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Provider Awareness of Postpartum Hemorrhage Risk Assessment Tool at the Time of Admission at a Community Setting

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ABSTRACT

Objectives: The primary objective of this study was to determine the provider's awareness of the postpartum hemorrhage risk assessment tool at the time of admission. In addition, in keeping with the organization's continual performance improvement philosophy, education on postpartum hemorrhage risk was provided to survey respondents who self-reported that they were unaware or requested additional resources.

Methods: This cross-sectional study utilized an anonymous survey methodology. We distributed a postpartum hemorrhage awareness risk assessment questionnaire and collected participant responses without personal identifiers over a 3 month time period, January 2023 – March 2023. Analysis was completed using Fischer's exact test. Alpha level was set to 0.05.

Results: 39 participants completed the questionnaire attending physicians: n=10 (25.6%), nursing staff: n=15 (38.5%), and resident physicians: n=14 (35.9%). 7 of the 10 attending physicians (70%) and 9 of the 15 nursing staff (60%) have worked over 10 years in their profession, while 11 of the 14 resident physicians (78.6%) have worked in their profession for 1-5 years (p=<0.0001). 5 of the 10 attending physicians (50%) and 7 of 15 nursing staff (46.7%) were 36-50 years old, while 13 of 14 resident physicians (93%) were 25- 36 years old (p=<0.0001). Majority of the participants were White; 5 attending physicians (50%), 11 nursing staff (73.3%), and 9 resident physicians (64.3%). Nursing staff had the most awareness of the postpartum hemorrhage awareness risk assessment tool at the time of admission (100%) in comparison with attending physicians (50%) and resident physicians (64.3%), (p=0.005). Nursing staff had the most knowledge of where to access the assessment (93.3%) in comparison to attending physicians (10%) and resident physicians (0%), (p=<0.0001).

Conclusions: Our study revealed a statistically significant difference in awareness of the postpartum hemorrhage risk assessment tool at the time of admission amongst the 3 groups of providers; attending physicians, nursing staff, and resident physicians. The nursing staff had the most awareness in comparison with other providers. The data also highlighted the inconsistencies with accessing the risk assessment and with communication of information obtained through the assessment among providers. A quality improvement project should involve notifying providers of patients that are stratified to high risk, developing a simpler method for all providers to readily access the risk assessment tool, and increasing preparedness by creating an algorithm or bundle.

Introduction

Postpartum hemorrhage (PPH) is the leading cause of maternal mortality and morbidity worldwide accounting for nearly a third of deaths in pregnant and postpartum women [1]. In the United States (US) hemorrhage that leads to blood transfusion is the leading cause of severe maternal morbidity closely followed by disseminated intravascular coagulation [2]. It accounts for 11% of maternal deaths in the US and is the 4^{th} most common cause

[1]. The rate of PPH in the US increased 26% between 1994 and 2005 primarily because of increased uterine atony rates [2]. Uterine atony accounts for 70 % of cases [2]. American College of Obstetrics and Gynecology (ACOG) currently defines PPH as blood loss greater than 1 liter. Primary PPH occurs within the first 24 hours of birth whereas secondary PPH is defined as excessive bleeding that occurs more than 24 hours after delivery and up to 12 weeks postpartum [2].

There are several known risk factors associated with PPH. Patients are typically categorized into low, moderate, and high risk based on the number of risk factors present. These risk factors include but are not limited to, prior PPH, placenta previa, placenta accreta, placental abruption, anemia, greater than 24 hours of oxytocin therapy, magnesium therapy, grand multiparity, known bleeding disorder, previous cesarean section/uterine surgery, and large fibroid [2]. By identifying risk factors, we hope to improve preparedness of all providers involved in the patients' care particularly if hemorrhage does occur.

