



Postpartum Warning

Signs:

P-O-S-T-B-I-R-T-H



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Disclosure

AWHONN Consultant

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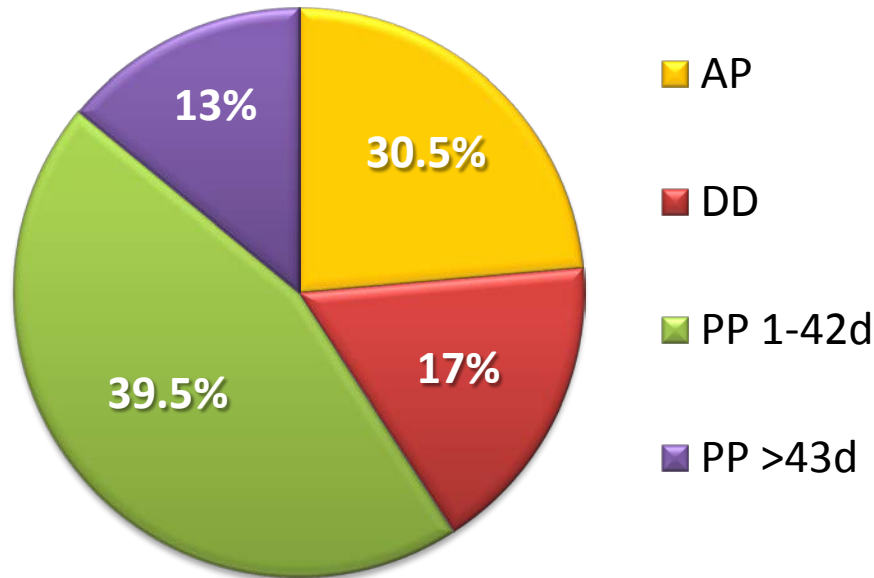
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Timing of Pregnancy Related Deaths

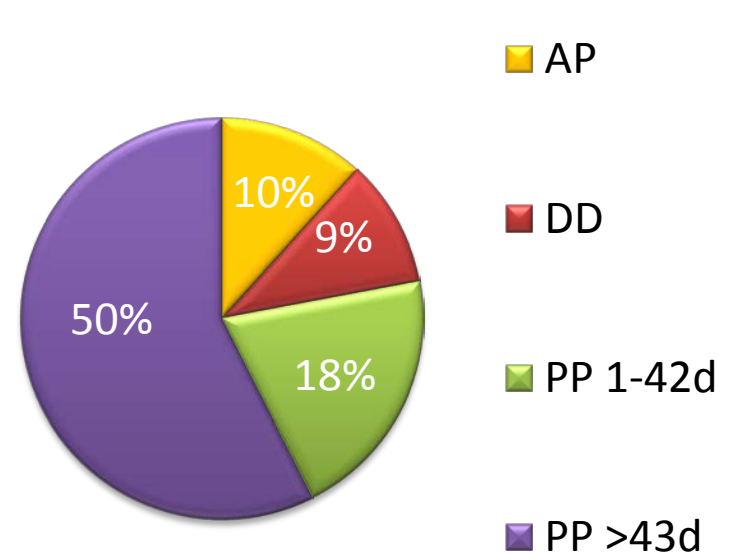
U.S.

N=1743



New Jersey

N=78



Creanga, A.A. et al. (2017). Pregnancy-related mortality in the United States, 2011–2013. *Obstetrics & Gynecology*, 130(2), 366-73.

