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GUEST EDITORIAL

If it isn't written down, then it didn't happen: documentation in obstetric anaesthesia

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Accurate documentation in clinical medicine is vital for delivering safe patient care and essential for medicolegal protection. Several international medical governing bodies place accurate record keeping as one of the fundamental requirements for good clinical care. This edition of SAJAA features an article directly relevant to clinical documentation, specifically within obstetric anaesthesia. The study by Du Toit et al. is timely within the context of the medicolegal climate in South Africa.[1] While litigation occurs less frequently in anaesthesia than other specialities, medicolegal claims relating to obstetric anaesthesia are increasing in South Africa, and the nature of these claims is evolving. In the United Kingdom (UK), although claims related to obstetric anaesthesia have decreased, the pattern of litigation has changed with pain during caesarean section having replaced accidental awareness under general anaesthesia as the leading cause of successful litigation against obstetric anaesthetists.[2,3] Ensuring accurate clinical documentation, particularly recording standardised variables, can optimise clinical care and assist with managing potential medicolegal concerns, should they arise.

Du Toit et al. present their findings from a retrospective folder analysis which aimed to evaluate documentation by anaesthetists relating to establishing surgical anaesthesia by subarachnoid block. They identified 12 variables related to the conduct of spinal anaesthesia that were felt to be important and examined 100 consecutive spinal anaesthesia charts, each completed by a different anaesthetist of at least registrar level. Their findings are stark; only 1/100 anaesthetists (1%) documented all 12 areas, and only 10% of anaesthetists documented at least 10/12 variables. The principal findings highlight two important points:

1. There is no accepted standard for adequate documentation during spinal anaesthesia in South Africa.
2. Inadequate record-keeping is problematic even at well-resourced hospitals with senior anaesthetists – it is likely worse at the national level.

Several variables considered by Du Toit et al. merit further scrutiny. Anaesthetic records were assessed for 'report of aseptic technique', although no further details of aseptic technique were recorded. Presumably, this would be deemed acceptable if 'aseptic technique used' was recorded. International surveys of clinical practice suggest significant variation in practices around asepsis.[4] In the UK, national guidance suggests that optimal asepsis for central neuraxial block requires thorough handwashing with a surgical scrub solution and the use of barrier precautions, including wearing a cap, mask, sterile gown and gloves, and the use of a large sterile drape.[5] The role of routine use of a surgical gown in reducing infection is unclear. In a randomised trial, researchers from Canada investigated the effect of gowning on colonisation rates following epidural catheter insertion for labour analgesia.[6] Parturients underwent epidural analgesia with the anaesthesiologist either ungowned or wearing a sterile gown. Swabs for cultures were obtained from each of the operator's forearms, the work area under the insertion site, the epidural catheter tip, and the catheter segment adjacent to the insertion site. The authors found no difference in the primary outcome of microbial growth of any organisms from the cultured sites. Although there were no significant differences in catheter-tip colonisation rates between the ungowned and gowned groups, there was a relatively high incidence of catheter-tip colonisation in both groups, highlighting the crucial role of an aseptic technique. A further consideration in the discussion around components of the aseptic technique must include the environmental impact of any clinical intervention. In a recent assessment of the total carbon footprint and component carbon sources of different modes of labour analgesia, it was estimated that for epidural analgesia, the disposables required for insertion are responsible for over 70% of emissions, with the most significant single contributor being the single-use sterile gown.[7] Changing to reusable gowns and drapes and streamlining packs to limit waste would reduce the carbon impact of epidural analgesia.

Another element of the aseptic technique is the choice of skin preparation. In their study, Du Toit et al. did not specify that the nature of the cleaning agent should be stated. While perhaps superficially unimportant to specify the agent used, there is relevance with neuraxial anaesthesia because of the risks of neurotoxicity of chlorhexidine and the development of chronic adhesive arachnoiditis.[8] Chlorhexidine gluconate is a potent, broad-spectrum antiseptic effective against nearly all bacteria and yeasts. It has a faster onset and more prolonged

bactericidal effect than povidone-iodine. It also has a lower incidence of skin reactions than povidone-iodine. A study that compared the colonisation of epidural catheters following skin preparation using 0.5% chlorhexidine in alcohol, with skin preparation using an aqueous solution of 10% povidone-iodine, found that catheters inserted following the use of chlorhexidine were six times less likely to be colonised than when povidone-iodine had been used.[9] These advantages of chlorhexidine for central neuraxial block have led it to be recommended by the Royal College of Anaesthetists, the American Society of Anesthesiologists and the American Society of Regional Anesthesia as the preferred agent for skin asepsis before regional anaesthesia. However, it has been identified as the most likely causative agent in several case reports of neurological damage.[10] This behoves all anaesthesiologists to be meticulous in avoiding contaminating equipment used for the spinal or epidural procedure, e.g. applying the antiseptic separately – perhaps by spray – and removing it from the vicinity of the equipment to be used for the block itself.

