



# Severe Hypertension in Pregnancy and Postpartum

Providing BP Monitors for Home Monitoring



**Oregon Perinatal Collaborative**



## BP Monitor Cuff Guidance

Recognizing the risk of morbidity and mortality from severe hypertension in the postpartum setting, the 2024-2025 OPC Severe Hypertension initiative prioritized increasing access to automated BP cuffs for home monitoring with patients who have hypertension. In the Fall of 2024, the OPC provided a one-time supply of BP cuffs to hospital teams who were participating in the hypertension initiative and working on developing sustainable workflows and processes to continue reliable access to BP cuffs upon discharge from the hospital when necessary. The information below highlights the best practices identified by the end of the initiative. It should be noted that there continues to be challenges to reliable distribution of automated BP monitors/ cuffs in the hospital, and we intend to update this document if new information becomes available.

The OPC submitted written and verbal support for an update to the Medicaid coverage across the state that was discussed by HERC in the Fall of 2024. This was approved and went into effect with the Prioritized List of Health Services as of January 1<sup>st</sup> 2025. Specific language within the guidance can be found on page 179 as ancillary guideline A4 and reads:

*Home blood pressure monitors (HCPCS A4660, A4663, A4670) are covered for diagnosing and monitoring hypertension, including hypertensive diseases of pregnancy, and related cardiac conditions. Automated arm (non-wrist) monitors are preferred as first-line devices. HERC prefers devices included on the US Blood Pressure Validated Device Listing (<https://www.validatebp.org/devices> retrieved on 11/14/2024) when possible.*

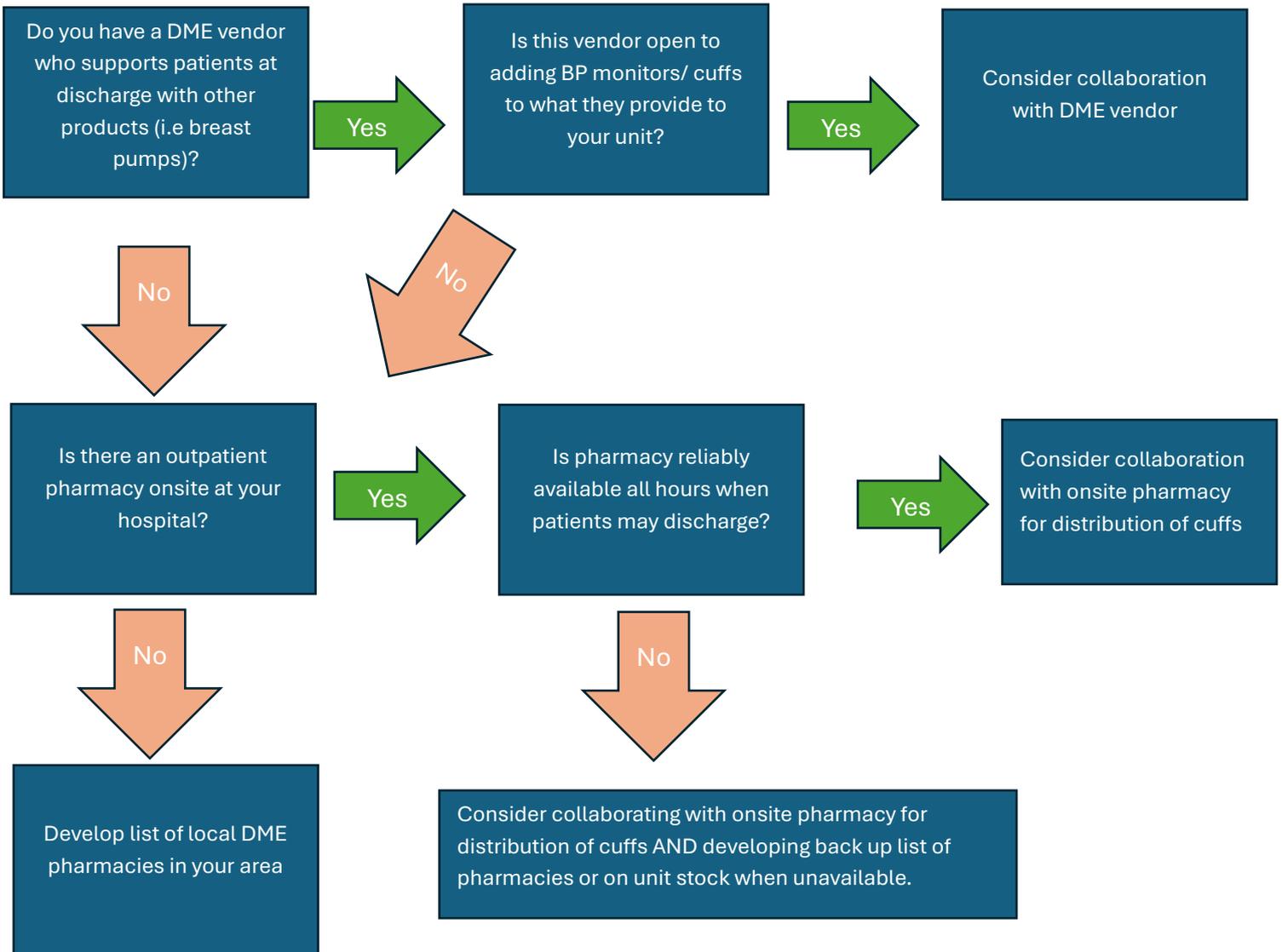
This document includes available information on:

