EPIDEMIOLOGIC INVESTIGATION ON HOW VICTORIAN PARAMEDICS TREATED LABOURING WOMEN

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ABSTRACT Today, the humanities are paying more attention to the mandated methods of engaging with the past through a number of culturally accepted ways. A large portion of this is attributable to the expanding discipline known as "cultural memory studies." Religious institutions are frequently used as an example of long-term cultural mediation and the varying agendas that permeate the preservation and concealment of a time-honored past in these circumstances. The crypt and its varied connections to the topic of recollection without memory are the focus of this essay, which is devoted to a notion that has received very little attention among students of cultural memory

Keywords: Labour, Birth, Childbirth, Paramedics, Ambulance

I. Introduction

Even though it is a normal part of the reproductive process, labour is a difficult and time-consuming physiological procedure. Pregnancy outcomes are closely related to labour and delivery choices made during this period of time. It is common for many women to confuse irregular cramping of bogus labour with signs of established labour, which can cause anxiety about the optimum time to see a doctor and delay the arrival of the baby. Labor develops quickly for a tiny percentage of women, increasing the risk of premature or unexpected deliveries in the community with increased related risks. Even though paramedics often called to unexpected out-of-hospital deliveries, little research has been done on how paramedics handle women in labour (Bull, *et al.* 2021). Foster and Maillardet found that only one-fifth of the women transferred for impending birth actually gave birth before arriving at the hospital; the other four-fifths were in varied stages of first and second stage labour when they were sent to the hospital. When irregular contractions of early labour give way to the beginning of the second stage, it takes a particular set of clinical abilities to tell the difference. Women who seek care from facilities that do not specialise in maternity care face a much greater barrier in accurately assessing their development. Pre-hospital diagnosis and progress evaluation rely on highly competent clinical judgement, much as in-hospital treatment for women in labour. New paramedics have a lack of confidence in their ability to manage labouring mothers because of the lack of instruction they received before to becoming a paramedic. A lack of study has been done on the management of women in labour by paramedics. Caseload, clinical characteristics, and paramedic treatment of women in labour were studied over the course of a calendar year in an Australian ambulance service that served the whole state.

II. Method

Ethics approval

The Human Research Ethics Committee at Monash University and the research committee at Ambulance Victoria both gave their blessing to the study.

Study setting including study population

Five million people call the Australian state of Victoria home, with three-quarters of them residing in the greater Melbourne region, which covers 227,416 square kilometres. Emergency medical services are provided by Ambulance Victoria over the whole state of Victoria (Svedberg, Strömbäck, & Engström, 2020). A rise in the overall number of live births was seen in Victoria. There are 72 percent of births in the public health system, with most of the rest occurring in private hospitals and a few home births (0.8 percent). Greater Melbourne is home to more than two-thirds of all births. Rural Victorian maternity care with few patients have a low birth rate (Bhattacharyya, *et al.* 2018). All complicated pregnancies necessitating tertiary maternity care in Melbourne are directed to one of three facilities. When faced with an unexpectedly difficult pregnancy situation, paramedics can contact a perinatal emergency referral service, which provides specialised obstetric guidance to all other health practitioners.

Data collection

Caseload data from around the state was examined in this study. From the Clinical Data Warehouse of Ambulance Victoria, data was retrieved from paramedics who used an on-site electronic patient care record information system (VACIS®) between January 1 and December 31 of 2009. All boys and females under the age of 10 and above the age of 55 were automatically excluded from the study. The recording of maternity cases by para-medics was found to be unsystematic, with variables recorded in multiple areas or not at all (Moafa, *et al.* 2021). All cases were personally examined to ensure that the final dataset contained cases involving pregnant and postpartum women. The completed database had 4096 obstetric-related cases and 196 newborns.

Women who were more than 20 weeks pregnant, or in the third trimester, and reporting "contractions," "tightenings," or "cramps," regardless of frequency, were included in the study (Figure 1) (McLelland, *et al.* 2018). Those who did not meet the inclusion criteria included women who had already given birth at home, those in the second trimester or less than 20 weeks gestation, and those who had called 911 for reasons other than labour pains, such as trauma, medical problems, or psychiatric symptoms. Those who had already given birth at home, whether naturally or medically induced, did not meet the inclusion criteria as well (Figure 1).

