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Commentary

Preventable stillbirths in the Solomon Islands – A hidden tragedy

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Stillbirth is an enormous global health challenge, affecting over 2.6 million families annually [1,2]. It is a burden most heavily felt in low-middle income countries (LMICs) and strongly associated with neonatal and maternal mortality and morbidity [1–3]. Whilst the majority of stillbirths occurring in LMICs are preventable and come at a huge socioeconomic cost, progress in reducing these numbers has been poor and underprioritized compared to other perinatal outcomes [1, 2]. Spanning 993 islands, the Solomon Islands is a Western Pacific LMIC facing significant geographical, socioeconomic and cultural barriers to achieving health equity. Notably, The National Referral Hospital is the only tertiary hospital in the nation. It is serviced by only four obstetricians and limited midwifery staff despite birthing 5000–6000 women a year. Like many countries in the Asia-Pacific, the Solomon Islands has a high incidence of preventable maternal mortality [4], and shoulders a disproportionate burden of poor perinatal outcomes [4]. Despite this, there has been no targeted research investigating preventable causes of stillbirths in the Solomon Islands.

The first step in reducing the burden of stillbirth is to accurately record cases and causes between nations. However, with a number of stillbirths occurring outside health facilities and no agreed universal classification system, it is difficult to obtain comparable estimates [1,5]. In many LMICs, the lack of diagnostics tools makes ascertaining timing and cause of death is especially challenging [1,5,6]. While stillbirths are not nationally classified, they are detailed at The National Referral Hospital which creates an opportunity to glimpse the state of stillbirth in this Western Pacific nation. Thus, with the aim of identifying key opportunities for intervention, we investigated all stillbirths (those ≥20 weeks estimated gestation or >500 g birthweight) occurring at The National Referral Hospital over 2 years (2017 and 2018). Using the World Health Organization's International Classification of Diseases applied it to the perinatal period (WHO ICD-PM) we identified timing of death, primary cause and linked each death with the main contributing maternal condition [6,7].

With 341 stillbirths and 11,056 births, we uncovered a high institutional incidence of 30.8 per 1000 births. This is nearly double that of its closest neighbour, Papua New Guinea (15.9 per 1000 birth, nation-wide) [8]. Whilst suspected cause of death was available for 198 stillbirths, 58% of case files were missing, highlighting the difficulties with accurate data collection in LMICs. Among stillbirths with available files, 72% (n = 102/142) were deemed preventable - those with an estimated gestation over 28 weeks, birthweight >1500 g and no congenital abnormalities. Most fetal deaths occurred antenatally (86%; n = 170/198) and unsurprisingly, risk factors, such as low birthweight (<2500 g) and preterm birth (<37 weeks estimated gestation) were common (59%; n = 84/142, and 62%; n = 88/14, respectively). Preventable maternal conditions were similarly overrepresented, with hypertensive disorders and infection present in almost half of antenatal stillbirths. Tragically, 10 fetuses showed overt signs of congenital syphilis. While referral bias may have inflated the overall incidence of stillbirth at the National Referral Hospital and data quality was poor, these find-

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ings suggest many crucial gaps in care. But they also provide hope that simple, cost-effective interventions may have the potential to significantly reduce stillbirths nationwide.

Many stillbirths in LMICs may be prevented through improved antenatal care [2,9]. This includes; an early ultrasound, education around birth preparedness and reduced fetal movements, and routine screening for anaemia and syphilis [10]. Although we found almost 80% of mothers attended at least one antenatal visit, sadly, many of these simple interventions were completely lacking. Only a quarter of women who experienced a stillbirth received an early ultrasound, discussions of reduced fetal movements were not documented in half of all cases and haemoglobin levels were only recorded in 56%. Only 90 women (63%) were tested for syphilis and of those who tested positive, only 30% completed treatment.

Importantly, progress is being made. The Solomon Islands Ministry of Health and the World Health Organisation have recently launched an updated national Antenatal Care Package, which emphasises interventions for many of these issues and provides a standard expected quality of care. It incorporates focussed health worker education and resource provision, such as improved access to antenatal ultrasounds and point of care syphilis and haemoglobin testing. This initiative acknowledges the socioeconomic return of investing in stillbirths [1] and is a fundamental step in reducing the burden of perinatal death in the Solomon Islands.

Despite these efforts, the true magnitude of perinatal deaths remains under-reported and under-investigated. Alarmingly, the disruption of health systems as a result of the COVID-19 pandemic will potentially increase these losses [11]. There is a critical need for further research into why mothers and babies are suffering in the Solomon Islands and more broadly, in the Asia-Pacific region. The large amount of missing clinical data highlights the need for a formal national registration system and improved prospective recording of all birth outcomes. Our findings clearly demonstrate the effectiveness of the ICD-PM in this setting. Through focussed research efforts, we may be able to shine a light on why stillbirths are occurring and what can be done to prevent them [5, 7]. Only when every mother and baby is counted can we hope to significantly reduce preventable stillbirth in the Asia-Pacific.

Contributors

MD conducted the literature search. MD, LP, RH and LM conceived and designed this study. MD, LP, CH and S Taragwanu completed data collection. MD conducted the data analysis and data interpretation and drafted the of final commentary. RH, SW, ST, AL, SB and DO provided critical analysis and made revisions of the manuscript and important intellectual contributions. All authors reviewed the manuscript before final submission.

Declaration of Competing Interest

We declare no competing interests.

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