therefore also without a graphic representation and interpretation which she would properly have had to apply her mind to if there had been paper. There was certainly no interpretation applied by her on her

⁶² This was confirmed by both Professors Smith and Cooper. There would have to have been significant bradycardia preceding the brain injury sustained by ST. Professor Smith suggested that her heart rate would probably have come down to below 90 -bpm.

bizarre explanation given of how she came to the numbers written down by her. The corollary of her revelation regarding her use of electronic monitoring however means that there was a continuous monitoring tool at her disposal during the second stage of the plaintiff's labour (in respect of which there was close monitoring as attested to by her). The CTG must plausibly either have been set with an audible alarm in the case of a significant deceleration to warn her of any threats to the baby or the readings must have been visible to her on the monitor itself. This monitoring must (on her version since she began close monitoring at 7cm and on the plaintiff's version from around midnight until delivery) have given her a clear indication that matters were getting out of hand. She made a note after the fact of a single heart rate of 127-bpm at 00h32 which on her version she must have obtained from the CTG monitor but none other whereas she was on hand, and the plaintiff's contractions were strong and frequent requiring more intensive monitoring. Even the reading of 127-bpm represents a significant deceleration (from the baseline noted by her on her partogram) which ought to have prompted some form of remedial intervention but instead she feigned surprise at how it had happened that ST came to born "flat".

[143] The clinical notes Sister Tshanyingca made are ironically on the hour suggesting a perfunctory note keeping or an after-the-fact template consistency, whilst ignoring the reality that even on her version, the plaintiff's labour had taken a turn for the worse that must have raised concerns which, if reflected in an honest contemporaneous note keeping fashion, would not have been limited to entries made at exactly twelve minutes past the relevant hour in each case. Her notes and entries also raise suspicion because they do not coincide with even the common cause facts. I refer by way of example to the fact that the plaintiff continued, on the partogram's representation, to be in strong labour even after ST was born. There is the further absence of any detail of foetal

distress or problems noted with regard to the delivery of ST on the Assessment of Newborn chart, or in the summary of labour, whereas it is an incontrovertible fact that there were both problems (even on her version), and neonatal encephalopathy.

[144] The most improbable feature of Sister Tshanyingca's evidence is that the birth of ST as a flat neonate etc, came as a surprise to her. In order to get to the acute brain injury ST must have suffered significant bradycardia near the end of the plaintiff's labour. She was closely monitoring the plaintiff according to her and using the CTG (albeit without paper), yet somehow missed this vital cue. The other probability is that towards the end she did recognize the risk and took the steps which she did in cutting the episiotomy and applying fundal pressure in her own awkward manner, but subsequently sought to conceal her manoeuvre.

[145] Sister Tshanyingca made a poor impression as a witness. Whenever it got too difficult to answer any question, she feigned an inability to hear what counsel was asking or cited a lack of understanding of the questions. This stands in contradiction to her arrogance at other times especially having regard to her insistence that she did not need to call a doctor to assist with the delivery and calling Dr Yama out for making assumptions and in effect causing to be reduced to writing a false entry concerning her management of the plaintiff's labour. She also adapted her evidence as she went along and only made concessions (such as the significant detail that she was using a CTG to monitor the foetal heart rate) when pushed into a corner. Her opportunism is also demonstrated by the fact that she was happy not to correct the specialists, in reading her note made after the delivery to mean that the plaintiff pushed from "5cm" (which would somehow explain how ST came to be born "not healthy"), but when it came to being grilled about why she did not administer analgesia to

a mother who was clearly in need of it, it suited her purposes for the figure to be interpreted as a six because that would put the plaintiff 4cm away from full dilatation to justify her excuse for not having administered any medication to her at that late stage for fear of side effects to the baby.

[146] It is regrettable that in respect of a matter so critical as this with lifelong adverse consequences to ST and the unimaginable pain and regret to the plaintiff, that she failed in both her legal and professional obligation to give a true account of her management of the plaintiff's labour and her delivery of ST in the maternity case record that this court can safely rely upon. The most plausible motive for this is that she wanted to cast off any suggestion that she acted unprofessionally by applying fundal pressure during the labour, and indeed that she also negligently missed the fact that a crisis had developed in the first place, requiring her to take this drastic step.

[147] In the result I am satisfied that the evidence of the plaintiff is to be preferred concerning the management of her labour and that Sister Tshanyingca's partogram and notes cannot be relied upon in instances of dispute between her and the plaintiff or other objective indications of the true situation.

[148] This significantly changes the basis then upon which the experts ought to have assessed the breach of duty, going to the issue of negligence, as well as the issue of causation.

The expert testimony:

[149] I deal below with the contributions of the experts in respect of the issues of negligence and causation under the various sub-headings indicated below.

The duty to monitor:

[150] Professor Anthony explained why foetal monitoring according to the Maternity Guidelines is essential against the background of the relevant physiology of mother and child and the unique process of labour in its various stages.

[151] The latent phase of labour (less than 4cm dilatation) is a period of slow cervical change of variable duration, whereas the active phase (between 4-10cm dilatation) is usually a more rapid and predictable passage of cervical dilatation. Contractions continue in the active phase to intensify through into the second stage of labour which is when the mother adds to the force of uterine contractions by bearing down to expel the foetus.

[152] The process of assessment, or monitoring, that takes place during labour depends on the phase and the stage of labour. In the latent phase of labour, when the contractions are weak and relatively infrequent, assessment intervals tend to be longer but once there is active labour, these shorten. During the second stage of labour, the juncture reached when the mother becomes fully dilated at 10 cm, and especially when she is bearing down (the expulsive phase), the frequency of the observations increases even further.

[153] In active labour, the cervical changes are documented every two hours and the foetal heartrate assessed every half an hour. When the second stage of labour is reached, the monitoring of the foetal heartrate intensifies further and is required to take place after every second contraction through until delivery.

[154] The reason why this is necessary is fairly obvious. Foetal oxygenation during labour is always at risk and is an inherently hypoxic process regardless of whether a woman has a normal pregnancy or whether there may be any other predisposing factors giving rise to hypoxia. If contractions take place too frequently or if they are too strong, these may interrupt the blood supply to the foetus sufficiently to make it hypoxic, and if it becomes hypoxic it will also become acidotic because it can no longer maintain its own metabolism. It is for this reason that the monitoring of the foetus in every single labour, no matter the risk of the mother, has to take place by means of looking for signs of evolving foetal hypoxia.

[155] He explained the physiology as follows:

“The process of keeping the baby oxygenated, enough oxygen to sustain fetal wellbeing, depends on placental function. And just to try and explain this, the placenta is very much like an upturned dinner plate which is in fact stuck to the side of the uterus. And there are vessels which come through the wall of the uterus called the spiral arteries which are pumping blood beneath that dinner plate. So, there is a gap between the dinner plate and the side of the uterus. And there is blood being, Maternity blood being pumped into that space which we call the choriodecidual space. The dinner plate itself is the placenta, and the structure of the placenta is that it has a number of finger like structures called villi which floats in this choriodecidual lake, this pool of blood beneath this upturned dinner plate. When the baby is pushing its own blood through those villi and gas exchange is taking place between the blood, the Maternity blood that is under the dinner plate and across the villi wall into the baby’s blood which is then been pumped round back into the baby itself. The problem is that labour, when it starts as the uterus starts contracting, those vessels which are coming through the wall of the uterus get squeezed and as the uterine muscle contracts and as they squeeze those vessels the blood flowing into that choriodecidual space diminishes. This means that for the duration of a uterine contraction during labour the baby has to extract what oxygen is available in the pool of blood trapped underneath the dinner plate whilst the uterus is contracting. For that reason, fetal oxygenation during labour is always at risk.”

[156] All guidelines for the management of labour according to him recognise the need for foetal monitoring during labour with monitoring escalating in frequency according to the amount of uterine activity and the pressure inside the

uterus which may compromise the perfusion of the placental bed.

[157] The reason for listening to the heartrate before and after a contraction is because, in the period immediately after the mother's effort, the baby will exhibit a response to what has happened during the course of the contraction, which it is necessary to gauge in order to confirm its wellbeing. Ideally there will be a resetting of the oxygenation of the foetus after the contraction (a self-compensatory mechanism) and this is the reason why you perform monitoring after a contraction in order to look for evidence of the foetal heartrate as slow in relation to uterine contractions. The purpose is to recognize when the foetus shows any evidence of hypoxia relative to a uterine contraction which typically presents as degenerative changes in the foetal heart rate. Monitoring takes place either by listening (auscultating), or by way of electronic monitoring (by CTG).

[158] It is important to know what response the baby has to a contraction and not merely to document the heartrate. The heart rate between contractions is evidence of life but not evidence of wellbeing. Wellbeing is determined by whether the baby can sustain a uterine contraction without showing a cardiovascular response which is indicative of hypoxia during that event. That is the distinction and that is why the Guidelines stipulate the need to auscultate both before and after the contraction in order to determine whether there is foetal wellbeing.

[159] In Professor Anthony's view, even taking the maternity case records at face value, it is not clear how the heartrate was measured *in casu*. He was prepared to state on the basis of a mere case review that Sister Tshanyingca's monitoring fell short of constituting adequate care even if it was purportedly done every half hour according to the Guidelines. The reason for this is that the mere measurement of a heart rate (a random recording having no connection

with the mother's contractions) misses the mark of assessing where the contractions are at. The foetal wellbeing in labour must always be assessed in relation to what happens when the uterus contracts.

[160] The effect of inadequate monitoring is that "there is an increased probability of adverse outcome in relation to undiagnosed fetal hypoxia which without intervention will result in fetal injury."

[161] The partogram is a valuable tool to present a picture of the progression of labour highlighting the most salient vitals of mother and foetus to identify cases where the progress in labour due to complications is slow and requiring intervention. That too is a necessary tool to anyone reading it to gauge adverse risk factors.

[162] He was not in agreement, despite the half-hourly foetal heart rate recordings plotted by Sister Tshanyingca on the partogram *in casu*, that these met the required professional standard because it is unclear when in relation to the plaintiff's contractions they were done. He also did not agree with the defendant's hypothesis that on probability what was monitored was the foetal heart rate *after* contractions. He pointed out in this regard the anomaly (on the partogram) that the periods between the contractions far exceed the period during which the foetal heart rate was measured, so the recorded entries do not in his opinion inspire confidence that the foetal condition was reassuring.

[163] He added (but without the benefit of knowing what Sister Tshanyingca would say concerning this significant aspect) that if the readings came from a CTG tracing, the expectation is that those would have been annotated to the effect whether they were either early, late, variable, or yielding no decelerations in relation to the plaintiff's contractions, and the interpretation of each such

assessment is then required to be noted on the partogram.

