SMFM Special Statement: Checklist for Postpartum Discharge of Women With Hypertensive Disorders

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Conflicts of interest: None

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Conflicts of interest: None

Condensation: The Society for Maternal-Fetal Medicine presents a checklist for the postpartum discharge of women with hypertensive disorders and suggests implementation strategies and quality indicators.

Introduction

Hypertensive disorders complicate 3% to 10% of pregnancies and are a leading cause of maternal morbidity and mortality.[1-5] The incidence is increasing, partially attributable to rising rates of obesity and other comorbidities.[5]

Postpartum exacerbations of hypertension and preeclampsia merit particular attention. Blood pressure usually decreases within 48 hours after delivery but increases again 3 to 6 days postpartum.[6] Therefore, it is recommended that patients with hypertensive disorders monitor blood pressure at home until a visit at 7 to 10 days after delivery.[6-8] A visit within 72 hours is recommended for women with severe hypertension.[7] The American College of Obstetricians and Gynecologists (ACOG) Practice Bulletin on Gestational Hypertension and Preeclampsia notes that most women who present with postpartum eclampsia or stroke had warning symptoms for hours or days before presentation.[9] The Bulletin stresses the need for increased awareness among health care providers about the importance of such symptoms and for empowerment of patients to seek medical attention if symptoms occur. Discharge teaching and postpartum follow-up are also emphasized in The Joint Commission's new Standards for Maternal Safety that go into effect January 1, 2021.[10]

Optimal care at postpartum discharge for women with hypertensive disorders requires several essential elements, including standardized education about warning symptoms,[11,12] support for home blood pressure monitoring,[13,14] and arrangement for a problem-focused postpartum office visit within 1 to 3 weeks.[8] Other elements include counseling on recurrence risk in subsequent pregnancies, use of low-dose aspirin to reduce recurrence,[15] long-term risk of cardiovascular disease,[9] and risk-modification strategies such as diet, weight loss, exercise, and smoking cessation.[8,9] These latter elements can be introduced at the time of discharge and reinforced during the postpartum office visit.

Because of the number of elements to be addressed, there is a risk of omitting one or more of them if providers rely upon memory alone to cover them all. A cognitive aid such as a checklist can help minimize such errors of omission.[16] We propose a checklist encompassing all relevant elements for every woman with hypertensive disorders at discharge. We also suggest practical tips to help facilities implement the checklist.

Checklist

A sample checklist is presented in Box 1. The purposes of the checklist are to reduce variation, improve patient education, encourage follow-up, improve documentation, and enhance continuity of care before, during, and after discharge. Checklist items are based on the ACOG Practice Bulletins on hypertensive disorders,[9] postpartum care,[7] and heart disease.[8] Checklist design follows guidance published in *A Checklist for Checklists* from Ariadne Labs[17] that recommends the use of a non-serif font, confinement to a single page, avoidance of color, and inclusion of a version date.

This checklist is only a sample. It should be customized and adapted to fit the unique circumstances of each facility.

Suggestions for Implementation

This checklist is appropriate for all hospitals and birthing centers providing delivery and postpartum care to women diagnosed with or at risk of hypertensive disorders including preeclampsia, eclampsia, gestational hypertension, and chronic hypertension.

A team approach is recommended, including health care providers who will use the checklist, along with other relevant stakeholders. Suggested members of a workgroup for the adoption-implementation process may include:

- At least one physician "champion" and one postpartum nurse "champion" to guide the process and communicate its importance to their peers
- Physicians and midwives who perform deliveries or postpartum care
- Nursing staff and management from the hospital's postpartum unit
- Emergency department or urgent care representative
- Hospital risk management
- Patient advocate
- Electronic health record (EHR) expert if the checklist is to be incorporated into the EHR

The implementation team should meet and consider the following:

- Do the checklist elements need to be adapted or modified to fit the local circumstances? For example, should there be a specified division of tasks between nurses and physicians? For postpartum blood pressure evaluation, some facilities may use remote monitoring smart-phone apps, text-message based reminder systems, or telehealth visits, while other facilities may use in-person office visits.[13,14] We recommend that each facility have one standardized model for follow-up and modify the checklist as needed to reflect that model.
- What supporting materials need to be prepared to reinforce the teaching provided? Excellent patient handouts with infographics are available in several languages from the Association of Women's Health, Obstetric and Neonatal Nurses[11] and the Council for Patient Safety in Women's Health Care.[12] Facilities may wish to develop additional materials customized with contact information for local resources.
- Where and in what format will the checklist be kept? Examples may include a wall poster in each patient room or the postpartum unit breakroom, a paper chart form to be completed and filed in the medical record, or a template in the EHR. Digital or online

versions have the advantage of access from multiple sites within the hospital, but they may pose challenges for interoperability between the hospital and clinic. Further, the development of EHR versions may delay implementation by months or longer compared to implementing a paper form.