- 1) [BP monitor/ cuff selection and validation](#)
- 2) [Coordination with DME vendor for hospital discharge, like other current processes/supplies.](#)
- 3) [Coordination with onsite outpatient pharmacy to discharge patients from delivery stay with BP monitor, including example workflows](#)
- 4) [Coordination with local payer/ CCO](#)
- 5) [Example patient education for use in EMR:](#)  
*NOTE: Local review, edits and build will be required.*
- 6) [Example algorithms for postpartum BP management](#)  
*NOTE: local review and edits will be required*



**Decision Tree for Sites Considering Distribution of BP Cuffs upon Discharge from L&D**

NOTES: Any patient who is diagnosed with hypertension prior to admission for birth should ideally have access to an automated BP monitor/ cuff confirmed prior to admission as some of the DME challenges noted below are specific to the hospital. There is one additional process involving working directly with a payer/ CCO outlined in this document that is not captured below.



Coverage for BP monitors/ cuffs is covered under the DME (durable medical equipment) portion of Medicaid, which may limit the ability for pharmacies to seek reimbursement (they must be licensed as a DME provider).

- Note that commercial/private payers’ coverage is also variable and may require copay/ deductible. Due to multiple insurance companies and products within an insurance company, confirmation of commercial coverage was not possible as part of the OPC initiative.
- Securing limited foundation, grant or other resources to ensure small onsite supply for patients without insurance and/or other barriers to securing is recommended for ongoing program as there will likely always be “one-off” needs but should be limited.



## 1) BP Monitor/ Cuff Selection and Validation

There are no specific monitors/cuffs that are recommended, but each hospital should work with their local DME teams to confirm what is available to them. Below are important considerations:

- The American Heart Association recommends an automated, cuff style upper arm (bicep) monitor.
- Wrist cuffs are not recommended, as they provide less reliable readings.
- Recommended cuff size, based on upper arm measurement, should be provided by inpatient clinical team for patient to use when obtaining for home use.
  - The inflatable part of the blood pressure cuff should cover 75-100% of the circumference of the upper arm. The cuff width should be wide enough to cover 40-80% of the distance from elbow to shoulder.
- Oregon HERC noted in their coverage guidelines on blood pressure monitors and cuffs that preference is for devices included on the US Blood Pressure Validated Device Listing but did not limit coverage to these devices. It is recognized that supply chain and other factors may impact what specific products are available to hospital teams and individual patients.
- Validation of new (unused) blood pressure monitor/ cuff at the time of distribution to patient may not be necessary. As the goal of home monitoring is to monitor trends and when to seek medical evaluation from a health care provider, it is acceptable for teams to direct patients to obtain their own cuff and/or distribute in clinic or hospital without validation. This does not limit the care team from seeking validation in future, if there are concerns about readings.