[164] Notwithstanding that the gap⁶³ left open on the partogram is coincidentally followed by two recordings of a “normal” foetal heart rate after, he was not convinced that this mitigated the risk because the last two measures on the partogram bear no obvious relationship to the plaintiff’s contractions that must have been happening at the time.

[165] He reiterated that it is the contractions that will expose any underlying foetal hypoxia and that it will manifest as a foetal heart rate deceleration.

[166] In his view the foetal heart rates recorded on the partogram reflect merely that the baby was alive at these times but are not reassuring of foetal wellbeing during labour in the absence of any recordal “in relationship to the contractions.”

[167] CTG tracings would automatically compute the foetal heart rate in relation to uterine contraction, but still require interpretation. With intermittent auscultation there would be the same requirement that one assesses the response of the foetus to the occurrence of a uterine contraction during labour.

[168] He explained how auscultation would be effected and when it would be necessary to switch over to electronic monitoring:

“To do this the midwifery staff commonly use a thing called the Pinard stethoscope which is a trumpet-shaped foetal stethoscope, which they will put on the mother’s abdomen, leaning against where the foetal back so they can hear the heart, and then with the other hand, well with the same hand they would usually palpate the fundus of the uterus and they would feel for when the contraction takes place and they would be measuring the foetal heart before and then after the contraction. That is

⁶³ This gap was referred to by Dr Koll as the “single omission” by Sister Tshanyingca to record the reading in between 22h00 and 00h12.

what is required in terms of the national guidelines. That is what is stipulated on the partogram which they used, where there is a circle indicated for the rate before the contraction starts and a cross for where the foetal heart rate should be recorded after the contraction, and the importance of this is to discern whether or not there is any slowing of the foetal heart rate in relationship to the contraction, and if there is that would be indicative of a potential problem which would then require a transition from intermittent auscultation to electronic foetal heart rate monitoring in order to characterise the nature of that decelerative change and its relationship to the contraction that provokes it. And then the analysis becomes more sophisticated, as it is indicated in that partogram, as well as to whether or not the decelerations that are observed are early, variable, or late, or whether there is no deceleration. In this particular case there is no indication that this foetal heart rate was auscultated after the contraction and if CTGs were used as a way of observing it there is no indication as to whether or not the tracings were analysed with respect to whether or not decelerations were present.”

[169] Put to him that Dr Koll would say that there are seldom three separate recordings of the foetal heart rate taken and that the hospital’s recordings were done as would be expected of a reasonable healthcare professional, he emphasized that this is not his view, neither is it the view of people who write the Maternity Guidelines and that it is also not what was required in terms of the partogram that was used in this particular instance. He conceded though that many partograms do not use all three recordings. (Indeed, the latest Guidelines do not mention or require three separate recordings). The important ones however are the foetal heart rate prior to the contraction and the foetal heart rate after the contraction.

[170] He did not agree with the defendant’s assumption that if anything untoward had been noted during auscultation that something would have been done about it and that it would have been reflected in the notes. Rather it works the other way around. The necessary protocols need to be observed *in order to detect abnormalities*. If the protocol is not followed, then it is likely that what exists as an abnormality may go undetected.

[171] He was not in agreement (and indeed this is not borne out by the facts

found proven by this court) that there is “evidence” that someone in the maternity ward listened to the foetal heart rate in the manner that he articulated is the professional standard. (Ironically Mr. Van Der Linde did not put Sister Tshanyingca’s anticipated version to Professor Anthony - that in the end turned out to be an unconvincing explanation of what and why she wrote what she did, instead inviting him to comment on the probability or assumption that she wrote down the *after*-contraction heart rate.)

[172] He agreed that there was no indication on the partogram that the “action line” had been crossed to suggest any concern of dystocia in terms of the actual progress of the plaintiff’s labour itself. (Indeed, to my mind a concern regarding a precipitated labour seems more appropriate.)

[173] In reviewing the case records, and even after hearing Sister Tshanyingca’s testimony, Dr Koll had no complaint regarding the overall monitoring of the plaintiff and her baby during her labour. Instead, he believed that the foetal heartrate was auscultated half hourly which he asserted was as per the Guidelines. There was one small area where it was auscultated a little bit late and a little bit early according to the partogram, but there were two normal heartrates auscultated after, leading him to conclude that the monitoring of the foetal heart was adequate. At 22h00 the plaintiff’s liquor was noted to be clear and two hours later she was fully dilated. The progress of labour was also adequate in his view. (Whilst the partogram reflects recordings above the 130-bpm baseline Sister Tshanyingca however indicated in her clinical notes that it had reduced to 127-bpm during the second stage and just before delivery. I refer to my further observation above that in order for ST to have suffered the injury which she did, a severe bradycardia had to have been an obvious feature of her condition just before her birth. The same can be said of an evolving hypoxia that on the proven evidence must have called attention to itself.)

[174] Dr Koll indicated that he was aware that the Guidelines say that the heartrate should be auscultated before, during and after a contraction but asserts that he has never seen it applied in a case that he has testified in, so the Guidelines seem at variance with what the average person does.⁶⁴

[175] Having said so, however, he suggested that given the standard teaching that one is to listen before and after contractions, which is drummed into people's heads from their first day as midwife, or for a medical student that the most important part is to listen before and immediately after a contraction so as to establish the baseline and recognize significant decelerations, the result expressing that consideration is the one that would in his view be recorded. As far as he is concerned, foetal heartrate monitoring is never recorded strictly as the Maternity Guidelines suggest and certainly not in Gauteng.⁶⁵

[176] He agreed that the maternal condition should have been recorded hourly, but that it was only recorded two hourly in this instance. This was not of any significance however since there no complication with the plaintiff's condition.

[177] In his view the assessment in the latent phase and during active labour were within the Maternity Guidelines and there was no evidence of foetal distress present in the labour or of any concerns to the nursing staff in attendance. The value of this observation is diminished however against my finding above that the plaintiff's version is to be accepted above that of Sister

⁶⁴ To put his view into perspective, he is in private practice presently only as a gynaecologist but prior to going into private practice trained and worked in public hospitals in Gauteng. He elaborated that he had also dealt with several case reviews in respect of medical negligence arising in Gauteng, the Eastern Cape and in Mpumalanga. In the last 20 years he has not been in a government labour ward and the only cases he has seen are medical malpractice cases. This may explain why he thought that three recordings were necessary instead of the two (before and after contraction rates) specified to be the requirement in terms of the present-day Guidelines applicable here.

⁶⁵ See footnote 66. He appears to have missed the fact that the present Guidelines do not require three recordings.

Tshanyingca. Her representation in the maternity case record of the premise of a re-assuring foetal status is unreliable, if not false.

[178] Dr Koll unreservedly agreed with the physiology of foetal oxygenation explicated by Professor Anthony and that it is exactly for this reason that monitoring is essential. He went on further to say that if any features of concern arise such as a late deceleration that it becomes imperative to progress from intermittent auscultation to electronic monitoring.

[179] In concluding with this aspect, the experts concur that foetal heart rate monitoring is essential and must be effected with the express objective of picking up on foetal distress in relation to a mother's contractions in labour if it is to effectively prevent adverse outcomes. This is the standard that I accept a reasonable nurse should aspire to.

[180] In this instance Sister Tshanyingca's explanation regarding how she monitored and what she was looking for does not inspire confidence that she appreciated that monitoring is more than simply noting down a random reading on a partogram that was self-evidently not timed to the plaintiff's contractions. I cannot find that what she wrote down provides reliable information that supports a finding on the probabilities that ST coped well with what, even on her own version, was a difficult labour.

[181] I need not in this instance determine whether a failure to write down both a *before and after* recording *strictly* in accordance with the Maternity Guidelines misses the mark of the professional standard in the light of my finding above that Sister Tshanyingca failed to monitor the plaintiff's labour properly, period. Further, her explanation concerning what she wrote down, and why, in my view renders the rates recorded somewhat questionable and of no

value to anyone. The question of whether she was negligent has to my mind less to do with her shortcomings in relation to writing down strictly what the Guidelines prescribe (that is a matter for an internal enquiry),⁶⁶ but whether *in casu* her monitoring and management of the plaintiff's labour over the relevant period, on the facts found proven, met the standard of a reasonable professional.

[182] Although the expert professional nurses agreed that there was no breach of duty by Sister Tshanyingca in writing down only a single heart rate reading, this expectation was no doubt prefaced on an understanding that what she wrote down was reassuring, by its mere representation on the partogram, and denoting a rate after the contraction rather than just a number bearing no relation to the plaintiff's contractions. I cannot endorse their common opinion however in the light of the unreliability of Sister Tshanyingca's record keeping. Indeed, it appears that Sister Tshanyingca paid mere lip service *in casu* to the prescripts and structure of maintaining a partogram and auditable records, best demonstrated by her bureaucracy as it were of checking on the foetal heart rate ostensibly on the clock at exactly twelve minutes past every relevant hour.

[183] This plausibly explains in my view why she missed the precipitated labour of the plaintiff and/or did not focus on her premature bearing down (or pushing before full cervical dilatation, from since around 20h00 already according to the plaintiff), leading in all probability to the crisis that arose when, at the appropriate time to push, the plaintiff had no energy reserves left to do so and the extreme measures taken by Sister Tshanyingca (episiotomy and applying fundal pressure) while ST's head was engaged in the birth canal for longer than was safe, became a necessity.

⁶⁶ I mentioned elsewhere however that the example provided by the Department in its Guidelines of what a partogram should look like applying it to a real live situation ambiguously suggests that it is acceptable to write down only the recording that reflects the heartrate *after* the mother's contractions as opposed to both.

[184] Sister Tshanyingca's surprise at the birth of a flat baby was in all probability a startled reaction after having missed the vital signs of the baby's impending doom that she would have to account for, which is why she resolved to note down "poor maternal effort" as the cause of all the trouble as an after-the-fact justification, a complication which just happens to be the exact opposite of her version of aggressive pushing by the plaintiff right up to the delivery.

[185] All of this suggests in my view that quite contrary to the defendant's supposition that ST's injury came from the blue and was unexpected, that it was most probably instead due to her failure to have properly monitored the plaintiff and ST's wellbeing, consistently and in relation to the developing crisis, and with reference to the express objectives of foetal monitoring which she conceded was vitally necessary, culminating in a risk that she tried to avert in her unconventional manner to ST's detriment.

[186] The failure to monitor was obviously not an isolated ground of negligence relied upon. The fact of the plaintiff's premature bearing down and the application of the fundal pressure are interrelated features of the plaintiff's narrative. I deal with these aspects below in relation to the elements of both negligence and causation.