At our institution a PPH risk assessment is completed on admission by nursing staff using the assessment checklist (see Appendix 1). Based on the assessment a score is determined and the score places the patient into low, medium, or high-risk category [3]. Providers are made aware of patients that are high risk and from there further preparations are made based on provider preference. Furthermore, not all providers involved in patient care are aware of the existence of this assessment tool, what is included in the assessment tool, or how to access it. This raises concerns that the assessment tool is not being utilized to full capacity. Bringing attention to this could provide an opportunity to improve preparedness, allow resources to be mobilized, and decrease maternal mortality and morbidity associated with PPH. The primary objective of this study was to determine the provider's awareness of the PPH risk assessment tool at the time of admission. By participating in the study, providers who self-reported that they were unaware of the PPH risk assessment tool could request additional information and be further educated.

Materials and Methods

We conducted a cross-sectional study that evaluated questionnaires submitted by anonymous participants including attending physicians, nursing staff, and resident physicians at the labor & delivery, and mother-baby units at Inspira Medical center Vineland, New Jersey.

The questionnaires were distributed on paper. The participants received a copy of the cover letter (Appendix 2a) and questionnaire (Appendix 2b). Questionnaires were distributed by hand to participants on the labor & delivery floor after 9 AM huddle, 8 PM huddle, department meetings, and during obstetrics and gynecology (OB/GYN) resident education. Institutional Review Board approval was obtained (study ID 2022-11-001). Potential respondents were advised to return their surveys via locked drop box on the labor and delivery unit. The drop box was emptied on a weekly basis. The survey was collected without personal identifiers

over a 3-month time period, January 13th, 2023 – March 5th, 2023.

Providers who reached out to the investigator to request additional information on the risk assessment tool were provided with additional education via email (Appendix 3 and 4) After completion of surveying, the PPH Risk Assessment tool, which was already in use in the organization (Appendix 1), was also made available in common areas of the department for widespread distribution and increased awareness.

Data Analysis

The statistical analysis was performed using R (version 4.2.1). All demographic data and survey results were expressed using *Fischer's Exact Test*. The results were expressed as descriptive analysis.

Results

A total of 39 questionnaires were completed by participants. Of the 39 participants, n=10 identified as OB/GYN attending physicians (25.6%), n=15 as labor & delivery/mother-baby nursing staff (38.5%), and n=14 as OB/GYN resident physicians (35.9%). 7 of 10 attending physicians (70%) and 9 of 15 nursing staff (60%) have worked over 10 years in their profession, while 11 of 14 resident physicians (78.6%) have worked in their profession for 1-5 years (p=<0.0001). 5 of the 10 attending physicians (50%) and 7 of 15 nursing staff (46.7%) were 36-50 years old, while 13 of 14 resident physicians (93%) were 25- 36 years old (p=<0.0001). Majority of the participants were White; 5 attending physicians (50%), 11 nursing staff (73.3%), and 9 resident physicians (64.3%). Table 1 shows the demographic details. Table 2 describes answers to each survey question.

For Question #1 "Are you aware that there is a PPH Assessment on the labor and delivery floor?", 5 of 10 attending physicians (50%) answered "yes", while all 15 nursing staff (100%), and 9 of 14 resident physicians (64.3%) said "yes", (p=0.005). Question #2 asks "Do you know any of the questions included in the assessment? Mark any/all questions that you are aware of." All of the participants selected "obesity" (100%). (See Figure 1). 3 of 10 attending physicians (30%) answered "all of the above" (prior cesarean section, prior PPH, placenta disease, obesity, grand multiparty), while 14 nursing staff (93.3 %), and 6 resident physicians (42.9%) marked "all of the above" (p=0.0017). In response to Question #3 "Who do you think this assessment needs to be performed by?", 1 of 10 attending physicians (10%) answered that the "resident" needs to perform the assessment, while 5 of 15 nursing staff (33.3%) and 0 residents (0%) answered "resident" needs to perform the assessment (p=0.04) (See Figure 2). For Question #4 "Where do you think this assessment needs to be performed?", 5 of 10 attending physicians (50%), 13 of 15 nursing staff (86.7%) and 7 of 14 resident physicians (50%) felt it should be performed "at the time of admission" (p=0.06) (See Figure 3). In response to Question #5 "Do you know how to access the assessment?", 1 of 10 attending physicians (10%) answered "yes", while 14 of 15 nursing staff (93.3%) and 0 resident physicians (0%) answered "yes" (p=<0.0001). For Questions #6 "If, yes how does