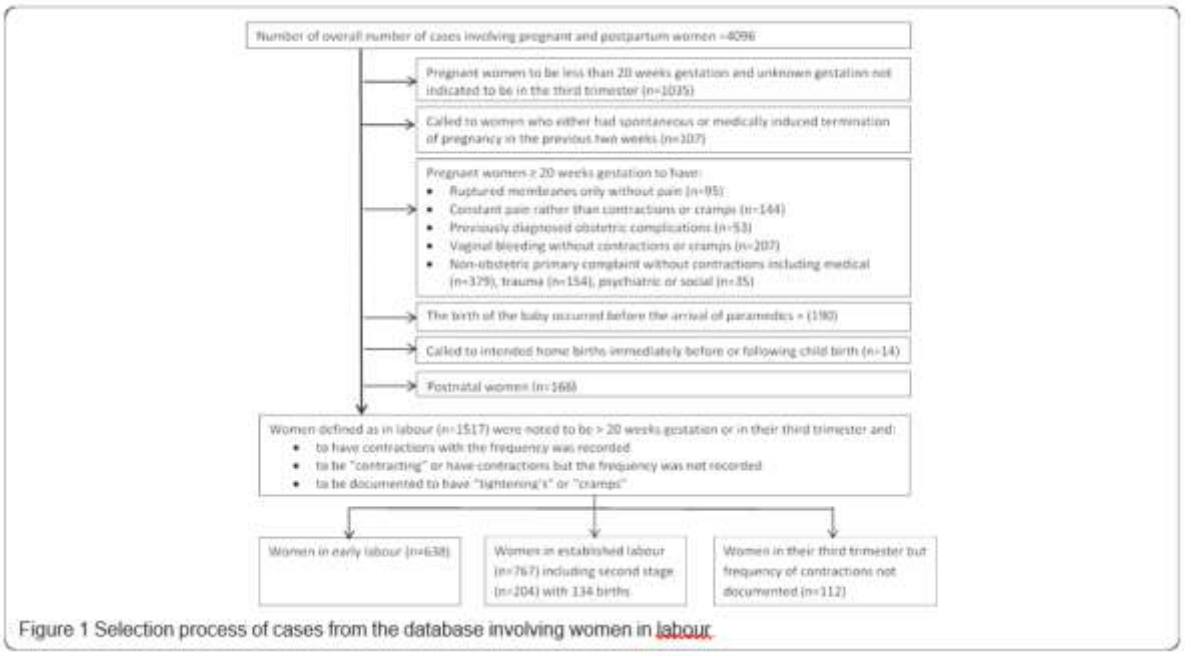

Figure 1 Selection process of cases from the database involving women in labour

III. Clinical data definitions

Only by doing a vaginal examination can a paramedic in Victoria determine whether or not a woman has gone into labour, which is beyond the scope of paramedic practise in Victoria. For the purposes of this research, women who had contractions of any frequency were categorised as being in labour by paramedics who attended them. The commencement of painful regular contractions happening at least three times per 10 minutes is clinically recognised as an active or established labour (Alqahtani, *et al.* 2020). Early labour was traditionally defined as contractions occurring fewer than four minutes apart, involving irregular 'tightenings' or 'cramps.' clinical indicators such as 'an desire to push, anal dilatation, or presenting part on view (PPOV) indicate that the second stage of labour has begun.

Preterm pregnancies were classified as those occurring between 20 and 37 weeks of pregnancy. Women who had gestational lengths of 37 weeks or more were regarded to be at term.

IV. Data analysis

Cases were classified as early or established labour based on the paramedics' observations of the symptoms (Figure 1). The Statistical Package for Social Sciences was used for descriptive statistical analysis (SPSS, v.19). There were a lot of continuous variables that weren't normally distributed, so we had to use both means and interquartile ranges to figure out how they compared to one another. Mann–Whitney If paramedics' on-scene time was impacted by the gestation or stage of labour, U tests were conducted to ascertain this (Mills, *et al.* 2019). Two comparison analyses were carried out using the Chi-square test. For women in early and late labour, analgesia administration was compared (Abosadegh, *et al.* 2019). Preterm and term labour were compared in the second study, with paramedic oxygen administered to both groups of mothers (Flanagan, *et al.* 2019). Patients' reports of discomfort and changes in blood pressure were examined using Wilcox signed rank tests. At the 0.05 level, statistical significance was obtained in all statistical analyses.

V. Results

1421 (94 percent) of the patient records were classified as obstetrics/gynecology (Table 1). Some data pieces were reported in the "free text" box while others were recorded inconsistently by paramedics in their documentation of clinical aspects.

In 1405 patient records, the frequency of contractions was observed, and 767 (55 percent) and 638 (45 percent) were categorised as being in established labour early labour (Moafa, *et al.* 2021). A total of 204 (27 percent) women were allegedly in the second stage of labour when they arrived at the hospital, with 134 (66 percent) of them supported by paramedics.

Paramedics are unable to monitor the health of the unborn other than by measuring the movement of the foetus or the colour of the amniotic fluid. In this study, there is no way to report on the well-being of the foetus upon delivery to hospital because paramedics did not document either of these clinical data components.

VI. Medical complications

Paramedics saw a large number of straightforward situations involving mothers in labour. Many obstetric, medicinal, and other issues need paramedics' consideration during their treatment in some circumstances. Obstetric paramedics had to deal with vaginal bleeding in 119 out of every 1,000 pregnancies during the third trimester and 20 out of every 1,000 in the second trimester. Pre-eclampsia and gestational diabetes were among the other obstetric complications, and one lady suffered an eclamptic seizure (Bhattacharyya, *et al.* 2018). The report shows that a tiny number of women had been traumatised before paramedics arrived. Asthma, epilepsy, and diabetes mellitus are only a few of the pre-existing medical disorders mentioned. At the same time, 250 (17%) of the female participants were found to have a systolic blood pressure of 140 or higher, including 36 (2%) with a reading of 160 or higher.