The impact and effect on the plaintiff's early bearing down:

[187] Professor Anthony, based on a face value assessment of the partogram and the clinical notes scribed by Sister Tshanyingca, concluded that the plaintiff had probably been bearing down for a period of two and a half hours before she was fully dilated (this based on Sister Tshanyingca's comment at 20h12 that she was not co-operating at all and at 22h12 that she was pushing and not listening,

ramping up to her after-the-fact entry at 00h12 that the plaintiff had been pushing “as from when she was 5cm.”) The accepted evidence however reveals that this situation in fact pertained from around 20h00 when the plaintiff said she first began to feel pain and the urge to push entailing a longer period, probably of four and a half hours. (As an aside it is difficult to accept that the moment of full dilatation was reached on Sister Tshanyingca’s evidence at 00h30. It was at least common cause that from around midnight the plaintiff was on the delivery bed. Sister Tshanyingca however stated that she was doing rounds in the antenatal ward at the time full dilatation was reached which is why she missed the moment and didn’t write it down. It is therefore possible that the milestone was reached much earlier because Sister Tshanyingca couldn’t have been in two places at the same time.)

[188] Professor Anthony explained that in the ordinary course a mother bears down when fully dilated coinciding with the descent of the foetal head into the pelvis.

[189] The plaintiff’s early bearing down would have represented a period marked by strong contractions with three occurring in every ten minutes and increasing closer to stage two to four or five per ten minutes. Apart from the fact that Sister Tshanyingca’s notes reflect a single foetal heart rate with no reference to whether any of the relevant data was properly recorded after the plaintiff’s several contractions, he noted his concern that these efforts on her part would have amounted to a prolonged second stage of labour,⁶⁷ or a prolonged expulsive phase.⁶⁸ He noted that in the South African literature both risks are clearly associated with an increased risk of still birth related to intrapartum foetal hypoxia which in all probability would have contributed to

⁶⁷ The total duration of the second stage of labour for a first-time mother should not exceed two hours.

⁶⁸ The duration of active pushing in the expulsive phase should not exceed 45 minutes.

ST's HIE in the absence of proper monitoring.

[190] He explained the likelihood of the foetus suffering hypoxia induced both by the intense contractions and by the bearing down efforts that were taking place. The effect of an increase in the intrauterine pressure on the placental perfusion would usually be up to about 40mm of mercury with a uterine contraction and with bearing down efforts would go up even further to something close to 100mm of mercury.

[191] The reduction of the perfusion of the placental bed is more profound in the second state of labour when the mother is pushing.

[192] This is of concern insofar as foetal monitoring needs to take account of both uterine contractions and bearing down efforts and needs to be correctly performed in order to ensure that the baby is not suffering from hypoxia induced by both the intense contractions and by the bearing down efforts that were taking place. With the increased intra-abdominal pressure which occurs when a mother tries to expel the baby by bearing down, the reduction in perfusion is more profound the higher the pressure goes and for that reason the expulsive phase of the second stage of labour is particularly problematic. What you would see would be a uterine contraction that would be double the pressure than what you would see with a uterine contraction without a bearing down effort.

[193] Both the inadequate foetal monitoring and the prolonged bearing down effort were in his view clear markers associated with adverse outcome.

[194] Under cross examination he clarified that he does not suggest that the prolonged bearing down on its own could have caused an acute profound injury itself but rather that in this period the risk of the foetus becoming hypoxic by

further diminishing the flow of blood and the amount of perfusion of the choriodecidual space would have increased and that during the periods when the plaintiff was both contracting and bearing down this would have led to an increased risk, represented as a progressive decline in foetal oxygenation over time. The foetus would then have entered the second stage of labour with an underlying hypoxemia caused by the prolonged bearing down. This, combined with the effects of labour itself would have rendered it more susceptible to any further insult during this stage, including the application of fundal pressure.

[195] Ironically Mr. Van Der Linde put it to him that if there was a bearing down effort by the plaintiff for an extended period as described by him that this would have been seen in the foetal heart rate which was exactly Professor Anthony's point, namely that a reasonable nurse would have been able to discern the abnormality by appropriately observing the foetus' wellbeing. (If Sister Tshanyingca's version were incidentally true, that she had been closely monitoring the plaintiff and her baby's condition since 7/8cm on a CTG monitor, I expect that she ought to have picked up on the obvious decelerated changes that must have indicated itself to her. The same applies to the period from midnight until the baby was delivered from when on either account of the lay witnesses Sister Tshanyingca was on hand making use of a CTG which is ostensibly sensitive to such decelerations.)⁶⁹

[196] Asked if anything could have been done in a case such as the plaintiffs to ameliorate the risk of her bearing down early, he explained that:

“... bearing down early is not an uncommon event, and where it happens usually the midwifery staff and again, I refer to their standard textbooks, would discourage the mothers from pushing too early. And there often is a reference to the fact that they would examine the patient, on the basis of

⁶⁹ Professor Anthony in fact lamented that CTG tracings are particularly sensitive, but non-specific. The problem that obstetricians have is that there are many other things that can cause decelerations apart from hypoxia, but decelerated changes are at least a given when there is hypoxia.

the fact that they wish to bear down and if they find the cervix which is incompletely dilated they would try and deal with the patients pain which is often the problem, in such a way that they can proceed with the labour without pushing before they are able to expel the baby during the second stage of labour. So, when the cervix is less than fully dilated it is a question of reassuring the mother, of providing good analgesia, perhaps repositioning her, explaining what is happening and trying to deal with her distress at that point. Bearing down in the second stage of labour is, is something which happens because the head enters the pelvis and reaches the pelvic floor, and it is very much a reflex much like defecation would be, it is a reflex bearing down activity that takes place at that point."

[197] It is common cause that the plaintiff was not given any analgesia for pain, but the reason advanced by Sister Tshanyingca why this was the case was quite illogical.

[198] It is instead evident from the facts found proven that Sister Tshanyingca in all probability did not appropriately manage this risk, consistent with no contemporaneous entries having made to such effect. According to the plaintiff's evidence there was only one instance in which she was encouraged to pant rather than to push, which must on the accepted factual premise have been at the time the plaintiff says the nurses were first called on her behalf, in other words, at the time of the second assessment of her which was after the night shift came on duty. The first entry made by Sister Tshanyingca at 20h12, if there was an assessment at this time at all, says nothing about this. In the second entry made by her (at 22h00), she writes that the plaintiff is not cooperating at all. This comment suggests recognition on her part that the plaintiff was pushing but does not inspire confidence that she reconciled herself to the extent of the problem, that is that her early pushing - before full dilatation, constituted a risk to the foetus. At 00h12 she wrote that she is pushing and doesn't listen. This plausibly correlates to the moment when the plaintiff says the nurses were again called to come and assist her and when she was then taken to the labour/delivery ward. Once in the ward and when it came to the delivery

itself, the plaintiff says that she could no longer bring herself to push. She had no reserves left to do so. It is no coincidence to my mind that the retrospective note made by Sister Tshanyingca does not say that at 00h30 the plaintiff “pushed”, but rather that “the plaintiff is pushing as from when she was 5cm,” as if to justify the complication after the fact. The reasonable inference to be drawn from all of this is that she probably missed the significance of the plaintiff’s early pushing in its entirety.

[199] Professor Smith added his view (perhaps more relevant to a discussion of causation below) that the fact that the plaintiff was pushing is known to result in the foetus developing acidosis the longer the mother bears down. This is a premise that Professor Cooper also accepted⁷⁰ but with the qualification that I mention below.

[200] Dr Koll was less reluctant to make this concession even in respect of the question whether Sister Tshanyingca was negligent in managing this feature of the plaintiff’s labour, rather wishing it away as if it were improbable. Even after having heard the evidence of the plaintiff and Sister Tshanyingca in this regard, he ventured that the information underlying this concern raised by Professor Anthony in this regard was on the thin side, but offered his view as follows:

“It is not physically possible for her to have pushed from there until the second stage of labour you know, I mean one just would not have enough energy reserves to do that⁷¹ so presumably it was intermittent,⁷² or it was sorted out.⁷³

The way we sort it out generally, the first thing to do to sort it out is to try and gain the patient’s confidence by talking to the patient and encouraging the patient to use manoeuvres

⁷⁰ He deferred to the obstetricians in this respect but suggested that if the contractions were very strong and she was bearing down that this might have interfered with the placental blood flow.

⁷¹ Ironically this is exactly what the plaintiff described was the result of being in pain and pushing and feeling the urge to bear down over the extended period. When it came time to deliver she had no energy to push whatsoever.

⁷² The reference to intermittent was offered evidently to discount the notion that there could have been a total cessation of oxygen or blood flow to the foetus, which is said to be a standard feature of the acute profound injury type pattern.

⁷³ Even on Sister Tshanyingca’s evidence this was not sorted out because the prolonged pushing continued.

that prevent pushing. The most common one we use is that you pant with a contraction and if you are panting you are unable to use your abdominal muscles and diaphragm to push. So that is normally the first and normally once the patient understands why you do not want her to push, normally that is successful. Whether that was employed or not, is not evident in the records. It would not normally be and the sister would not normally write down that this is what she did, so we don't know if it was done or not and we don't know if it was successful or not.⁷⁴

We do not know how long this uncontrolled pushing went on for. The only thing we do know is that there apparently was not foetal distress associated with it.”⁷⁵

[201] He appeared reluctant to concede the consequences of pushing on the foetal condition but ultimately agreed that if it was significant or had a significant effect on the foetus that one would expect that foetal distress would have been detected. Asked how such distress would be detected in these circumstances, he conceded that it would have been by way of marked decelerations after contractions gleaned by proper monitoring.

[202] He added though that, apart from any decelerations in the case records to support this (after a contraction) he was not convinced that it had caused any problems. If it did, he shared his doubts that there would then have been clear liquor at 22h00, or that an acute profound injury would have ensued. He expected that a partial prolonged or a mixed pattern would then rather have shown up on the MRI scan.

[203] As to how to ameliorate the situation where the plaintiff was in pain, he did not hesitate to agree that where analgesia is needed, it should be given. He added, however, that an uncooperative mother should be counselled before administering drugs which are given as a last resort. This is because of the effects on the baby afterwards.

⁷⁴ The nursing experts seemed to agree that the high level of intervention warranted in this kind of situation ought to have been noted in the case record.

⁷⁵ This last observation is a repeat of the sentiment that the records do not indicate foetal distress which misses the point. A failure to monitor properly taints the assumption that all is well.

