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Monitoring postpartum haemorrhage in Australia: Opportunities to improve reporting

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ABSTRACT

Problem: The rate and severity of postpartum haemorrhage (PPH) are increasing, according to research reports and clinical anecdote, causing a significant health burden for Australian women giving birth. However, reporting a national Australian rate is not possible due to inconsistent reporting of PPH.
Background: Clinician concerns about the incidence and severity of PPH are growing. Midwives contribute perinatal data on every birth, yet published population-based data on PPH seems to be limited. What PPH information is contributed? What data are publicly available? Do published data reflect the PPH concerns of clinicians?
Aim: To examine routine public reporting on PPH across Australia.
Methods: We systematically analysed routine, publicly reported data on PPH published in the most recent perinatal data for each state, territory and national report (up to and including October 2016). We extracted PPH data on definitions, type and method of data recorded, markers of severity, whether any analyses were done and whether any trends or concerns were noted.
Findings: PPH data are collected by all Australian states and territories however, definitions, identification method and documentation of data items vary. Not all states and territories published PPH rates; those that did ranged from 3.3% to 26.5% and were accompanied by minimal reporting of severity and possible risk factors. Whilst there are plans to include PPH as a mandatory reporting item, the timeline is uncertain.
Conclusions: Routinely published PPH data lack nationally consistent definitions and detail. All states and territories are urged to prioritise the adoption of nationally recommended PPH items.

Statement of significance

Problem or issue

Australian research findings have consistently found increasing rates and severity of PPH, corresponding to anecdotal clinician concerns about rising PPH rates. However, there is limited reporting of PPH in routinely published perinatal reports.

What is already known

Some PPH data are collected by all states and territories and nationally. These data are primarily provided by midwives as part of the perinatal data collection.

What this paper adds

This paper is a single-source synopsis of current and planned PPH population-based monitoring in Australia that systematically examines all publicly available, routinely published data about PPH. This paper demonstrates the urgent need for each state and territory to adopt consistent reporting of recommended PPH items.

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1. Introduction

Postpartum haemorrhage (PPH) remains a major direct cause of maternal mortality and morbidity worldwide including in Australia.[1,2] The World Health Organization defines primary PPH as blood loss from the genital tract of 500 mL or more in the first 24 h after birth although this definition is not consistently used.[3] There is clinical concern about the rate of PPH, and increasing incidence and severity of PPH have been documented by researchers in a number of well-resourced countries, including Australia.[4–7] Of the 30 most common diagnoses for women admitted to Australian hospitals (excluding New South Wales) in 2012–2013, PPH was the twelfth most common.[8]

PPH can have short and long-term adverse effects on women, including admission to intensive care units,[5,7,9] anaemia, fatigue, emotional and psychological impacts,[10] increased readmission to hospital,[10] lower rates and earlier cessation of breastfeeding,[10] need for blood transfusion,[11] need for emergency surgery including hysterectomy[7,10] and increased likelihood of PPH in a subsequent birth.[11] PPH can result in a protracted recovery period when women go home, and may have a negative impact on their birth experience.

We were interested to know the national PPH rate as these sequelae are a significant health burden given the common diagnosis of PPH[8] and that 304,777 women gave birth in Australia in 2013.[2] In a recent New South Wales (NSW) record linkage study of 2003–2011 in-patient admission data with perinatal data, researchers found that blood product transfusion related to childbearing has increased in frequency.[11] The number of women who received a blood transfusion associated with a PPH increased from 0.75% in 2003 to 1.21% in 2011: a 62% increase.[11] While there is no precise standard definition of maternal morbidity, it is acknowledged that this comprises ill-health related to pregnancy, birth or related interventions and that there is a range of severity; it includes PPH.[5,7] The number of births with associated severe maternal morbidity increased by 3.8% per annum during 1999–2004 in Australia; an increase almost entirely attributed to an increase in PPH.[12]

As PPH is one of the most common complications of childbirth, it was timely to examine what data on PPH are recorded, how data are reported to the public and what PPH data items are recommended for collection in Australia. The aim of our study was to examine routine public reporting of Australian population-based data on PPH to assess the detail of recording, analysis and reporting, and to determine whether identification and reporting are consistent across the states and territories.