N.J. Division of Family Health Services Reproductive and Perinatal Health (2016). Trends in state wide maternal mortality: New Jersey 2009-2013. Retrieved from https://www.state.nj.us/health/fhs/professional/documents/nj_maternal_mortality_trends_2009_2013.pdf



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Review of Literature

- Increase in rates of maternal mortality unclear (CDC, 2017)
 - Check box added to death certificate
 - Use of computerized data linkages by the states
 - Changes in the way causes of death are coded
 - Increase in chronic health conditions, obesity epidemic, more births to women who are “older”
 - Previous under-reporting
- Several research studies have shown that the majority of maternal deaths, particularly those related to OB hemorrhage, embolism, and hypertension, could be avoided with appropriate standards of care and education (Bingham & Jones, 2012; Della Torre et al., 2011).
- More than **65,000** women each year experience severe maternal morbidity in 2012 (CDC, 2016).
- HP2020 and UN Millennium Development Goals – improve maternal health!
- Lack of literature on best practices to teach women about potential complications or warning signs
 - How to differentiate normal from abnormal
 - Discharge teaching: topics, time, assessment of understanding, tools, documentation, follow-up



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Empowering Women to Obtain Needed Care Project

AWHONN and Merck for Mothers – OBJECTIVES:

- Increase nurses' awareness of the problem of maternal morbidity and mortality in the U.S.
- Provide nurses with consistent, quality information about post-birth warning signs to use when educating all women and their families during postpartum discharge
- Empower women to recognize warning signs and when to obtain immediate health care for a potentially life threatening complication after birth



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Phase One: Focus Groups

Suplee, P, Kleppel, L., & Bingham, D. (2016). Discharge education on maternal morbidity and mortality provided by nurses to women in the postpartum period. *JOGNN*, 45(6), 894-904.

- **Design:** Exploratory Qualitative
- **Participants:** 52 postpartum nurses
- **Setting:** Six hospitals in Georgia & New Jersey
- **Instruments:**
 - Demographic Survey
 - Semi-structured Interview Guide
- **Methods:** Six focus groups were conducted to elicit data. Discussions were audiotaped, transcribed, coded, and clustered into categories by two researchers. Reviewed by independent researcher. Demographic information was analyzed in Stata 13 using descriptive statistics.



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Example Guided Questions

1. Please describe the types of **resources** used in your organization to educate women in the pp period during & prior to discharge?
2. What **information** is typically discussed with a woman prior to discharge?
3. What do you think should be the top priority **education safety elements** that every woman who gives birth learns before she is discharged?
4. Can you describe the postpartum nurse's role in **facilitating** follow-up care for women post-discharge?



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Focus Groups Demographics

Characteristic	n	%
Age in years		
20-29	4	8
30-39	8	15
40-49	15	29
50-59	18	35
60-69	6	12
>70	1	2
Ethnicity		
Hispanic/Latina	3	6
Non-Hispanic/Latina	49	94
Race		
Asian	2	4
African American/Black	8	15
White	40	77
Other	2	4
Education		
Diploma	3	6
Associate Degree	15	29
Baccalaureate Degree	25	48
Master's Degree	8	15
Doctorate	1	2

Years of Nursing Experience	n	%
1-5	8	15
6-10	10	19
11-15	2	4
16-20	8	15
21-25	7	13
26-30	5	10
>30	12	23
Years of Postpartum Practice		
1-5	15	29
6-10	7	13
11-15	7	13
16-20	4	8
21-25	8	15
26-30	6	12
>30	5	10
Role on Unit		
Staff Nurse	39	75
Nurse Educator/CNS	5	10
Nurse Manager/Asst. Manager	8	15

(Suplee et al., 2016)



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Focus Groups Results

- **Types of resources**
 - Individual interactive
 - Booklet/packet
 - Discharge education sheet
- **Types of information**
 - **Inconsistent** information provided (description, topics, who to notify)
 - Majority of educational messages were **focused on baby**
 - Based on **GP status, age, where care was received**
- **Process of updating educational materials**
 - Committees, NM/Educator
 - EMR, Booklet
- **Challenges**
 - Comorbidities
 - Literacy/language barriers
- **Warning signs**
 - often **buried** within materials, not primary focus
 - taught **based on real or perceived risk** instead of shared with every postpartum woman
 - what to do (Provider vs. ER)



Example Descriptions

Obstetric Hemorrhage

- **Pad saturation:** one pad within an hour was a trigger for the woman to do something
- **Amount:** “An increase in bleeding”
- **Clot size:** “larger than an egg,” “larger than a golf ball,” “bigger than your fist,” “a plum (but not a Costco plum),” “apple,” “pear,” the size of a “quarter,” or “a cluster of clots that filled your hand”
- **Activity:** increased activity or breastfeeding
- **Dizziness:** associated with blood loss or elevated BP

Venous Thromboembolism

- **Pain:** Calf area (some added on rest)
- **Color:** Redness
- **Size:** One calf bigger than the other
- **Temperature:** Sensation of heat
- To **Homan’s** or not to Homan’s....