one access the assessment?", 1 of 10 attending physicians (10%) answered "form browser" while 7 of 15 nursing staff (46.7%) answered "form browser" (p=0.004). 1 of 10 attending physicians (10%) and 6 of 15 nursing staff (40%) answered "documentation" (p=0.01). In comparison, 0 residents provided an answer to this question (p=0.004). (See Figure 4). In response to Question #7 "What is the risk stratification based on the assessment?", 1 of 10 attending physicians (10%) answered correctly with "low/ medium/high", while 10 of 15 nursing staff (66.7%) and none of the residents (0%) answered correctly (p=<0.0001). For Question #8 "To your knowledge, what is done with this information?", 1 of 10 attending physicians (10%) and 7 of 15 nursing staff (46.7%) answered that "Providers are made aware and PPH medications are made available", while 1 of 14 resident physicians (7.1%) answered the same. In response to Question #10 "Are you aware of other PPH risk tools/checklists?", 1 of 10 attending physicians (10%) answered "yes", while 8 of 15 nursing staff (53.3%) and 3 of 14 resident physicians (21.4%) answered "yes" (p=0.003). For Question #11 "How does this compare with other PPH risk tools/ checklists you've encountered?", 3 of 15 nursing staff (20%) said it was "similar" while 2 nursing staff (13.3%) said it was "very similar" (p=0.03), in comparison none of the attending or resident physicians answered. In response to Question #12 "Would you like to receive more information on PPH risk tools?", 7 of 10 attending physicians (70%) answered "yes", while 6 of 15 nursing staff (40%) and 5 of 14 residents (35.7%) answered "yes" (p=0.2).

Discussion

Based on our data, there was a statistically significant difference in the awareness of PPH risk assessment tool among 3 groups. Labor, delivery, and Mother/baby unit nursing staff had the most awareness of the PPH risk assessment tool (100%) compared to attending (50%) and resident physicians (64.3%). Nursing staff had more knowledge of how to access PPH assessment tool and the risk stratification categories within the tool. Nursing staff were also able to provide alternative PPH risk assessment tools more often in comparison with attending and resident physicians. Attending physicians and nursing staff requested additional PPH information more frequently than resident physicians.

Strengths of this study include cost effectiveness and convenient data gathering without personal identifiers. However, this descriptive study did have limitations. We anticipated 67-99 participants based on average response rate being 68% [4] with a total of 99 eligible participants in our department. Only 39 responses were returned, which was less than half of those who were eligible, leading to a smaller sample size than anticipated. The questionnaires might also hold a limitation as the participant was asked not to progress beyond Question #1 "Are you aware that there is a PPH assessment tool on the L&D floor" if they selected "no" as their answer choice. This might have affected the results. (See Table 2). There might also have been confusion amongst participants when it came to the wording of questions. Particularly survey Question #2 "Do you know any of the questions included in the assessment? Mark any/all questions that you are aware of." A participant noted that the answer choices presented were

different from the wording on the existing PPH assessment tool that is completed on admission at our institution (see Appendix 1). Survey Question #6 "If, yes how does one access the assessment?" has multiple correct answer choices since one can access the assessment in multiple ways within our electronic medical records (EMR) system. This raises the question of whether accessing this tool should be simplified to 1 route in hopes of making it more readily accessible (See Figure 4). There also appeared to be errors made by participants during completion of the questionnaire: For those participants who answered "yes" to Question #1 and were able to advance to the remainder of the survey, many left Question #5 "Do you know how to access the assessment?", and Ouestion #10 "Are you aware of other PPH risk tools/checklists?" unanswered although the response was "yes or no". This could have affected the data analysis although it is unclear whether these errors were because participants were confused by the instructions or because they did not read the questions carefully.

Despite the limitations of the study, the data reveals a gap among attending physicians, nursing staff, and resident physicians in the knowledge and accessibility of the PPH risk assessment tool at the time of admission. We suspect that the gap could be because nurses perform the assessment at the time of admission. This study can be viewed as a first step in a quality improvement project that could involve notifying providers of patients that are stratified to high risk and developing a method for all providers to readily access the risk assessment tool. This information should be used to help providers be more prepared and could be used to develop (or adjust) a standard protocol.