[204] A summary of the experts' respective views on the impact of the plaintiff's pushing ultimately came down to an acceptance physiologically that there can potentially be a compromise to the foetus suffering hypoxia and that a risk such as this should by necessary implication (immediately upon its identification as a problem, which ought to be picked up by proper monitoring) be mitigated by counselling and the giving of analgesia. There however remained strong disagreement on the question whether it could plausibly have led to or contributed to the acute profound brain injury sustained by ST because of the nature of such an injury. The plaintiff's experts' explanation of underlying hypoxia/ischaemia making the foetus more susceptible to an acute profound injury under these claimed circumstances, initially rejected by the defendant's experts as a general proposition, is dealt with further below.

[205] In concluding on this aspect, I point out that on either version of the plaintiff or Sister Tshanyingca little was done by the latter to deal adequately with this crisis of the plaintiff's pushing itself, leave alone the length and duration of the claimed pushing with early bearing down efforts. The experts (including the professional nurses) were spot on in their criticism of Sister Tshanyingca for not being more explicit in the maternity case record about why the plaintiff was not listening or why she regarded her as being uncooperative, or what steps she took to redress this situation.

[206] The ineluctable inference is that she either did not recognize the problem at all for lack of proper monitoring, or that she did, but failed to take the problem seriously, reconciling herself with the full extent of the situation only at the point that the plaintiff was about to give birth and she was faced with an obstruction in the plaintiff's birth canal necessitating the cutting of an episiotomy and the application of fundal pressure.

[207] In my view this ground of negligence (interwoven with the related complaints that the staff failed to monitor or to reasonably detect the risk and impact on the foetal wellbeing and react thereto by applying established methods of intervention) has also been established by the plaintiff on probability.

The impact and effect of the application of the fundal pressure:

[208] In Professor Anthony's view the fundal pressure referenced by Dr Yama in his note constituted an additional risk factor for the adverse outcome.

[209] He provided the following background to the "practice" of fundal pressure:

"... fundal pressure is a practice which is not advocated in any South African certainly teaching unit. It is also in terms of midwifery practice something which is not advocated. The midwifery staff are trained generally using very standard text books for teaching and the one that is most used is a book called Myles, M-Y-L-E-S which is a very old book that has been revised on many occasions, including the most recent African addition of that, Ana Nolte, one of our senior midwives was involved in the revision and in the, that text there is absolutely no reference at all to fundal uterine pressure as a means of effecting delivery. Nevertheless there are some people who have considered the possibility that this may be a useful way to assist with a delivery, and certain studies had been done to try and assess whether or not gentle fundal pressure using only the hands (on) the fundus could assist in the process of child birth, but the evidence for that has not been, has not shown any benefit at all, and there are very significant concerns that have been expressed about the possibility of this causing harm. And once again the harm that can result from this may range from a further escalation in intrauterine pressure, much as what happens when the mother pushes down, but this is now somebody exerting external pressure on the uterus, which will compromise uterine perfusion further, even to the point of the possibly of rupturing the uterus. So these concerns have been acknowledged by the WHO and they on the basis of that they do not recommend this, they do not consider this or recommend this procedure and the whatever further obstetrics practice develops from this intervention has to be only in the context of clinical studies and not part of the routine obstetric practice because it is considered to be potentially dangerous."

[210] Apart from noting the anomaly that Sister Tshanyingca had not written in her notes that she had applied fundal pressure, he was somewhat perturbed by how the plaintiff contended this pressure had been applied to her abdomen which in his view would certainly have added to the risk of HIE:

“(In) this particular case although it is not written in the notes, that it was more than gentle fundal pressure that seems to have been applied. If this is indeed correct, and arms or even knees have been used, this (has) definitely never ever been studied anywhere, and nobody would I think every think that this was an acceptable form of practice. And the risks would be those that I have alluded to already.”

[211] Ironically in cross examination the Cochrane Review was held up by the defendant as a reason not to discount the practice of fundal pressure, and/or to argue away its potentially harmful effects as contributing causally to ST’s HIE, not only ignoring Sister Tshanyingca’s outright denial that she attempted even regular fundal pressure in the circumstances, but also overlooking the egregious nature of the claimed assault to the plaintiff’s abdomen according to her testimony which on anyone’s account would have been unacceptable.

[212] Dr Koll agreed that the issue of the application of fundal pressure remains controversial and offered the usual indicators for and against its use. He confirmed however that it is a practice still widely applied. Regarding the plaintiff’s version how fundal pressure was applied he suggested that he was more concerned with maternal than foetal injury. He was incidentally aghast at the Plaintiff’s rendition of how Sister Tshanyingca applied the pressure to her abdomen, remarking that if it were true, he would not allow the person to set foot in a labour ward again. (As an aside, I realise that his comment was aimed at the suggested incredulity of the plaintiff’s version regarding how this happened, but it needs to be said that no fledgling medical professional is beyond redemption or remediation or cannot be appropriately counselled or

disciplined.)⁷⁶

[213] He agreed ultimately however that if fundal pressure in the manner suggested by the plaintiff had been applied *for a continuous period of 10 minutes* (I deal with the so-called 10-minute “rule of thumb” below), he would agree with Professors Anthony and Smith as to how the damage was done.

[214] Professor Cooper added his understanding that fundal pressure is generally not recommended. He was inclined to agree with Professor Smith that the application of fundal pressure (as an iatrogenic induced event as referred to by the latter) might be so regarded but only if “it is going to be the equivalent of what we recognize as a sentinel even, which is a ruptured uterus, prolapsed cord, a massive abruption of the placenta....” And provided that it would “have to have been...applied for these 10 minutes continuously and with excessive force.”

[215] He further agreed that Schifrin’s theory of cranial compression ischaemic encephalopathy was an accepted one “as shown in the animal situation.”

[216] On this score too, I conclude that the plaintiff has established on a preponderance of probabilities that Sister Tshanyingca breached the standard of reasonable care by performing this manoeuvre (on the basis described by the plaintiff) which, on anyone’s assessment of what is considered acceptable, created a foreseeable risk of harm to ST.

⁷⁶ Sister Tshanyingca should have made a clean breast of things. Her remarkable and quick thinking attempts to resuscitate the baby shows a side to her ability that would be ungracious of me not to recognize or to encourage as being among her attributes worthy of her calling as a nurse. Her willingness to concede her mistakes and the obligation to be accountable however evidently requires to be appropriately addressed.

The probable cause of ST's HIE injury:

[217] This question, which goes to causation, generated the most controversy.

[218] The reason for the defendant's expert's reluctance in conceding that Sister Tshanyingca's substandard monitoring or management of the plaintiff's labour (even though it may have created a risk) caused ST's acute profound brain injury lies in the unique features and pattern of such an injury.

[219] Pasternak & Gorey,⁷⁷ who conducted a study of the images of eleven term infants who suffered acute, near-total asphyxia at the end of labour documented which regions of the brain are typically targeted by such injury. A consistent pattern of injury was shown in the subcortical brain nuclei, including thalamus, basal ganglia, and brainstem (involving grey matter areas); whereas in contrast the cerebral cortex and white matter were completely or relatively spared. Their work suggests that this pattern of injury is unlikely to be reproduced when seen on an MRI scan of a damaged brain except in a situation where the hypoxic ischemic insult which caused it occurred or manifested itself as a total or near total occlusion of the baby's blood supply to the brain (a simultaneous and abrupt deprivation of oxygen and blood flow to all organs) at the end of labour. (The insults are usually relatively brief because, if prolonged, the probable outcome is foetal demise or unsuccessful neonatal resuscitation).⁷⁸

[220] The distribution of injury in the eleven patients reflects the hierarchy of the foetal brain's metabolic needs that are unmet after a severe, sudden disruption of substrate supply as occurs in an acute, severe asphyxia. The higher

⁷⁷ The Syndrome of Acute Near-Total Intrauterine Asphyxia in the Term Infant, Pasternak & Gorey, *Pediatric Neurology*, Vol 18 No 5, 391

⁷⁸ This period is stated to be between ten minutes, from the point of onset of the acute insult (see the ten-minute rule of thumb referred to in paragraph [221], and forty-five to fifty minutes on the extreme side.

metabolic rate of the brain compared with other organs explains the significant neonatal encephalopathy with relative sparing of nonbrain organs. Similarly, the higher metabolic rate of subcortical nuclei compared with cerebral hemispheres explains the preponderance of subcortical damage. This clinical and imaging syndrome is in contrast with that seen in more prolonged but less severe intrauterine asphyxia, in which the shunting of blood flow from nonbrain organs to the brain and from cerebral hemispheres to the thalamus and brainstem renders nonbrain organs and cerebral hemispheres most vulnerable.⁷⁹

[221] In a different study by Rennie and Rosenbloom,⁸⁰ which reflects on the time to foetal hypoxic ischaemic brain damage in animal models and human babies, the authors conclude that damage begins to accrue after ten minutes of an acute profound hypoxic ischaemic insult. (“the ten-minute rule of thumb”).

[222] Based on these typical features the defendant’s case is that an acute profound brain injury is the result of a sentinel event, that is a sudden, profound insult, that occurs without any forewarning prior to its onset. It is unexpected so therefore it is unlikely to present itself as an evolving threat by foetal monitoring. Instead, it constitutes an obstetric emergency. The obvious implication of this is that when the insult or event becomes a feature of the foetus’ condition there is also invariably insufficient time to react so as to avoid or ameliorate the damage. In the result a plaintiff in the trial of an action such as the present one will be unlikely to establish factual causation.

[223] The test for factual causation is whether the act or omission of the defendant has been proved to have caused or materially contributed to the harm

⁷⁹ Pasternak, *Supra*.

⁸⁰ How long have we got to get the baby out? A review of the effects of acute and profound intrapartum hypoxia and ischaemia, Janet Rennie & Lewis Rosenbloom, 2011.

suffered on the basis of the traditional “but for” test.⁸¹ Where the defendant has negligently breached a legal duty and the plaintiff has suffered harm, it must still be proved that the breach is what caused the harm suffered.

[224] Therefore, the question still needs to be asked in the present situation: would ST’s injury have been avoided if Sister Tshanyingca had properly monitored the plaintiff and her foetus and had acted appropriately on the results (which in all probability would have alerted her to signs of evolving foetal distress requiring her to apply established methods of intervention in order to avert the harm)? The other part to the question, since the application of the inappropriate fundal pressure is pleaded as one the wrongful acts relied upon as constituting the cumulative negligence contended for, is whether the harm would have ensued but for this act.