Sample Comments: Hemorrhage

- “I usually say to them, ‘If you have a clot and then you continue to bleed after that, that is not a good sign’ ”
- “Some of them can pass what looks to them as pretty scary clots, but you know, if that comes out and then nothing else comes out, you know, then I’m a lot more reassured than if that comes out and then you’re seeing gushing, bright, red blood then I’m a lot more concerned.”



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Sample Comments: VTE

- “We wait until someone is symptomatic, unfortunately”
- “I basically don’t (teach about VTE) – it doesn’t say it on the form. To be perfectly honest, it doesn’t trigger for me. We’re checking pulses postpartum”
- “...I tell them because of the increased blood supply in your body and your decreased activity, every woman whose just had a baby is at risk for a blood clot”



Interphase

- **Expert Panel**
- **Literature**
- **Design**



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AWHONN Program Components

- ❖ Education for all nurses who provide postpartum discharge teaching
- ❖ Save Your Life Handout (patients)
- ❖ Maternal Mortality Postpartum Discharge Education Checklist (for nurses)
- ❖ QI Medical Record Audit Tool
- ❖ Postpartum Education Evaluation Tool



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Script...

“Although most women who give birth recover without problems, any woman can have complications after the birth of a baby. Learning to recognize these post-birth warning signs and knowing what to do can save your life. I would like to go over these post-birth warning signs with you now so you will know what to look for and when to call 911 or when to call your healthcare provider.”



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POST-BIRTH WARNING SIGNS: POSTPARTUM DISCHARGE EDUCATION CHECKLIST



This checklist is a teaching guide for nurses to use when educating all women about the essential warning signs that can result in maternal morbidity and/or mortality.

Instructions:

- Instruct ALL women about all of the following potential complications. All teaching should be documented on this form or in your facility's electronic health record.
- Focus on risk factors for a specific complication first; then review all warning signs.
- Emphasize that women do not have to experience ALL of the signs in each category for them to seek care.
- Encourage the woman's significant other or her designated family members to be included in education whenever possible.

The information included on this checklist is organized according to complications that can result in severe maternal morbidity or maternal mortality. Essential teaching points should be included in all postpartum discharge teaching.

The parent handout, "Save Your Life", is designed to reinforce this teaching. This handout is organized according to AWHONN's acronym, POST-BIRTH, to help everyone remember the key warning signs and when to call 911 or a health provider. A portion of this handout is below for reference.

Call 911 if you have:	<input type="checkbox"/> Pain in chest <input type="checkbox"/> Obstructed breathing or shortness of breath <input type="checkbox"/> Seizures <input type="checkbox"/> Thoughts of hurting yourself or your baby
Call your healthcare provider if you have: (If you can't reach your healthcare provider, call 911 or go to an emergency room)	<input type="checkbox"/> Bleeding, soaking through one pad/hour, or blood clots, the size of an egg or bigger <input type="checkbox"/> Incision that is not healing <input type="checkbox"/> Red or swollen leg, that is painful or warm to touch <input type="checkbox"/> Temperature of 100.4°F or higher <input type="checkbox"/> Headache that does not get better, even after taking medicine, or bad headache with vision changes

Below is a suggested conversation-starter:

“Although most women who give birth recover without problems, any woman can have complications after the birth of a baby. Learning to recognize these POST-BIRTH warning signs and knowing what to do can save your life. I would like to go over these POST-BIRTH warning signs with you now, so you will know what to look for and when to call 911 or when to call your healthcare provider.