The collection of perinatal data is mandated in all states and territories of Australia for all births ≥20 weeks' gestation or of at least 400 g birthweight (with minor variations in the definition of a birth between the states and territories).[2] Midwives are the major contributors to routine monitoring of PPH as they usually complete the perinatal data form following each birth. Each state and territory collects these data and is required to provide an agreed set of perinatal data, i.e. the perinatal National Minimum Data Set (NMDS), annually to the National Perinatal Data Collection (NPDC).[13] First itemised in 1997 and updated to include new items on occasions, it comprises a mandatory set of data items within the NPDC specified under the National Health Information Agreements. The main purpose of these standardised data is to obtain comparable and consistent data nationally, and to enable monitoring of progress in perinatal health by health authorities, policy-makers, researchers and clinicians.[14] Additional data items, some of which will be included in the NMDS in the future, are recommended under the Perinatal National Best Endeavours Data Set (NBEDS)[15] as shown in Fig. 1. Despite these established processes around perinatal data, there seemed to be inconsistent reporting of PPH and a lack of prominence about PPH in Australian perinatal reports.

2. Methods

A document analysis of publicly available perinatal reports of routinely collected data was undertaken as this method enabled structured extraction of data from multiple sources for comparison[16] and data are available to consumers. The most recent national[2] and state and territory[17–24] perinatal data reports, and the latest available perinatal data collection form published by each Australian state and territory were systematically analysed in October 2016. Data items related to PPH were examined and compared: definition of PPH; type of data collected on PPH including format and ability to report severity; descriptors of severity of PPH including provision of blood transfusion and/or hysterectomy; trends and commentary; and the nature of any analysis conducted. Where a data collection form was not included in the report we obtained a copy from the relevant authority. All perinatal data collection forms include antenatal, intrapartum, birth, postnatal and neonatal items. Earlier perinatal reports were examined to obtain trend data for state and territory PPH rates. Research publications on PPH were not included as they are not 'routine' and are not always publicly available (i.e. require a subscription).

To gain a policy perspective, the current Perinatal NMDS[25] and Perinatal NBEDS[15] were examined to identify current and future PPH reporting requirements. Ethical approval was not required for this study as only publicly available, aggregated data and documents were studied.

3. Results

For state and territory reports, the most recent data reported were for births in 2014 for one state and one territory,[21,23] for 2013 for four states and one territory,[16–20,22] and for 2008 for the second territory.[24] The most recent national report of 2013 data is compiled from data provided by each state and territory and published annually with a two year time lag from year of birth to year of publication.[2] The current report comprises a brief report with accompanying tables[2] and links to analysis of selected data.[26]

3.1. Definitions, reporting and descriptors of severity of PPH

Only three states and territories included an explicit definition of PPH in their report although others reported volumes of estimated blood loss (EBL) without using the words 'postpartum haemorrhage' (Table 1). When provided, definitions varied and included ≥500 mL, >500 mL and ≥600 mL. One state and one territory each had different definitions for vaginal birth and caesarean section (CS).[20,24]

The way in which PPH-related information is sought by each state and territory in their perinatal data collection forms was not uniform (Table 2). The presence of a PPH is indicated on a number of states' and territories' forms by a 'tick in the box' for PPH and in others by recording the reported EBL. NSW does not report PPH incidence and only reports data for women who received a blood transfusion for PPH.[21] Only half of the eight states and territories have the capacity to analyse and report severity of haemorrhage.

3.2. Incidence and analysis of PPH in state and territory reports

A PPH rate was reported by all states and territories other than NSW in their individual reports, although Victoria reports EBL by parity only (Table 1). Reported PPH rates ranged from 3.3% to 26.5% (Fig. 2).[2,17,27–34] Despite rising rates of PPH in most states and

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