Next steps should involve using this data to increase provider preparedness. Preparedness would involve developing a standard protocol for patients who are stratified to a high-risk group, whether that be through a PPH bundle that can be selected in the EMR or algorithm for providers to follow. PPH outcomes before and after the implementation of the bundle would be subsequently analyzed for comparison.

Conclusion

Our study revealed a statistically significant difference in awareness of the PPH risk assessment tool at the time of admission amongst the 3 groups of providers; attending physicians, nursing staff, and resident physicians. The nursing staff had the most awareness in comparison with other providers. The data also highlighted the inconsistencies with accessing the risk assessment and with communication of information obtained through the assessment among providers. A quality improvement project should involve notifying providers of patients that are stratified to high risk, developing a simpler method for all providers to readily access the risk assessment tool, and increasing preparedness by creating an algorithm or bundle.

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Table 1: Demographics.

		Attending physician	Nursing staff	Resident physician	Р	Test
N		10	15	14		
Profession (%)	Attending physician	10 (100.0)	0 (0.0)	0 (0.0)	< 0.0001	Exact
	Nursing staff	0 (0.0)	15 (100.0)	0 (0.0)		
	Resident physician	0 (0.0)	0 (0.0)	14 (100.0)		
Years in profession (%)	<1 year	0 (0.0)	0 (0.0)	3 (21.4)	< 0.0001	Exact
	1 to 5 years	3 (30.0)	3 (20.0)	11 (78.6)		
	5 to 10 years	0 (0.0)	3 (20.0)	0 (0.0)		
	>10 years	7 (70.0)	9 (60.0)	0 (0.0)		
Age (%)	18 to 25	0 (0.0)	1 (6.7)	0 (0.0)	< 0.0001	Exact
	26 to 35	1 (10.0)	3 (20.0)	13 (92.9)		
	36 to 50	5 (50.0)	7 (46.7)	0 (0.0)		
	>50	4 (40,0)	4 (26.7)	0 (0.0)		
	N/A	0 (0.0)	0 (0.0)	1 (7.1)		
Race/Ethnicity (%)	Asian	2 (20.0)	0 (0.0)	3 (21.4)	0.534	Exact
	Black/African American	2 (20.0)	1 (6.7)	1 (7.1)		
	Hispanic	0 (0.0)	1 (6.7)	0 (0.0)		
	White	5 (50.0)	11 (73.3)	9 (64.3)		
	N/A	1 (10.0)	2 (13.)	1 (7.1)		

N/A: Not applicable

Table 2: Answers to questionnaire.