The authors also audited documentation of the number of attempts at spinal anaesthesia at each spinal level. There is no published consensus on how to accurately document a spinal (or epidural) regarding the definition of an 'attempt'. Multiple attempts can indicate a spinal anaesthetic's difficulty and correlate with decreased patient satisfaction and an increased risk of complications. A UK questionnaire survey found marked diversity of opinion on how to define an 'attempt' at spinal anaesthesia, with the most popular definitions being the number of separate skin punctures made with the introducer and the total number of times the skin was punctured (including reinsertion through the same puncture).[11] It may be that perceived difficulty (or ease) is better documented by other means, for example, the time spent performing the procedure or an alternative scoring system.

A critical area of documentation of spinal anaesthesia for caesarean section evaluated by Du Toit et al. was the assessment of the adequacy of the block (including the method used for testing the block and dermatomal level of the sensory block) and what intervention was undertaken if the block was inadequate intraoperatively and the patient experienced pain. In their study, Du Toit et al. found that fewer than a third of patients had the block height recorded. Adequacy of surgical anaesthesia was also inadequately documented. Although spinal anaesthesia is generally reliable, failure, either wholly or partially, can be associated with intraoperative pain. A woman who experiences pain during caesarean section under spinal anaesthesia is at risk of adverse psychological sequelae, which can be mitigated by appropriate management.[12,13] Objective assessment of neuraxial anaesthesia can be challenging, and surveys of neuraxial block assessment before caesarean section reveal significant variation in practice. The urgent need for guidance to support best practices and offer a standard approach to practice in this area has been recognised by the publication of national guidelines in the UK and France.[14,15] Both guidelines focus on three thematic areas: patient consent, neuraxial block assessment, and intraoperative pain management. Additionally, they emphasise the critical role of communication at all stages of clinical care and finally highlight the crucial role of follow-up for women who experience pain and distress during caesarean section under neuraxial anaesthesia.

Du Toit et al. did not report on the extent of recording details around the degree of urgency of the caesarean section and time intervals associated with the decision to delivery. In a recent review of 21 years of litigation for anaesthetic negligence resulting in peripartum hypoxic-ischaemic encephalopathy, the authors stated, "It has never been so important to document our actions and the reasons for them accurately, meticulously and to the minute".[16] A recent narrative review found that although the decision-to-delivery interval and decision-to-incision interval are widely used performance measures in medical research, no consistent definition is used for either term in the published literature.[17] In particular, there was broad variation in the interpretation of when the 'decision' occurs, ranging from when the obstetrician in attendance documents the decision to when the whole team is alerted or when the patient is prepared for the operating theatre. This lack of consistency and precision in defining time intervals around emergency caesarean section can have many implications; communication within the multidisciplinary team can be compromised, with different team members having a different understanding of when the decision was made. For example, the obstetrician may perceive it as when they informed the patient, and the anaesthetist may consider it the time when they became aware.[18] In the UK, the Royal College of Obstetricians and Gynaecologists' "Each Baby Counts" anaesthetic-themed report contained multiple examples where communication between the obstetrician and the anaesthetist at category 1 and 2 caesarean section was inadequate. Given that the time to deliver a compromised fetus is a frequent issue in medical negligence cases, the lack of standardised definitions around timing can have medicolegal ramifications. Medical conditions requiring time-sensitive management require detailed record-keeping with exact times – a standard it appears we are a long way from achieving.

While serious neurological sequelae following obstetric spinal anaesthesia are rare, they are a potentially catastrophic complication. Key to management is early detection, and surgery, if required, should occur within eight to 12 hours. Recent guidelines make suggestions for monitoring and recovery, including documentation in the recovery area of ability to lift the legs or dermatomal level of sensory block.[19] A recent novel addition in Northern Ireland is the use of a "Regional Anaesthesia Alert Bracelet".[20] This bracelet instructs the patient to remove the bracelet if she can raise one leg at a time four hours post spinal insertion (the time of which is written on the bracelet). If she is unable to lift either leg, she alerts the midwife, who will request an anaesthetic review.