Eight of the 59 women with mental health difficulties who were treated by paramedics (four percent) had previously been diagnosed with multiple illnesses.

VII. Discussion

It was the goal of this study to examine paramedics' handling and transportation of pregnant women. Results clearly show that Victorian paramedics saw roughly 30 women in labour each week, despite the fact that this was a relatively minor fraction of the overall ambulance service burden. Considering that most of these ladies were towards the end of their pregnancies, their care was straightforward. One in five of the women paramedics treated were pregnant for the first time (Abosadegh, *et al.* 2019). According to the total maternal age in the year of the research, paramedics saw younger women in labour. Only a tiny percentage of women encountered complications that paramedics had to take into account when managing their care.

Using a Clinical Practice Guideline (CPG) framework, paramedics in Victoria are able to make clinical choices concerning patient treatment and transportation to the hospital within the appropriate timescales. In all, 90% of patients in Victoria are transported to a hospital by paramedics. Almost all women in labour (98%) were evacuated within Ambulance Victoria's suggested time periods.

When a woman is in labour, she may appear vulnerable and worried, and she may want reassurance from a midwife or other health care provider, which may prompt her to phone the emergency services. Paramedics are unable to confirm the physiological progress of labour once they are present, but when considered within the 'cascade of interventions' framework, their decisions and management can significantly impact the experience of the woman when this framework indicates that women at term would be at increased risk of interventions including epidural and caesarean section when transported to hospital in early labour (Moafa, *et al.* 2021). However, premature labour may necessitate an evaluation or monitoring regardless of the stage of the labour process for the mother. Paramedics have no choice but to evacuate women in labour regardless of their labour progress or gestation if they lack the necessary skills and expertise.

Nearly two-thirds of women in the second stage went on to give birth while under the care of paramedics, whether they were transitioning from the first to the second stage or actively in the second stage. In most cases, paramedics are able to deliver an uncomplicated and rapid birth, although the results for both mother and baby are often worse than in either a hospital or planned home birth (Ogushi, *et al.* 2021). While it may be difficult for paramedics to judge the progress of labour, they reacted to the women's requests for pain relief by considerably more women obtaining analgesia in established labour. But there was no statistically significant difference in the type of analgesia given to women in the second stage of labour compared to those already in labour, which might have an impact on the health of both mother and child. Paramedics' ability to accurately assess progress into the second stage of labour is hindered by a lack of awareness of clinical signals, which affects their ability to make clinical decisions about transfer or staying at the site in expectation of childbirth (Svedberg, Strömbäck, & Engström, 2020). The results show that paramedics recognised the signals of imminent birth and opted to stay on the site rather than risk labour on the road to the hospital.

Preterm labour, which was reported in a third of instances, and almost half of those at gestational levels that would necessitate critical care, necessitates extensive training for paramedics. In a metropolitan area, all of the tertiary institutions are (Mills, *et al.* 2019). Melbourne's outer suburbs, regional and rural locations necessitate careful clinical decision-making when it comes to the safest modes of transportation.

A tiny percentage of paramedics' employment involves maternity care, but they are highly experienced emergency medical practitioners who treat a wide spectrum of patients with a variety of conditions. There is no indication in this study that paramedics in Victoria consulted with referral agencies for perinatal crises observed. However, paramedics must have particular maternal clinical expertise in order to recognise the indications for appropriately assessing and reporting to the service, as well as implementing any advice offered (Alqahtani, *et al.* 2020). Ambulance Victoria recruits new paramedics from undergraduate programmes and trains them in emergency maternity care. There is a wide variation in the substance of maternity education at different colleges, and it can be difficult to determine because just a few universities offer separate maternity education material.

VIII. Limitations

An in-formation system used by Victorian paramedics at the time of treatment was used for this study. Because the information is being gathered for therapy rather than study, certain important details are being omitted. When researching paramedics' interactions with unexpected out-of-hospital deliveries, similar concerns with poor

documentation by paramedics have been documented everywhere (Flanagan, *et al.* 2019). It is also a shortcoming of this study because it does not include a post-hospital evaluation of the women's outcomes. Paramedics' management of women in labour should be studied further, particularly the formation of minimal datasets, according to this recommendation.

IX. Conclusion

It is essential for paramedics to have extensive yet particular knowledge about delivery in order to make judgments about the care and transportation of women in labour (McLelland, *et al.* 2018). Women in labour are a vulnerable group who rely on the judgement of medical personnel, including paramedics, for their well-being. When it comes to providing obstetrical care, paramedics must be well-versed in all phases of labour and have the capacity to interact effectively with maternity support and referral agencies.

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