Survey questions	Level	Attending physician	Nursing staff	Resident physician	Р	test
N		10	15	14		
Q1: Are you aware that there is a PPH assessment on the L&D floor? (%)	No	5 (50.0)	0 (0.0)	5 (35.7)	0.0051	Exact
	Yes	5 (50.0)	15 (100.0)	9 (64.3)		
Q2: Do you know any of the questions included in the assessment? circle any/all						
	Prior cesarean section = $1 (\%)$	1 (10.0)	0 (0.0)	0 (0.0)	0.2564	exact
	prior postpartum hemorrhage = 1 (%)	1 (10.0)	0 (0.0)	3 (21.4)	0.1179	exact
	placenta disease = 1 (%)	1 (10.0)	0 (0.0)	0 (0.0)	0.2564	Exact
	Obesity = 0 (%)	10 (100.0)	15 (100.0)	14 (100.0)	NA	Exact
	Grand multiparity = 1 (%)	1 (10.0)	0 (0.0)	3 (21.4)	0.1179	Exact
	All of the above $= 1 (\%)$	3 (30.0)	14 (93.3)	6 (42.9)	0.0017	Exact
	None of the above $= 1 (\%)$	1 (10.0)	0 (0.0)	0 (0.0)	0.2564	Exact
	N/A = 1 (%)	5 (50.0)	1 (6.7)	5 (35.7)	0.0371	Exact
Q3: Who do you think this assessment needs to be performed by?						
	Nursing staff = $1 (\%)$	2 (20.0)	6 (40.0)	2 (14.3)	0.2697	Exact
	resident = 1 (%)	1 (10.0)	5 (33.3)	0 (0.0)	0.0419	Exact
	attending physician = 1 (%)	1 (10.0)	3 (20.0)	0 (0.0)	0.223	Exact
	any of the above $= 1 (\%)$	3 (30.0)	8 (53.3)	7 (50.0)	0.5164	Exact
	none of the above $= 0$ (%)	0 (100.0)	0 (0.0)	0 (0.0)	NA	Exact
	N/A = 1 (%)	5 (50.0)	0 (0.0)	5 (35.7)	0.0051	Exact
Q4: Where do you think this assessment needs to be performed						
	Office prior to admission $= 1$ (%)	1 (10.0)	6 (40.0)	2 (14.3)	0.2097	Exact
	At the time of admission to $L\&D = 1$ (%)	5 (50.0)	13 (86.7)	7 (50.0)	0.0672	Exact
	At home self-eval by patient $= 0$ (%)	0 (0.0)	0 (0.0)	0 (0.0)	NA	Exact
	N/A = 1 (%)	5 (50.0)	0 (0.0)	5 (35.7)	0.0051	Exact
Q5: Do you know how to access the assessment? (%)	No	4 (40.0)	0 (0.0)	8 (57.1)	< 0.0001	Exact
	Yes	1 (10.0)	14 (93.3)	0 (0.0)		
	N/A	5 (50.0)	1 (6.7)	6 (42.9)		
Q6; If yes, how does one access the assessment?						
	documentation = 1 (%)	1 (10.0)	6 (40.0)	0 (0.0)	0.0124	Exact
	notes = 1 (%)	1 (10.0)	1 (6.7)	0 (0.0)	0.7166	Exact
	form browser = 1 (%)	1 (10.0)	7 (46.7)	0 (0.0)	0.004	Exact

	histories = 1 (%)	0 (0.0)	3 (20.0)	0 (0.0)	0.1027	Exact
	N/A = 1 (%)	9 (90.0)	3 (20.0)	14 (100.0)	< 0.0001	Exact
Q7: What are the risk stratification options on the assessment? (%)	low, high	0 (0.0)	3 (20.0)	0 (0.0)	< 0.0001	Exact
	low, medium, high	1 (10.0)	10 (66.7)	0 (0.0)		
	risk, no risk	0 (0.0)	1 (6.7)	0 (0.0)		
	N/A	9 (90.0)	1 (6.7)	14 (100.0)		
Q8: To your knowledge, what is done with this information? (%)	Blood automatically on hold	0 (0.0)	1 (6.7)	0 (0.0)	< 0.0001	Exact
	Providers are made aware	0 (0.0)	0 (0.0)	0 (0.0)		
	PPH meds are made available	0 (0.0)	1 (6.7)	0 (0.0)		
	Providers are made aware and PPH meds made available	1 (10.0)	7 (46.7)	1 (7.1)		
	blood automatically on hold	0 (0.0)	1 (6.7)	0 (0.0)		
	None of the above	0 (0.0)	0 (0.0)	0 (0.0)		
	All of the above	0 (0.0)	5 (33.3)	0 (0.0)		
	N/A	9 (90.0)	1 (6.7)	13 (92.9)		
Q10: Are you aware of other PPH risk tools/checklists? (%)	No	1 (10.0)	5 (33.3)	1 (7.1)	0.0034	Exact
	Yes	1 (10.0)	8 (53.3)	3 (21.4)		
	N/A	8 (80.0)	2 (13.3)	10 (71.4)		
Q11: How does this compare with other PPH risk tools/checklists you have encountered? (%)	Similar	0 (0.0)	3 (20.0)	0 (0.0)	0.0346	Exact
	very similar	0 (0.0)	2 (13.3)	0 (0.0)		
	N/A	10 (100.0)	10 (66.7)	14 (100.0)		
Q12: Would you like to receive more information on PPH risk tools? (%)	No	1 (10.0)	6 (40.0)	3 (21.4)	0.2896	Exact
	Yes	7 (70.0)	6 (40.0)	5 (35.7)		
	N/A	2 (20.0)	3 (20.0)	6 (42.9)		