Please share this with family and friends and post the “Save Your Life” handout in a place where you can get to it easily (like your refrigerator).”

SAVE YOUR LIFE:

Get Care for These POST-BIRTH Warning Signs

Most women who give birth recover without problems. Yet any woman can develop complications after the birth of her baby. Knowing what could be life-threatening warning signs after the birth of your baby could save your life.

Tell your partner and others you need immediate care if you experience any of the following warning signs:

Call 911

if you have:

- P**ain in chest
- O**bstructed breathing or shortness of breath
- S**eizures
- T**houghts of hurting yourself or your baby

Call your healthcare provider

if you have:

(If you can't reach your healthcare provider, call 911 or go to an emergency room)

- B**leeding, soaking through one pad/hour, or blood clots, the size of an egg or bigger
- I**ncision that is not healing
- R**ed or swollen leg, that is painful or warm to touch
- T**emperature of 100.4°F or higher
- H**eadache that is not relieved, even after taking medication, or associated with visual changes.

Trust your instincts.

ALWAYS obtain medical care if you are not feeling well or have questions or concerns.

Tell 911 or your healthcare provider:

"I had a baby on _____ and
(Date)
I am having _____."
(Specific warning signs)

Maternal Mortality Postpartum Discharge Education Checklist

Pulmonary Embolism	Essential Teaching for Women	Taught Date/Initials	Understood Date/Initials	Family Member Present for Teaching
What is Pulmonary Embolism	Pulmonary embolism is a blood clot that has traveled to your lung.			YES / NO
Signs of Pulmonary Embolism	<ul style="list-style-type: none"> • Shortness of breath at rest (e.g., tachypneic shallow, rapid respirations) • Chest pain that worsens when coughing • Change in level of consciousness 			YES / NO
Obtaining Immediate Care	Call 911 or go to nearest emergency room RIGHT AWAY.			YES / NO
Obstetric Hemorrhage	Essential Teaching for Women	Taught Date/Initials	Understood Date/Initials	Family Member Present for Teaching
What is Obstetric Hemorrhage	Obstetric hemorrhage is when you have an excess amount of bleeding after you have delivered your baby.			YES / NO
Signs of Obstetric Hemorrhage	<ul style="list-style-type: none"> • Bleeding through more than 1 perineal pad/hour • Passing 1 or more clots the size of an egg or bigger • Character of clots/differentiation of bright red bleeding from dark with clots 			YES / NO
Obtaining Immediate Care	<ul style="list-style-type: none"> • Call healthcare provider immediately for signs of hemorrhage. • If no response from provider/clinic or symptoms worsen, call 911 or go to the nearest emergency room. 			YES / NO
Severe Hypertension	Essential Teaching for Women	Taught Date/Initials	Understood Date/Initials	Family Member Present for Teaching
What is Hypertension	Hypertension is when your blood pressure is higher than it should be.			YES / NO
Signs of Severe Hypertension	<ul style="list-style-type: none"> • Seizures or change in level of consciousness • Severe constant headache that does not respond to mild analgesics, rest, and/or hydration • Changes in vision, nausea, dizziness • Pain specifically in the upper right abdominal area • Swelling of face, hands, and/or legs more than what you would describe as “normal” hand and feet swelling 			YES / NO
Obtaining Immediate Care	<ul style="list-style-type: none"> • Call 911 for seizures or changes in level of consciousness. • Call healthcare provider immediately for any of other signs. • If no response from provider/clinic or symptoms worsen, call 911 or go to nearest emergency room. 			YES / NO



Postpartum Nurses Evaluation

Empowering Women to Obtain Needed Care: AWHONN's Postpartum Education Evaluation

FOR ALL POSTPARTUM NURSES: Please complete this survey after you have used the new Maternal Mortality Postpartum Discharge Education Checklist and Postpartum Warning Signs and submit to the Site-Coordinator for the Empowering Women to Obtain Needed Care Project.