[225] The view of the plaintiff’s experts is that the brain injury pattern does not confine this court to a conclusion that factual causation cannot be established simply because of the agreed radiological finding as to what the neuroimaging features on the MRI scan depict because this merely speaks to the injury’s pattern and severity and not its causative mechanism. (I agree with this proposition especially since the radiologists emphasize that the MRI scan “*demonstrates features* of a global of a global insult due to an acute-profound hypoxic injury” and in fact does not speak to any mechanism at all. Indeed, it is the court that must determine the probable mechanism on the evidence.) They maintain further that BG injuries also can also be caused by a different event than the classic one which happens in an obstetric emergency. In this respect, the possibility exists that repeated and prolonged periods of asphyxia (oxygen deficiency) or ischaemic (blood flow) insufficiency during labour in the near-

⁸¹ Oppelt v Head: Health, Department of Health, Provincial Administration: Western Cape 2015 (12) BCLR 1471 (CC) at [35]-[48] including the authorities referred to therein.

term foetus (referred to as “subthreshold hypoxia/ischaemia”) can also be causative of such an injury and is an exception to the general tendency of a watershed distribution (the so-called partial prolonged acute profound injury) after global asphyxia insults in the near-term foetus in the absence of any intrauterine “sentinel”/catastrophic event. These kinds of repeated insults of moderate duration cause selective neuronal loss in the striatal nuclei (putamen and caudate nucleus) which develops when relatively prolonged periods of asphyxia or ischemia are repeated. The medical literature outlined in paragraph 28 above supports this theory (Mallard *et al.*, 1995; de Haan *et al.*, 1997). So, whereas in the experimental work 30 minutes of continuous cerebral ischemia was associated with predominantly parasagittal cortical neuronal loss, with only moderate striatal injury, three times ten periods of ischemia led to a greater proportion of striatal injury relative to cortical neuronal loss (Mallard *et al.*, 1995). Significantly, striatal involvement was also seen after prolonged partial asphyxia in which distinct episodes of bradycardia and hypotension occurred (Gunn *et al.*, 1992).

[226] Professor Smith explicated that the striatum (putamina) is within the territory of the middle cerebral artery (the grey matter area of the brain that is typically damaged in an acute profound type of injury) and is therefore not a watershed zone. Thus, it is likely that the pathogenesis of striatal involvement in the near-term foetus is related to the precise timing of relatively prolonged episodes of asphyxia and not to more severe local hypoperfusion (ischaemia). Speculatively, the apparent vulnerability of striatal medium-sized neurons to this type of insult may be related to a greater release of glutamate into the extracellular space after repeated insults compared with a single insult of the same cumulative duration.

[227] The effect of this is that the underlying or subthreshold

hypoxia/ischaemia, evolving like a perfect storm as it were, but without those insults causing injury in themselves like one would see in a partial prolonged injury pattern, would render the foetus more susceptible to a global insult (when the foetal brain can no longer maintain its own metabolism) that will show up on an MRI brain scan as an acute profound injury because of the predominant lesion being in the grey matter zone of the brain. The other tendency is that because of this predisposition the foetus may be more vulnerable to suffering a global insult in less time than the accepted timeframe of between 10 and forty-five or fifty minutes.

[228] These propositions are gleaned from existing literature that supports the so-called subthreshold theory.

[229] Professor Anthony described his understanding of how a foetus may sustain a hypoxic brain injury during labour:

“(T)he labour, as I have already tried to describe is a highly potential hypoxic stress to the baby. And the baby can withstand a certain amount of hypoxia before that hypoxia translates into an actual injury. The most important organ and the most sensitive organ that will suffer consequences of inadequate oxygenation is the brain, the fetal brain. And the baby can adapt in various ways to evolving hypoxia in order to try and protect itself. In terms of the structure of the fetal brain the most important structures are the basal ganglia of the brain which are responsible for what we call vegetative functions, so in other words the breathing, the things that normally we do unconsciously, and that keep us alive. And the baby faced with hypoxia which worsens will try and preserve the blood flow to the brainstem above all else. In doing that it may constrict some of the blood vessels that are flowing, bringing blood to the cortex of the brain and in doing that parts of the brain may become, what we call ischemic, in other words the blood flowing through them, there is not enough blood containing enough oxygen flowing through those tissues and then they show evidence of injury. But when that happens, there are still preserving their blood flow to the brain stem. And this is often what is called a partial prolonged hypoxic injury. And it indicates a process of compensation usually to a gradually increasing hypoxic stress. When the hypoxia intensifies and becomes or moves beyond the point of the baby being able to compensate then you may get injury to the fetal brainstem. And that can happen either through an intensification of a gradual process of evolving hypoxia during the course

of the labour, or it can happen because there is a sudden cessation of oxygenation of the fetus as a result of what is often called a sentinel event. So, if something happens which cuts off the baby's blood supply abruptly, for example the uterus ruptures or the placenta separates and under those circumstances the baby cannot begin to adapt and the most sensitive metabolically active tissue which is in the basal ganglia are affected almost immediately and this is sometimes called the acute profound injury. Now in this particular case one needs to consider why it was that the basal ganglia in particular (was) targeted. And we know that generally speaking there is about ten to 12 minutes of complete anoxia that may pass before there is evidence of injury to the brainstem and to the fetus. But that period of ten to 12 minutes presupposes a normal baseline oxygenation of a normal baby. Where the baby has become gradually more hypoxic and perhaps being able to adapt to some extent to evolving hypoxia and something happens that then suddenly intensifies the hypoxia. The consequence may lead to a basal stem acute profound injury, as was described in this particular case."

[230] Leave aside the "10-to-12-minute rule" of complete anoxia that may pass before there is evidence of injury to the brainstem and to the foetus, he explains how it would have been possible that subthreshold hypoxia (consisting in effect of cumulative hypoxic insults) could have conduced to an acute profound injury in ST's situation:

"What needs to be explained is what happened in the particular circumstance in this case. Usually, a normally oxygenated baby can sustain ten to twelve minutes probably of complete anoxia before injury sets in. And that has been documented in experimental work.⁸² But it presupposes that if you look at this particular injury that the baby was normally oxygenated at the time that the central events took place, and in this case what we know is that the baby was not adequately monitored during the first stage of labour. That the mother was pushing for a prolonged period of time, and it is more than likely that the fundal pressure was the additional insult which further increased the likelihood of hypoxia, and which probably led to the injury that has resulted in this child, the basal ganglia and thalamic injury that we see and characterise as acute profound injury."

[231] Professor Anthony agreed that the pattern of an acute profound brain injury seen on an MRI scan is distinguishable from that of a so-called partial prolonged hypoxic ischemic injury. This is evident from his reply that:

⁸² This is a reference in the Rennie and Rosenbloom Review to the works of Windle and Myers concerning the use of fetal monkeys used to mimic acute total damage footnoted in the paper.

“The partial prolonged ischemic injury is an adaptive injury, if you like, caused by the baby having to restrict the blood flow to the main cortical blood flow and the area between the vessels that are supplying blood to the cortex, that are furthest from the vessels, so-called watershed areas, are the ones where the flow is most attenuated and most likely to become injured.

ADV V/D LINDE: And that is the pattern that one will see on an MRI image where a hypoxic ischemic injury or the insult occurred over a period of time.

PROF ANTHONY: Correct..”

[232] He did not agree however that an acute profound type of injury is caused by a hypoxic ischemic episode limited to a period of 10 to 45 minutes as was suggested to him on behalf of the defendant. Instead, he opined that the question as to how long it takes to cause damage is “not entirely clear”. He explained why:

“... If you have complete anoxia, in other words if you cut off all the blood supply and all the oxygenation to the foetus then between 10 and 12 minutes is required to initiate the process of damage; initiate the process of injury. But the notion that you can have a gradually worsening hypoxemia of the baby, in other words not enough oxygen floating around, an adaptation which involves decreasing the flow to the cortical brain and redirecting it towards the brainstem, where the baby, where ongoing hypoxia outstrips, if you like the compensatory mechanism, that can also lead to the same pattern of basal ganglia and thalamic injury that is seen. On the other hand, in a sentinel event, an acute sudden event which is an absolute event, the most likely structure that you are going to see injured is going to be the brainstem, because it is the most metabolically active of the cerebral tissue and it is the most susceptible to profound ischemia.”

[233] He agreed that there is no indication on ST’s MRI scan of any damage to the watershed regions of her brain (the typical pattern of a partial prolonged brain injury) but emphasised that an insult does not necessarily lead to injury.

[234] To put this into context, he explicated that:

“If that were, if the insult were to lead most directly to injury then it would be impossible to salvage any baby that is getting into trouble as a result of hypoxia during labour without there also being injury on every occasion. That is not true. The whole, the whole thrust of foetal

monitoring during labour is to detect evolving hypoxemia in the baby and to intervene before injury takes place. And what the counsel is referring to now is the possibility that this baby may have become increasingly hypoxemic during the labour, because of the process of labour itself and because of the prolonged bearing down of the mother, and then what happened was that the introduction of fundal pressure worsened that quite acutely during the second stage of labour. And depending on the baseline in response of the baby, depending on where it is in relationship to what preceded it, in other words how much, how well oxygenated it was at the time that the critical event took place, will determine what happens. If the baby has a period at the time to further adapt its blood supply to the cortex then you will see the watershed injury as well, but in this particular instance the second stage of labour was very short and for that reason, whatever damage would have taken place, would have affected the most metabolically susceptible tissue in the brain, bearing in mind that this baby more than likely was not adequately oxygenated at the start of the second stage of labour.”

[235] He disagreed with the assumption put to him by Mr. Van Der Linde that if there was any interference in the oxygenation of ST that it would have shown up on an MRI showing features consistent with a partial prolonged pattern. He explained why not as follows:

“...a certain level of hypoxemia is necessary to cause an injury and you may, as I have already said, have hypoxemia, which is detectable in terms of foetal monitoring, which has not yet resulted in injury. If you have a sudden escalation in the severity of that hypoxemia as a result of an event, whatever that may be, the consequences of that are going to be related to the severity of the hypoxia and its duration. If it is of longer duration then you will see a progressive change in the foetal brain, as the baby tries to adapt and fails, leading to both watershed injury, and if it is sufficiently severe, also a basal ganglia injury. If the insult is severe but of short duration then whatever injury we see is going to accrue to the most metabolically active tissue first and then to other tissues afterwards, and the most metabolically active tissue that you have got is in fact in the basal ganglia.”

[236] Put to him that a HIE episode which gives rise to an acute profound injury lasts for 10 to 45 minutes, he explained why he disagrees:

“An acute profound injury can develop in a normally oxygenated foetus after 10 minutes of, 10 to 12 minutes of complete anoxia. It may develop much more rapidly than that if the baby is not normally oxygenated at the time the event takes place. It may also develop over a longer period of time if the baby is in a chronically hypoxic stress environment where the baby is not getting enough oxygenated blood through the placenta and where the hypoxemia continues and that maybe

gets worse, under circumstances where all the adaptive mechanisms have been deployed and the baby can no longer preserve sufficient flow of oxygenated blood to the basal ganglia, in which case you will see a mixed picture of both prolonged partial and also acute profound injury. In other words, watershed injury and basal ganglia and thalami.