The relevance of the study by Du Toit et al. and implications for clinical practice should be considered in the context of the

medicolegal climate in South Africa and associated legislative changes. Almost 30 years ago, South Africa established a constitutional democracy that began significant societal change, underpinned by a strong culture of human rights awareness. While this was clearly a positive development, it has also led to a parallel increase in litigation when these rights are thought to have been breached. In October 2021, the South African Law Reform Commission released a discussion paper concerning medicolegal claims in South Africa.[21] Over the last decade, there has been a massive increase both in the number of claims for medical negligence and in the compensation awarded for these claims. There is a 36.8% growth rate per year nationally in payments made (R1 740 924 000 paid in 2020/2021), and contingent liability in 2020/2021 stood at R9 167 281 000. These staggering costs further cripple an overburdened health system and increase the likelihood of further claims through further budget restriction that worsens resource limitation. These issues are compounded by a lack of specific legislation to address legal claims in the medical field in South Africa: meaning that claims are dealt with under the common law. The discussion paper was aimed predominantly at addressing this deficiency in South African legislation but makes recommendations that:

1. Proper record-keeping systems be introduced and maintained, as proper record keeping is critical both in terms of patient care as well as evidence in legal processes.
2. Record-keeping guidelines be developed that address the National Health Act 61 of 2003 (NHA) provisions and related regulations, and which provide for the entire "life-cycle" of a health record: from origin to final disposal, addressing any deficiencies or pitfalls at any point along the way.[22]

These recommendations provide a narrative to address the deficiencies highlighted by the Du Toit et al. study with interventions that should be considered to promote safety and quality improvement in obstetric anaesthesia:

1. National practice standards in obstetric anaesthesia are needed, as some of the issues highlighted relate to differences in practice rather than documentation. Additionally, documentation minimum standards should be specified.
2. Anaesthetic forms should encourage compliance with these standards rather than hinder documentation. Collaborative national standards for documentation that result in preformatted procedural records have been successfully introduced internationally and may have local relevance.[23]
3. Education regarding specific areas could be enhanced, specifically concerning pain during caesarean section.

The study by Du Toit et al. has provided a starting point for documentation standards. In contrast to general anaesthesia, there is little to guide what constitutes a minimal data set for recording neuraxial procedures. Ahmed et al. established recommendations for documentation in regional anaesthesia (including neuraxial anaesthesia) using a modified Delphi process with international participants. Their final list is extensive, with a total of 54 items, with 51 having achieved strong consensus (≥ 75% agreement) and three having achieved weak consensus (50–74% agreement).[24] The list was divided into six areas: patient information, procedure preparation, procedure performance, specific items for peripheral nerve block performance, specific items for neuraxial procedure performance and post-procedure care. The authors acknowledged the impact of participants from different healthcare systems and the significant variation in current documentation practices in different countries, particularly between privately and publicly funded healthcare systems. Several items for consideration were added during the Delphi process due to their necessity in billing processes in privately funded health care. Additionally, several items would be routinely included in anaesthetic documentation. The authors commented that their proposal was not intended to be an exhaustive list nor a legal standard of documentation but rather a consensus of useful items to document patient care. Legislative intervention, while essential, can never address the root causes of the public health sector's systemic challenges. However, some areas, such as documentation, are relatively quickly addressed and under the clinician's control. Appropriate documentation and record-keeping are vital for patient care and essential for medicolegal defence. The NHA stipulates what should be contained in this documentation, including information relating to the examination of patients and healthcare interventions. Ultimately the maxim that "If it isn't written down, then it didn't happen" undermines the defence of many potentially defendable cases. Based on the work by Du Toit et al. and Ahmed et al., a suggested list of variables for documentation in obstetric anaesthesia is shown in Table I.

Table I: Suggested variables for documentation in obstetric regional anaesthesia

Preoperative care
Date and time of anaesthetic
Degree of urgency of the caesarean section
Level of experience of the anaesthesia provider
Consent process: including complications discussed and consent from patient
Intraoperative care
Use of aseptic technique; agent used, method of application
Needle type, gauge and length
Lumbar vertebral level at which the dura was punctured
Number of passes of the needle at each level attempted
Immediate complications: paraesthesia, dysaesthesia, bloody tap
Drugs used: local anaesthetic and opioid, concentration, and dose
Method of assessment of block and results
Intraoperative supplementation: drugs used and result
Time intervals: spinal anaesthesia to skin incision time; spinal anaesthesia to uterine incision time; spinal anaesthesia to skin closure
Instructions for postoperative care
Care of pressure areas and bladder
Documentation in recovery area of ability to lift the legs, or dermatomal level of sensory block

There are several potential benefits to thorough documentation, including effective communication within a multidisciplinary team and improvements in patient safety. It may also function as a memory aid, an audit tool, and even an educational resource in the training of junior clinicians. Indirectly, these things may lead to better patient outcomes and fewer medicolegal cases,

but should litigation ensue, good documentation may directly influence the outcome.

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