1. Can you identify anything that facilitated your use of the **Maternal Mortality Postpartum Discharge Education Checklist and Postpartum Warning Signs** with postpartum women?
2. Can you identify anything that was a barrier to using the **Maternal Mortality Postpartum Discharge Education Checklist and Postpartum Warning Signs** with postpartum women?
3. Please use the Likert Scale below to address each statement:

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
I found the Maternal Mortality Checklist easy to use.	1	2	3	4	5
I feel that the Maternal Mortality Checklist will assist me when teaching all women about warning signs of	1	2	3	4	5



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Phase II

- ◆ Increase women's access to quality information during the postpartum hospitalization
- ◆ Empower women to recognize warning signs and when to obtain immediate health care for a potentially life threatening complication after birth
- Pilot tested educational materials with nurses at four sites

Suplee, PD., Kleppel, L., Santa-Donato, A., & Bingham, D. (2016/2017). Improving postpartum education about warning signs of maternal morbidity and mortality. *Nursing for Women's Health*, 20(6), 552-567



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Results

52 nurses completed follow-up survey:

- **78.85%** (n=41) agreed/strongly agreed that the Maternal Mortality Checklist was easy to use
- **84.62%** (n=44) agreed/strongly agreed that the Maternal Mortality Checklist would assist them when teaching all women about possible postpartum complications
- **78.84%** (n=41) agreed/strongly agreed that the handout was easy to use when teaching women



Results

- **86.53%** (n= 45) agreed/strongly agreed to being satisfied with the amount of information included on the handout
- **86.54%** (n=45) agreed/strongly agreed that women were able to understand the importance of the postpartum warning signs that were discussed with them
- **92.31%** (n=48) agreed/strongly agreed that women were able to describe when to obtain needed care related to all of the warning signs presented on the handout



Facilitators/Barriers

Primary Facilitator:

the
acknowledgement
of how helpful the
tool was to use
when educating
women

Primary

Barrier: tool
was not available
in Spanish



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Implications for Practice

- Women
 - Deserve consistent messaging on warning signs
 - Can misinterpret information
 - Description of who to contact when
- Nurses
 - Best practice education needed
 - Post-birth warning signs, causes, & type of care
 - Use of clear, concise messages
 - Assessing understanding - Teach Back
 - Learning moments within group
 - “I didn’t know we should do that”
 - Peer education mechanisms



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Having a more focused discussion with women regarding potential complications of giving birth and using clear, concise messages of when women should obtain care may contribute to decreasing the rates of maternal mortality post discharge.



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Conclusion

- Most nurses are providing discharge education about warning signs
- How messages are conveyed, which women receive what messages, what information is provided, & what information is given to women to seek additional care varies
- Future research & practice:
 - Intervention & population based studies
 - Staff education



Resources

- Buchko, B.L., Gutshall, G.H., & Jordan, E.T. (2012). Improving quality and efficiency of postpartum hospitalization. *Journal of Perinatal Education*, 21(4), 238-247.
- Callaghan, W.M., Creanga, A.A., & Kuklina, E.V. (2012). Severe maternal morbidity among delivery and postpartum hospitalizations in the United States. *Obstetrics & Gynecology*, 120, 1029–36.
- Center for Disease Control (CDC) (2017). Pregnancy mortality surveillance system. Retrieved from <http://www.cdc.gov/reproductivehealth/maternalinfanthealth/pmss.html>
- Creanga, A.A., Syverson, C., Seed, K., & Callaghan, W.M. (2017). Pregnancy-related mortality in the United States, 2011–2013. *Obstetrics & Gynecology*, 130(2), 366-373.
- Glance, L.G., Dick, A.W., Glantz, J.C....Kellermann, A.L. (2014). Rates of major obstetrical complications vary almost fivefold among U.S. hospitals. *Health Affairs*, 33(8), 1330-1336.
- Kassebaum, N.J. et al. (2014). Global, regional, and national levels and causes of maternal mortality during 1990–2013: A systematic analysis for the Global Burden of Disease Study 2013. *The Lancet*, 384(9947), 980 – 1004.
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