ADV V/D LINDE: Now one does not see that picture on the MRI in this matter.

PROF ANTHONY: That is correct, M'Lady. It is as I understand the neuro-radiology report.

ADV V/D LINDE: If the ischemic, hypoxic ischemic episode is shorter than 10 minutes then there will be no brain damage.

PROF ANTHONY: M'Lady, that is not correct. As I have already indicated the, this 10-to-12-minute rule applies to experimental work that has been conducted and it looks at the process of a normally oxygenated baby subject to complete anoxia. In other words, you switch off the tap altogether and that is the consequence. After 10 to 12 minutes the baby can no longer sustain foetal hypoxia without suffering damage to the neurones and injury. If the baby, if somebody had been sort of standing on the baby's windpipe for a variable period of time prior to the onset of some other event that caused hypoxia then a much shorter period of time will be required to elicit the same response"

[237] Referred to the Rennie and Rosenbloom review on which Professor Cooper bases his conclusion that damage will accrue strictly 10 minutes after an acute profound insult, Professor Anthony however honed-in on the reservation expressed in that same article that there is biological variability in human foetuses regarding the timing. The opinion of the authors is that human cases of acute profound hypoxic ischemia in which the insult duration can be timed with precision remain rare and that there is often uncertainty about the prior state of foetal health.⁸³ He also alluded in the article to the authors' reference to foetal monkeys implicated in classic experiments on acute profound damages by

⁸³ The passage from the Rennie Review of relevance to his submission reads as follows:

"Human cases of acute profound hypoxic ischemia in which the insult duration can be timed with precision remain rare and there is often uncertainty about the prior state of foetal health. Nevertheless, it is the case that in many circumstances the human baby does appear to experience an insult that is close to that administered to animal foetuses in a laboratory setting. While there is clear variability both in the foetal reserve and in the duration and degree of the insult, we are now the opinion that the concept that damage begins to accrue after 10 minutes of an acute profound hypoxic ischemic insult originally constructed from the results of the work of Windle and Myers, continues to serve well as a framework and hence all obstetricians need to be aware of these data"

Myers⁸⁴ in which they note that: “fetal monkeys who were already acidotic because of a period of partial asphyxia acquired damage to the deep grey matter after a very short period of superimposed acute asphyxia, lasting 3-4 minutes.”

[238] Thus, the insult to the foetus by pressure exerted during the irregular application of fundal pressure (where there was already underlying compromise) is consistent with the kind of superimposed acute asphyxia insult of shorter duration than 10-minute rule of thumb referred to in the Rennie and Rosenbloom review.

[239] Professor Smith further to his professional report reiterated in his testimony that an acute profound injury should not imply that it is a *process* that is linked to a pattern. Rather, it is a term that a radiologist gives to the pattern, which is of damage to the grey matter of the brain, that is the basal ganglia and thalamus, also known in experimental work as the striatum. He cautioned that one cannot conclude from looking at the brain injury pattern that the damage was necessarily caused by a sudden, rushed, unexpected, profound total asphyxia.

[240] He alluded to the mechanism of injury in animal models forming the basis for his and Professor Anthony’s view regarding how ST’s injury probably occurred. He emphasized that repeated insults over time in the near-term human foetus mimic what happens during labour in the animal models that have been researched, and that the foetal sheep studies fit in with the analogous situation during labour where there is no sentinel event. In such an event, there is a gradual changeover in the foetal condition from reassuring to non-reassuring.

[241] He too explicated that subthreshold hypoxia does not necessarily cause an

⁸⁴ This is referenced in the Rennie Review in the footnotes.

injury on its own but that it is followed by a superimposed acute process that causes the grey matter brain injury. The subthreshold situation just causes increased vulnerability to what is going to follow.

[242] His opinion of what happened in this case is that due to suboptimal monitoring and the plaintiff's prolonged persistent bearing down, acidosis probably developed upon which was superimposed the inappropriate application of fundal pressure. He illuminated that if one applies external mechanical force that one has no control over what pressure one raises.

[243] His review of the plaintiff's case revealed no sentinel event, therefore nothing unknown and no umbilical cord prolapse. But even supposing a true sentinel event, he emphasized that such a situation would not have happened without warning. Instead, one would have been able to see it coming as it were, reflected by a change in the foetal condition with reference to foetal heartrate changes.

[244] He emphasized that while the 10-minute rule of thumb has proved to be a useful guide, there is a degree of biological variability and variation in the severity of the insult and the prior state of the foetus, hence it is helpful to re-examine the evidence from time to time as he has done. The data supports the evidence provided by the primate studies regarding a worse outcome if an acute near total insult is superimposed on a previous episode of partial hypoxia.

[245] Professor Koll described an acute profound injury as one that tells us it's a consequence of an acute profound "insult". In his view, in order for the injury to manifest itself there would have to be a complete occlusion of blood supply to the baby. He deferred to the opinion of Professor Cooper regarding the cause of the injury *in casu*, but not before giving away his ostensibly narrow view of

brain injury in neonates:

“As I said right at the start, my knowledge of ...brain injury in neonates is confined to the mechanism of acute profound and an understanding that acute profound injury is caused by an acute profound event. And a partial prolonged injury is caused by a partial prolonged event. And that is the extent and that is what I have always used in my, in interpreting my understanding and where to look to see if any negligence has occurred.”

[246] He disagreed with the hypothesis of subthreshold hypoxia put forward by Professors Anthony and Smith, dismissing it on the basis that there are no studies in the conventional literature that supports it, despite been pointed to these. In his ultimate view of it all the animal studies put up as justification for the theory's validity (already accepted in the literature on which Professors Anthony and Smith rely) do not fill him with confidence because in his view, whilst animal research is of considerable value, there is “not a simple walkway between animal studies and human studies.”

[247] From an obstetric point of view, based on his review of the foetal and maternal condition as recorded in the maternity case record (he did not offer an opinion based on the plaintiff's evidence), the nature of the injury and relying on his current understanding of the literature, he concluded that the injury occurred shortly before birth and in the classic manner in which he understands acute profound injuries to occur. Indeed, asked whether he accepted that the susceptibility of the foetus during the second stage of labour will vary, depending on the extent to which its compensatory mechanisms have already been deployed in the earlier part of labour, he reverted to his simplistic understanding of the stereotypical causative mechanisms for the two brain injury patterns:

“It is a difficult one to answer. We have always believed that that unless the baby has a prior injury, it is not going to get an acute profound injury. And that is my

understanding of it and that is what I have always believed.

The thing that predisposes a baby to injury, are things like inflammatory syndromes and stuff like that. But not partial, not clinically insignificant partial prolonged insult during the labour.”

[248] He accepts that that the timing is controversial and that it varies but aligns himself with those who agree that the hypoxia has to be present for *at least* 10 minutes for injury to occur.

[249] Since there is no indication in the maternity case record of any foetal distress according to him (again glossing over the lay evidence) and absent a partial prolonged injury or mixed pattern being suggested to him as being the outcome, he presumes that an acute profound insult caused the injury in the second stage of labour. Pressed to suggest what in his view might have caused it in all the circumstances, he had to concede ultimately that he had no idea. He was firm however that the application of the fundal pressure as alleged could not have been the cause because that would have had to entail a complete occlusion of the blood supply for a period of at least ten minutes.

[250] Professor Cooper also insisted on a strict application of the ten-minute rule of thumb. In his view, if a shuttle for blood flow is occluded for less than 10 minutes it is very unlikely to cause damage but beyond that it potentially can cause damage.

[251] He however conceded the notion, based on the animal models, that damage might be caused other than by a total occlusion provided it ensues for a period of ten minutes. This is evident from his explanation that:

“If there is excessive force during a contraction, theoretically and I think based on some animal models as well, it may increase the intracranial pressure and if that occurs to a severe extent, then blood flow coming from the heart and via the blood vessels to the brain could be impeded, so excessive pressure during a contraction, resulting in increased, marked increased, firstly into uterine pressure, which should be transmitted or translated to the intracranial

pressure inside the head, the skull, that could interfere with blood flow. However, to cause this kind of brain damage it would have to have been for a continuous period of at least 10 minutes ... based on what I have said before so one would need to know how long if there was excessive pressure that (was) exerted, one would need to know for how a period it was exerted.”

[252] Despite his fastidious hold on the ten-minute rule, ironically owed to animal studies, he does not accept the Mallard papers that give weight to the subthreshold hypoxia theory because it is based on animal studies which in his view is not an appropriate model to test the hypothesis because “there is no situation during...labour that would give you intermittent five-minute complete lack of blood flow to the brain.”

[253] He was however open to the suggestion that there are a lot of unknown aspects of what the foetus experiences during labour, and that there might, in the case of an acute profound injury, not be a recognized sentinel event. He was therefore prepared to accept Schifrin’s mechanism of cranial compression as being causative of ischaemic and haemorrhagic foetal neurological injury:

“When you have external fundal or if you have got a situation and it may be just one of excessive uterine contractions that there is external pressure of the foetus’ head, then that would compress the blood vessels and interfere with blood flow to the brain. So, if that is accepted hypothesis and it has been shown in the animal situation ...”

[254] He further agreed with Professor Smith’s exposition concerning the underlying pathophysiological concepts of excessive external pressure on blood vessels collapsing them and causing ischaemic injuries as well as the concept that during a contraction, the intrauterine pressure on a foetus increases in response to which it raises its own internal blood pressure to ensure that blood circulates to tissues and organs.

[255] In the current situation however, he dismissed the notion that the application of the fundal pressure, as described by the plaintiff, is a probable

explanation for ST's encephalopathy, because a continuous period of 10 minutes of pressure would have been necessary to cause it.

[256] He does not accept that there is a connection between the "series of earlier insults" relied upon by the plaintiff falling outside of the 10-to-45-minute period and ST sustaining the brain injury. This would in his view be akin in the human situation to a partial prolonged type of injury.

[257] He resisted the reliance on animal studies as underscoring the subthreshold hypoxia theory on the basis that these cannot be automatically applied to the human situation because the human brain is a lot more complex and is unlikely to exactly mimic any of the models.

[258] This notwithstanding he agreed under cross examination that it is not an exact science that all fetuses react in exactly the same manner when they are subjected to insults. He conceded that there is always a variation or often a variation and therefore one cannot say there is an absolute minimum time for this or an absolute maximum time for that.