PPH: Postpartum Hemorrhage, L&D: Labor and Delivery, N/A: not applicable





Figure 1:

N/A: not applicable



Figure 2:

N/A: not applicable



L&D: Labor and Delivery, N/A: not applicable





References

- Say L, Chou D, Gemmill A, et al. Global causes of maternal death a WHO systematic analysis. The Lancet. Global health. 2014; 2: e323-e333.
- 2. https://www.acog.org/clinical/clinical-guidance/practicebulletin/articles/2017/10/postpartum-hemorrhage
- 3. Ende HB, Lozada MJ, Chestnut DH, et al. Risk Factors for Atonic Postpartum Hemorrhage A Systematic Review and Metaanalysis. Obstetrics and gynecology. 2021; 137: 305-323.
- 4. Holtom B, Baruch Y, Aguinis H, et al. Survey response rates Trends and a validity assessment framework. Sage Pub. 2022; 75: 1560-1584.

Appendix 1: Current Postpartum Hemorrhage (PPH) Risk Assessment Tool in Use.				
	RISK CATEGORY ADMISSION			
	Medium Risk			

	Low Risk	Medium Risk (2 or more medium risk factors Advance Patient to High Risk Status)	High Risk
	[] No previous uterine incision	[] Induction of labor (with oxytocin) or cervical ripening	[] Has 2 or more Medium Risk Factors
	[] Singleton pregnancy	[] Multiple gestation	[] Active bleeding more than "bloody show"
	[] = 4 previous vaginal<br births	[]>4 Previous vaginal births	[] Suspected placenta accreta or percreta
	[] No known bleeding disorder	[] Prior cesarean birth or prior uterine incision	[] Placenta previa, low lying placenta
	[] No History of PPH	[] Large uterine fibroids	[] Known coagulopathy
		[] History of previous PPH	[] History of more than one previous PPH
		[] Family history in first degree relatives who experience PPH (known or unknown etiology with possible coagulopathy)	[] Hematocrit <30 AND other risk factors
		[] Chorioamnionitis	[] Platelets <100,000
		[] Fetal demise	
		[] Estimated fetal weight greater than 4 kg	
		[] Morbid obesity (body mass index >35)	
		[] Polyhydramnios	
	Anticipatory Interventions Monitor patient for any change	e in risk factors at admission and implement	t anticipatory intervention as indicated
[] Blood bank order: Change blood bank order as needed if risk category changes	[]Clot only (Type and Hold)	[]Obtain type and Screen	[]Obtain Type and Cross (see Clinical Guidelines)
		[] Notify appropriate personnel such as the Provider (OB MD/CNM) anesthesia, blood bank. Charge Nurse, Clinical Nurse Specialist	[] Notify appropriate personal such as the Provider (OB MD/CNM) anesthesia, blood bank, Charge Nurse, Clinical Nurse Specialist
			[] Consider delivering at a facility with the appropriate level of care capable of managing a high risk mother

PPH: Postpartum Hemorrhage, OB MD: Obstetrician, CNM: Certified Nurse Midwife

Appendix 2a &b: Cover letter and questionnaire.



Assessment of Provider awareness of Postpartum Hemorrhage Risk Assessment tool at time of admission

An Inspira Health team is conducting an Institutional Review Board reviewed (a committee responsible for overseeing research activities and participant welfare) Research Study examining providers' awareness of the postpartum hemorrhage risk assessment tool. To participate in the research study, you will be asked to complete a brief survey including demographics and study questions. Completing the survey should take no more than 10 minutes. You will not be compensated for your participation. Completion of the survey is voluntary and anonymous. Neither your name nor any identifying data will be collected or included on any report of the project. Your responses to the survey are strictly confidential. You can choose to stop completing the survey at any time without penalty or consequence. If you choose not to complete the survey, it will not impact you. There are no foreseeable risks associated with completing the survey. You may skip any question at any time. The results of this study may help increase awareness of the available postpartum hemorrhage risk assessment tool. The act of completing and returning the surveys will constitute as your consent to participate in the project.

