

Postpartum Hemorrhage: Differences in Definition, Data and Incidence

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Introduction

Postpartum hemorrhage (PPH) remains a major cause of morbidity and mortality worldwide. Geo-temporal comparisons of in-hospital PPH incidence remain a challenge due to differences in definition, data quality and the absence of accurate, validated indicators.

the need for a validated PPH indicator to enable monitoring. Future prospects include the validation of a diagnostic code based PPH indicator aided by text mining in electronic health records.

Objectives and Approach

To compare the incidence of PPH using different definitions to assess the need for a validated indicator. Singleton births from 2014–2016 at Lausanne University Hospital, Switzerland, were included. PPH was defined based on 1) clinical diagnosis using International Classification of Diseases (ICD-10-GM) PPH diagnostic codes, 2) volume of blood loss ≥ 500 ml for vaginal births and ≥ 1000 ml for cesareans 3) peripartum Hb change > 2 g/dl in vaginal births and ≥ 4 g/dl in cesareans and 4) fulfillment of criteria from definition one, two or three. Data were extracted from hospital discharge data and linked with electronic health records.

Results

There were 2529, 2660 and 2715 singleton births in 2014, 2015 and 2016, respectively, 28.8% were cesareans. Peripartum change in Hb was available for 17% of births. The incidence (95% CI) of PPH in 2014, 2015 and 2016 was, respectively: 1) 6.0% (5.1, 7.0), 6.3% (5.4, 7.3) and 7.9% (6.9, 9.0) based on diagnostic codes; 2) 7.9% (6.8, 9.0), 7.1% (6.2, 8.2) and 7.2% (6.3, 8.3) based on blood loss volumes; 3) 2.4% (1.8, 3.1), 2.7% (2.1, 3.4) and 3.5% (2.9, 4.3) based on change in Hb; 4) 11.3% (10.1, 12.6), 10.4% (9.3, 11.6) and 11.0% (9.9, 12.3) based on the combined definition. Differences in PPH incidence by year between definitions one and four, two and four and three and four were all statistically significant (McNemar p-values

Conclusion/Implications

Incidence varied widely according to definition and data availability, not to mention data quality. Our results highlight