[259] He accepts the authority of Rennie and Rosenbloom (which ironically endorses the foetal monkey studies) and that this article can be used as an indication as to what happens in the human brain as elucidated by the authors.

[260] He further accepts that a hypoxic event in a fetus can be of different magnitudes and duration.

[261] He accepts the notion that insults can last for a substantial period of time before there is actual damage done to the brain. He was also prepared to concede (as propounded by Rennie & Rosenbloom in their review concerning

primate studies) that you get a worse outcome if an acute near total insult is inflicted after a previous episode of partial hypoxia. Whilst at first tentatively suggesting that this is akin to a partial prolonged injury scenario, he conceded the logic that if the foetus is already acidotic because of the period of partial asphyxia (in other words she has suffered *insults* of asphyxia as opposed to damage), then damage follows on that, and the foetus is more susceptible then to acute profound damage.

[262] Responding to the submission that it is the plaintiff's case that this end damage was done during the period when the traumatic fundal pressure was applied, and even assuming the mechanism which he agrees (namely that it could have caused intracranial pressure beyond the level that would allow for adequate blood flow to the point that it severely affected or even shut down the blood flow), he yet maintained that such a situation would had to have endured, or the pressure have been applied, for a period of ten minutes. This however rests on the premise that fundal pressure contended for by the plaintiff was applied during a contraction. The logic he postulates is that a contraction (which is what would raise the intracranial pressure) normally only persists for a period of 45 minutes, rendering the plaintiff's submission of this being the cause of the ST's brain injury improbable.

[263] Put to him that given the plaintiff's evidence of how the fundal pressure intervention was applied and it being unlikely for this reason that one could expect it to have coincided with the plaintiff's contractions, he was prepared to make allowance for a period of "five, six, eight minutes" as being possibly causal to the damage, but this was premised on an acceptance that there was "severe compromise" to the foetus prior to the second stage of labour.

[264] He was reluctant to concede that it was reasonable to add the period of 5

minutes it took after birth until ST breathed on her own as constituting a continuing insult and period of bradycardia on the basis that ST would have been getting some perfusion by bag and mask ventilation during the period immediately after her birth once the resuscitation efforts commenced. He accepted however that there was perhaps one single minute in which the insult could have continued until the Apgar assessment by Sister Tshanyingca.⁸⁵ He also accepted that there would have been ongoing damage occasioned to the brain as a result of cell death in the hours and even days after the damage causing event which is known to continue after reperfusion of the brain.

[265] Referred to the one case in the paper of Pasternak where a bradycardia of only a few minutes had been documented (3-4 minutes) before an acute profound insult had occurred, Professor Cooper was not prepared to accept the obvious logic that the window of 10 minutes could therefore be narrowed. Asked to suggest on what authority he might be so dogmatic that one needs at least ten minutes of bradycardia before acute profound damage will accrue, he could not point to any alternative authority other than Rennie and Rosenbloom's 10-minute rule of thumb (which postulates the minimum time to get a compromised baby out). Ironically, in the same review the authors note that the "rule" has served as a useful guide of when the scale is tipped on the side of an obstetric emergency justifying intervention to get a baby delivered, and further points to the significant qualification that there is a degree of biological variability and variation in insults as well as the prior status of each foetus that would mean that the "rule" cannot be applied inflexibly. The authors in their conclusion in the review incidentally note that human cases of acute profound

⁸⁵ The fallacy of this premise is that Sister Tshanyingca's Apgar assessments may have been overstated. I have dealt with this above and concluded that her evidence is unreliable and or falls to be rejected. It is fairly probable because of the damage sustained by ST, that there had to have been severe bradycardia to have caused damage to the grey matter of her brain. It is therefore implausible that when Sister Tshanyingca did her Apgar assessment (before commencing resuscitation) that a heartbeat of more than 100 bpm pertained. It is just inconsistent with the clinical presentation of ST at birth. All the experts were ad idem that ST was severely asphyxiated.

hypoxic ischemia in which the insult duration can be timed with precision remain *rare*.

Was the injury avoidable?:

[266] Professor Anthony's answer is a resounding yes:

"... the whole process of fetal monitoring of any pregnancy, any labour is based upon the notion that an evolving insult to the fetus and evolving hypoxic ...[indistinct], can be detected and through intervention be mitigated either by removing whatever reason there may be for hypoxia, or by intervening to deliver the baby in order to allow the baby to breath outside the uterus. The process of intervening is designed to take place prior to injury occurring and the whole process of auscultating the fetal heart, the whole process of using CTG monitoring, is of signs in the baby that there is evolving hypoxia that there is a hypoxic insult with a goal in mind of intervening in order to prevent fetal injury. And I do not think that anybody doubts that this is possible and should be done, and it is the reason why there are universal protocols of fetal monitoring during labour. In this particular case, the question asked by counsel was whether this injury could have been averted, and the answer is yes, yes, on the basis of the fact that adequate monitoring should have taken place, during the first stage of labour, meaning auscultation of the fetal heart rate in relationship to contractions. It should have been avoided also on the basis of the fact that when the mother began bearing down that there should have been some attempt to deal with her pain to try and avoid her bearing down efforts and to more importantly monitoring the response of the fetus to those bearing down efforts and it could have been avoided to the extent that interventions that took place during the second stage of labour that were likely to aggravate any pre-existing fetal hypoxia should not have taken place, and here I am referring in particular to the this question of fundal pressure."

[267] In response to Mr. Van Der Linde's assertion that an acute profound injury is by its nature unavoidable and therefore not preventable Professor Anthony opines that:

"M'Lady in answer to counsel acute profound brain injury as I have already suggested to you is something which may sometimes occur as a result of a (sentinel) event which may be unavoidable.

On the other hand, even an acute profound brain injury which

takes place over a period of let us say 10 minutes, during the second stage of labour is preventable to the extent that if the injury and if the insult is related to an intervention which is prescribed then that by forbearance from carrying out that particular intervention you would avoid the injury.

If you had been monitoring the baby correctly anyway during the second stage of the labour and had any reason to be concerned that there was a problem developing especially during the second stage of labour, there is always the possibility of operative vaginal delivery which can take place very swiftly using a pair of forceps or a vacuum extraction.”

[268] Again, put to him that a sentinel event by the very definition of an acute profound injury is not preventable because it occurs too suddenly and unexpectedly, Professor Anthony agreed that whereas that might well be applicable to certain events, this would not be the case if the sentinel event is taken to be the application of the external fundal pressure as *in casu* which of its own might lead to an adverse outcome that was avoidable by forbearance in doing that which is proscribed.

[269] Dr Koll opined that he did not believe that the acute profound injury was preventable by any routine antenatal and delivery care that is administered in this day and age. This approach however stems from his inflexible view of what the neuroimaging of ST’s brain purportedly dictates.

Possible interventions:

[270] Professor Anthony in response to the assertion put to him by Mr. Van Der Linde that there was no way in the last 45 to 50 minutes from full dilatation to the baby’s birth to have expedited her delivery, offered the following possibilities to avoid the injury:

“... that is not true either the... the question of dealing with fetal distress for (want) of a better word during this second stage of labour is dealt with in a number of standard ways.

If... if the delivery can be accomplished using instruments that is generally the approach taken which would mean either vacuum

extraction or the use of pair of forceps. If that is not attainable either because the patient is not fully dilated or for any other reason the approach to management is to restore oxygenation to the fetus.

That means intrauterine resuscitation and that involves putting the mother on her side giving her oxygen stopping the uterine activity and then expediting delivery by whatever means is most rapid and that may mean a caesarean section, or it may mean as I have already suggested instrumental delivery.”

[271] Professor Anthony rejected Mr. Van Der Linde’s assertion that forceps delivery or a vacuum extraction procedure would not have been viable options. He pointed to the fact that the Maternity Guidelines, despite the risks inherent in these procedures, propose instrumental vaginal delivery in the case of foetal distress.

[272] Professor Smith, to whom it was put that if a prolonged cord threat arose within the last ten minutes of the birth process there is nothing that can be done, discounted such resignation. He lamented the fact that counsel had not necessary interrogated this with Professor Anthony as the expert obstetrician but added his view but there are mechanisms and procedures and things that they would do to gain time to deliver the baby and to relieve the obstruction on the umbilical cord.

[273] Indeed, this scenario is also clearly made provision for in the Maternity Guidelines.

[274] The observation ought to be made here that senior hospital staff appeared to have been on hand at the hospital to deal with any crisis at the time of the plaintiff’s delivery as was indicated by the fact that both Dr Yama and the night superintendent arrived promptly after been called to assist with the resuscitation of ST.

The role and duties of the experts:

[275] As indicated elsewhere, on the score of reasonableness and negligence the experts were at least in agreement that meaningful foetal monitoring that considers the foetal heart rate in relation to the mother's contractions with a view specifically to picking up on any foetal distress, is consistent with the standard of reasonable care outlined in the Maternity Guidelines and a *sine qua non* for a safe delivery without any adverse outcomes. The sole opinion of Dr Koll that there was no breach of duty on the part of Sister Tshanyingca in her management of the plaintiff's labour is diminished against the facts which I have found proven.

[276] The real disagreement arises concerning how ST's basal ganglia injury could plausibly have arisen from that breach of duty.

[277] It is well-established that where there are conflicting opinions of experts in the field, the court's determination of the issue at hand must depend on an analysis of the cogency of the underlying reasoning which led the experts to their conflicting opinions.⁸⁶

[278] Dr Koll, in respect of this aspect, could advance no cause for the acute profound damage.

[279] Both Professors Anthony and Smith however offered a plausible, logical explanation for how the injury may have been sustained, backed up by contributions from the literature to show that their reasoning is scientifically valid and supported by others in the profession.

⁸⁶ Buthelezi v Ndaba 2013 (5) SA 437 (SCA) at para 1; Michael & Another v Linksfield Park Clinic (Pty) Ltd & Another 2001 (3) SA 1188 SCA at para 36.

[280] Professor Cooper was hard pressed to accept the plaintiff's experts' views but relented on the issue concerning the relevance of subthreshold hypoxia/ishaemia. This notwithstanding, he was only prepared to accept Professor Smith's postulation of the external abdominal pressure as being causal to the final insult on the assumption that this would have entailed a total or near occlusion of ST's blood supply for 10 minutes based on Rennie and Rosenbloom's 10 minute "rule of thumb".

[281] He had to be reminded however of the qualification that despite the concept that damage begins to accrue after ten minutes of an acute profound hypoxic ischaemic insult providing a framework for how long an obstetrician has to get the baby out, that there is a degree of biological variability and variation in the severity of the insult and the prior state of the foetus.