- Will the checklist be completed and filed in each patient's medical record, along with a signature, date, and time of the persons completing it? Or will it be used as a template to guide care and teaching but not kept in the individual medical record?
- What is the target date for the initial roll-out of the checklist?
- How will the staff be informed or educated about the availability of the checklist and expectations for use?
- Who will be responsible for initiating the checklist (physician or nurse), and how will the team members be held accountable for initiating, maintaining, and completing it?
- How will future modifications to the checklist be made? What mechanisms will be used to garner feedback about the checklist so that it can be improved?

The implementation project must have the backing and support of leadership and must have clinical champions to lead the project and ensure that relevant clinicians have appropriate training. During implementation, we suggest frequent interval communications to review the contents of the draft checklist and solicit feedback from obstetric care providers, inpatient obstetric unit staff, outpatient clinic staff, and emergency department providers. The project should be discussed at department and staff meetings to engage as many people as possible in implementation.

Suggested Quality Indicators

Once the checklist has been integrated into clinical practice, the implementation team should monitor compliance and follow-up. Feedback should be solicited regarding any suggested improvements to the discharge process or revisions to the checklist itself. If the checklist needs revision, the updated version date should be clearly marked, and older copies should be discarded.

Quality indicators can help to evaluate whether the form is being used effectively. Some potential indicators are the percentage of women with hypertensive disorders who have documentation of:

- At least one blood pressure check at 7 to 10 days after delivery
- A postpartum office visit within 3 weeks after delivery
- Counseling regarding future cardiovascular risk
- Counseling regarding low-dose aspirin in a future pregnancy

These metrics should be stratified based on maternal race and ethnicity to aid in the identification of individual risks and structural barriers to medical care.[18]

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174 **Box 1.** Sample Checklist

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Checklist for Postpartum Discharge of Women with Hypertensive Disorders

This checklist is a SAMPLE only. It should be modified to fit facility-specific circumstances.

Patient Education

- ☐ Provide all education in patient's own language (via interpreter if necessary).
- ☐ Reinforce all education with a handout in patient's own language.
- ☐ Review warning symptoms and when to seek medical care.
- ☐ Discuss antihypertensive medications including dosage, schedule, potential side effects, hold parameters, impact on breastfeeding.
- ☐ Discuss the diagnosis, recurrence risk in future pregnancy, and recommendation for low-dose aspirin to reduce recurrence risk.
- ☐ Discuss the long-term risk of cardiovascular disease, recommendation for annual screening of blood pressure, and lifestyle interventions to reduce risk (diet, weight management, exercise, smoking cessation).

Follow-Up

- ☐ Provide contact information for obstetrical provider (phone, electronic patient portal).
- ☐ For all patients with hypertensive disorder:
  - ☐ Schedule follow-up within 3 weeks after delivery (in-person or telehealth)
  - ☐ Evaluate and address barriers to care, such as:
    - □ Transportation and childcare for visit(s).
    - □ Access to telephone if needed to call provider or reschedule appointments.
    - □ Access to interpretation services if needed.
- ☐ If remote BP monitoring will be used (e.g. telehealth, smartphone app):
  - Evaluate and address barriers to care, such as:
    - □ Access to blood pressure cuff.
    - □ Access to necessary technology (smartphone, internet).
    - □ Literacy, ability to read and interpret numbers, dyslexia.
  - Provide instruction on how to measure blood pressure.
  - Discuss target blood pressures (systolic less than 150 mm Hg; diastolic less than 100 mm Hg).
  - Discuss blood pressures requiring prompt notification (systolic 160 mm Hg or greater; diastolic 110 mm Hg or greater).
- ☐ If remote BP monitoring will **not** be used:
  - Severe hypertension: Schedule office visit for BP check within 72 hours.
  - Nonsevere hypertension: Schedule office visit for BP check at 7 to 10 days after delivery.

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All authors and Committee members have filed a conflict of interest disclosure delineating personal, professional, and/or business interests that might be perceived as a real or potential conflict of interest in relation to this publication. Any conflicts have been resolved through a process approved by the Executive Board. The Society for Maternal-Fetal Medicine (SMFM) has neither solicited nor accepted any commercial involvement in the development of the content of this publication.

This document has undergone an internal peer review through a multilevel committee process within SMFM. This review involves critique and feedback from the SMFM Document Review Committees and final approval by the SMFM Executive Committee. SMFM accepts sole responsibility for document content. SMFM publications do not undergo editorial and peer review by the American Journal of Obstetrics & Gynecology.

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SMFM has adopted the use of the word “woman” (and the pronouns “she” and “her”) to apply to individuals who are assigned female sex at birth, including individuals who identify as men as well as nonbinary individuals who identify as both genders or neither gender. As gender-neutral language continues to evolve in the scientific and medical communities, SMFM will reassess this usage and make appropriate adjustments as necessary.

All questions or comments regarding the document should be referred to the SMFM Patient Safety and Quality Committee at smfm@smfm.org.