Please Return Completed Surveys To The Locked Boxes Located On The Labor And Delivery Unit And The Mother Baby Unit. You are eligible to complete this survey if you are an OB/GYN Resident at Inspira Medical Center Vineland, an OB/GYN Attending at Inspira Medical Center Vineland, or if you are a Registered Nurse (full-time, part-time, or per diem) working in the Mother Baby or Labor and Delivery Unit. You are not eligible if you are a Medical Student, if you are an Agency Nurse or are temporarily assigned to the Mother Baby or Labor and Delivery unit, or if you are a member of a vulnerable population*. If you have questions regarding this project please contact the corresponding investigator, Dr. Kimberley Agbo at Agbok@ihn.org.



* Vulnerable Populations: Prisoners, Pregnant Women, Decisionally Impaired Individuals, Minors (under the age of 18)

Postpartum Hemorrhage (PPH) Awareness Survey

Demographics:

Please circle one answer for each question

- 1. Your profession
- a. Nursing staff
- b. Attending physician
- c. Resident physician
- d. Other
- 2. How many years have you been in this profession
- a. <1 year
- b. 1-5 yrs
- c. 5-10 years
- d. >10 years
- 3. Age
- a. 18-25
- b. 26-35
- c. 36-50
- d. >50
- 4. Race/Ethnicity
- a. White
- b. Black/African American
- c. Hispanic
- d. Asian

Survey Questions

Please circle one answer unless question indicates otherwise

- 1. Are you aware that there is a PPH assessment on the labor and delivery floor?
- a. Yes: go to question #2
- b. No: skip to #12 question
- 2. Do you know any of the questions included in the assessment? Circle any/all questions that you are aware of:
- a. Prior cesarean section
- b. prior postpartum hemorrhage
- c. placenta disease
- d. Obesity
- e. Grand multiparity
- f. All of the above
- g. None of the above
- 3. Who do you think this assessment needs to be performed by?
- a. Nursing staff
- b. Resident
- c. Attending physician
- d. Any of the above
- e. None of the above

- 4. Where do you think this assessment needs to be performed?
- a. Office prior to admission
- b. At the time of admission on labor and delivery floor
- c. At home self evaluation by patient
- 5. Do you know how to access the assessment?
- a. YES: skip to 6
- b. NO : stop here
- 6. If **yes** how does one access the assessment?
- a. Documentation
- b. Notes
- c. Form browser
- d. Histories
- 7. What are the risk stratification options on the assessment?
- a. Low, medium, high
- b. Low, high
- c. Risk, no risk
- 8. To your knowledge, what is done with this information?
- a. Blood is automatically put on hold
- b. Providers are made aware
- c. PPH medications are made available
- d. B &C
- e. All of the above
- f. None of the above
- 9. What would you like to see done with this information? (Free text below)

Comments:

- 10. Are you aware of other PPH risk tools/checklists?
- a. Yes: Please list the names of tools/checklists . Continue to #11
- b. No: Stop here skip #12

If yes, list names of other tools and checklists here (then Continue to #11)

- 11. How does this compare with other PPH risk tools/checklists you've encountered?
- a. Similar
- b. Very similar
- c. Different
- d. Very different

Comments:

- 12. Would you like to receive more information on PPH risk tools?
- a. Yes
- b. No

If you are not aware of this PPH assessment and would like to learn more about it, please contact Kimberley Agbo at agboK@ihn.org **Appendix 3:** Additional resources

https://www.acog.org/-/media/project/acog/acogorg/files/forms/districts/smi-ob-hemorrhage-bundle-hemorrhage-checklist.pdf

Appendix 4: Additional Resources

https://www.acog.org/-/media/project/acog/acogorg/files/forms/districts/smi-ob-hemorrhage-bundle-risk-assessment-ld-admin-intrapartum.pdf

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