[282] Even when referred to the Pasternak case of a few minutes he remained reluctant to concede the obvious, namely that "a few minutes" denotes less than 10 minutes. The fact that he did not wish to concede continuous bradycardia during the application of the traumatic fundal pressure detracts somewhat from his objectivity. Other than this fastidious resistance to the helpful understanding put forward by the plaintiff's experts, he too could not explain how the injury occurred.

[283] Mr. van der Linde criticised Professors Anthony and Smith for "attempting to develop a theory of so-called 'sub-threshold hypoxia.'" I however saw nothing of the kind. I accept their *bona fides* that they are merely interpreting what has long been stated in the literature to support their view helpfully offered to the court as to how the acute profound injury pattern could have resulted in the peculiar circumstances of the plaintiff's labour. In any

event, the notion that the foetus entered the second stage of labour with an underlying degree of hypoxia which gathered momentum earlier in the plaintiff's labour was ultimately accepted by Professor Cooper as contributing to the final insult. The resistance was rather in his reservation that the bradycardia could not have been continuous for a period of ten minutes, and that the ten-minute rule was unyielding.

[284] The plaintiff's attorneys, in supplementing the trial bundle on the fourth day of trial, included a document described in the index thereto as an Article / Letter to the Registrar by Professors Anthony and Smith, and Ronald van Toorn which I was informed during closing arguments purported to deal with an article authored by one Bodiat. I did not have sight of this letter because immediately the bundle had been emailed to me (the hearing proceeded via an internet platform and documents were constantly being added via email), and before I had had an opportunity to download it, Mr. Wessels placed on record that it had been included in error and the court should disregard it. I understood from Mr van der Linde that the letter is contentious and that it has appeared in a journal: *Professional Nursing Today* 2020. He explained in the letter that the authors take umbrage to the reference by Bodiat to a judgment of this court in *Shange v MEC for Health Province of KZN*.⁸⁷ Although I had regard to the judgement itself, because this was referenced in the defendant's heads of argument, whatever offence has been registered against the article, or in the letter, has not informed my thinking. Indeed, neither should it. The obligation of this court is to consider the evidence properly before it.

[285] Mr. van der Linde pointed in *Shange* to criticism by the court against the subthreshold hypoxia theory propounded by Professor Anthony and Professor Smith, but these comments again cannot be of application to the evidence at

⁸⁷ Case no 9019/2021 KZNP, judgement delivered on 5 December 2019.

hand. In this court, my obligation was to establish the possible cause of ST's brain damage in *this* factual scenario and against the background of the expert views presented to me concerning this unique situation.

[286] Mr. van der Linde submitted that the “alignment” of Professor Anthony and Professor Smith was highlighted when he advised in response to a question from the court that he, together with a group of radiologists and obstetricians, have submitted a descriptive article with regard to incidents of acute profound brain injuries in South Africa to an international journal but that they were still awaiting peer review of it. That article was not made available during the course of the trial. Mr. van der Linde submitted that the purport of the article is to advance the theory of the existence of a so-called ‘sub-threshold hypoxia’ which does not show up as an injury or injuries on an MRI scan and he went so far as to suggest that they were using the court as a forum to validate “their theory.”

[287] On the basis of this background Mr. van der Linde suggested that the objectivity of Professor Anthony and Professor Smith should be called into question.

[288] To the contrary, however, neither of the plaintiff's experts in my view peddled a theory that is inconsistent with what already exists in the accepted literature, and both were indeed quite mindful of their obligation to be objective in justifying their conclusions with reference to existing material rather than to any paper which they have co-authored. Professor Anthony when he testified in fact made no mention of their collaborative article at all, neither was it raised with him in cross examination. Professor Smith similarly did not refer to the fact that there is a body of professionals engaged in researching and interrogating this aspect in his evidence either until I asked the question referred to above so it can hardly be contended that there was a concerted effort on their

part to test or validate the paper to which they have contributed that is awaiting peer review. The contentious letter that was first included in a supplementation of the court bundle by email was also promptly withdrawn immediately Mr. Wessels noted the mistake.

[289] I add that I can hardly be suspicious when experts are engaging in research and writing articles about subjects that constantly come before the courts in medico-legal matters such as this. Indeed, I would be surprised if they were not putting their wisdom, training, and vast experience into practice by collectively investigating and trying to evolve “theories” that will hopefully make a difference not only in forensic but in clinical settings as well to eradicate or minimise what has obviously become a serious problem in government hospitals with the birth of compromised babies. In *AN obo EN v MEC for Health, Eastern Cape*⁸⁸ the Supreme Court of Appeal was constrained to remark upon the “prevalence of matters such as these” and the pity that despite “this sad state of affairs” (that is the “serious and serial negligence” in hospitals falling under the defendant and the studied neglect of professional standards in these hospitals that have become pervasive) and the need for urgent remedial intervention, that such conduct does not appear to have abated significantly. The situation is, as the court said, to be deprecated and something needs to be done about the problem.

[290] If that something entails that specialists in the medical profession, who are also teachers and mentors having a substantial influence in public health care institutions, can put this unfortunate experience of babies born with HIE to research in order to establish the cause of such injuries (which will then assist in how the problem is addressed in future) I doubt that anyone will hold this academic zeal against them when they are coincidentally also engaged as experts

⁸⁸ *Supra* at [28].

on the vexed issue in our courts.

Conclusion:

[291] The failure of a professional person to adhere to the general level of skill and diligence possessed and exercised at the same time by the member of the branch of the profession to which he or she belongs would normally constitute negligence.⁸⁹

[292] In *Goliath v MEC for Health* the court, concerning the approach to be adopted in determining the issue of negligence, noted with reference to Lord Justice Hobhouse's dictum in *Ratcliffe*) that:

“At the end of the trial, after all the evidence relied upon by either side has been called and tested, the judge has simply to decide whether as a matter of inference or otherwise he concludes on the balance or probabilities that the defendant was negligent and that such negligence caused the plaintiff's injury. That is the long and short of it.”⁹⁰

[293] At the close of the case after hearing the testimony the question is whether there is sufficient evidence to give rise to an inference of negligence on the part of Sister Tshanyingca. In this regard the court stated in *Goliath* that:

“... it is important to bear in mind that in a civil case it is not necessary for a plaintiff to prove that the inference that she asked the court to draw is the only reasonable inference. It suffices for her to convince the court that the inference that she advocates is the most readily apparent and acceptable inference from a number of possible inferences (*AA Onderlinge Assuransie Assosiasie Bpk v De Beer* 1982 (2) SA 603 (A); see also *Cooper & another NNO v Merchant Trade Finance Ltd* 2003 SA 1009 SCA)”.⁹¹

[294] I am satisfied that ST's brain injury was caused by the factors as described by Professors Anthony and Smith which, at least with regard to the

⁸⁹ *Goliath v MEC for Health*, Eastern Cape 2015 (2) SA 90 SCA at par 8.

⁹⁰ *Supra* at par 18.

⁹¹ *Supra* at par 19.

physiological mechanism of how the damage probably occurred, is not in contention. The experts were divided in the end only by the question of how long it would have taken for the acute profound damage to ensue and whether it was probable in this factual scenario that this could have happened. They were on one hand prepared to accept the authority of Rennie and Rosenbloom regarding the existence of what they unreasonably postulate as a rigid rule (as opposed to a “rule of thumb guide indicated for an entirely different purpose) but evidently seek to ignore the qualification and very sensible caution sounded in the article to obstetricians that recognition needs to be given to the fact that every insult and every foetus is different.

[295] The circumstances here were indeed very unusual but all the elements of a perfect storm were clearly in the making to conduce to the unfortunate adverse outcome. I have outlined above what probably happened following on Sister Tshanyingca’s dismissal failure to properly monitor the plaintiff and her foetus and to mitigate the obvious problem and risks arising from the plaintiff’s early and in effect prolonged pushing and bearing down before full cervical dilatation culminating in a situation whether she was faced with a baby stuck in the bony birth canal of a mother who was by then too exhausted to push her out, necessitating the cutting of an episiotomy and the application of the traumatic fundal pressure. Each of these actions in the unfortunate concatenation had a deleterious effect on the foetal wellbeing, leading to the final acute insult that caused the damage.

[296] A plaintiff is not required to establish the causal link with certainty, but only to establish that the wrongful conduct was probably a cause of the loss.⁹²

[297] I cannot conclude that the plaintiff’s experts’ views that the application of

⁹² Minister of Safety and Security v Duivenboden 2002 (6) SA 431 (SCA) at par [25].

the traumatic fundal pressure applied at the end of the series of these events is not capable of logical support.

[298] When the factual premise is considered in its entirety, the negligent monitoring, the premature and or prolonged pushing and the traumatic fundal pressure all logically contributed to and have a sufficiently close connection with the damage that resulted. This satisfies the “but for” test envisaged in *Oppelt v Department of Health, Western Cape* and the cases referred to therein.⁹³

[299] In the result I make the following order:⁹⁴

1. The defendant is held liable to compensate in whatever form or manner allowed in law whether in cash or in kind, the plaintiff’s agreed or proven damages arising from the cerebral palsy suffered by the minor child, ST.
2. The defendant shall pay the plaintiff’s party and party costs relating to the merits, together with all reserved costs, if any, which costs shall include:
 - 2.1 the costs of the preparation of their reports and qualifying fees, if any, of the following expert witnesses:
 - 2.1.1 Professor Andronikou - Radiologist
 - 2.1.2 Professor Anthony - Obstetrician
 - 2.1.3 Dr Kara - Paediatrician; and

⁹³ 2016 (1) SA 325 (CC) at para 48.

⁹⁴ The order I make is premised on a draft that was provided by the parties in the event that I found in favour of the plaintiff. I will assume that they have applied their minds to the costs of the experts that should be included or forgone. If anything has been omitted due to common oversight, the parties may obviously approach me to amend the order should the need arise.

2.1.4 Professor Smith - Neonatologist.

3. The defendant shall pay interest on the aforesaid costs at the current prescribed legal rate of interest within 14 days from date of *allocatur* or agreement to date of payment thereof.

B HARTLE

JUDGE OF THE HIGH COURT

DATE OF HEARING: 12, 13, 14, 15, 16 and 23 October 2020

DATE OF JUDGMENT: 18 October 2021*

*Judgment delivered electronically on this date by email to the parties.

APPEARANCES:

For the plaintiff: Adv J J Wessels SC instructed by Zuko Nonxuba Inc, East London (ref. Mr Nonxuba)

For the defendant: Adv H J Van der Linde SC & Adv. Y Malunga instructed by Norton Rose Fullbright care of Smith Tabata Attorneys, East London (ref. Ms Demmer)