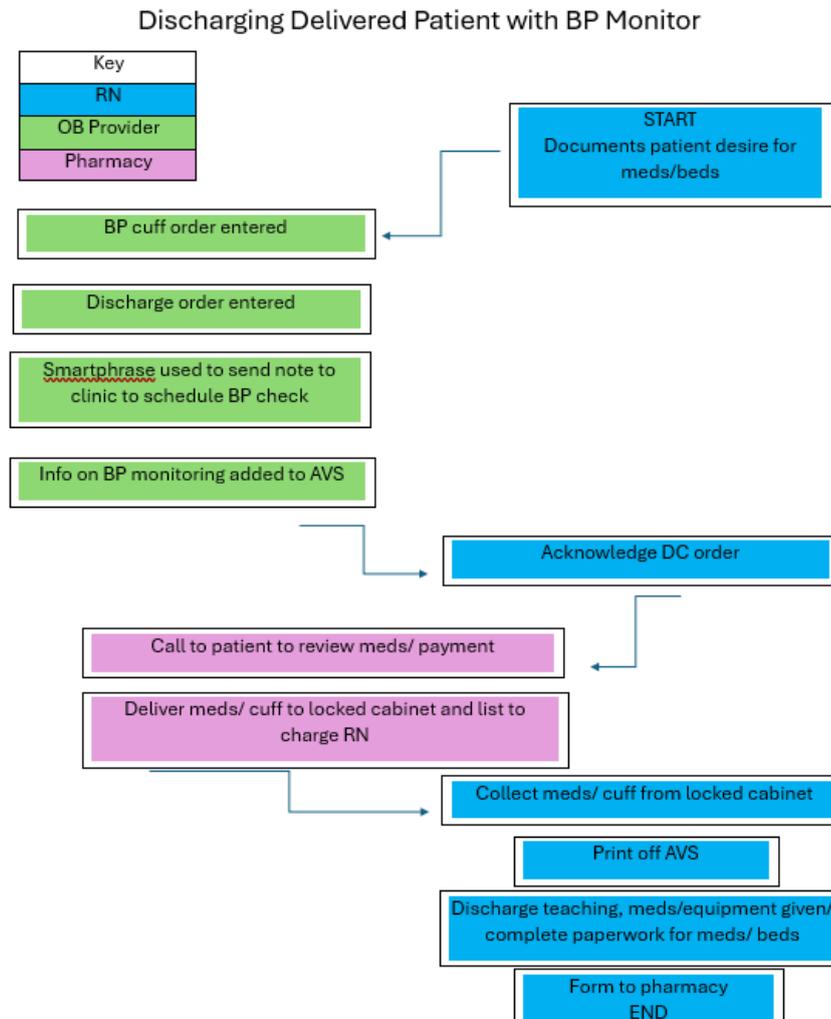
**2) Coordination with DME vendor for hospital discharge, like other current processes/ supplies.**

Multiple facilities across the state attempted to partner with DME vendors to distribute blood pressure monitors/cuffs through similar discharge process as breast pumps. There were no examples of successful attempts within the initiative, as DME vendors declined interest/ ability with those that requested. If anyone is successfully able to do this, we request this information is shared with the Oregon Perinatal Collaborative, so it can be shared broadly with perinatal units across the state.



3) Coordination with onsite outpatient pharmacy to discharge patients from delivery stay with BP monitor. *NOTE: Unless pharmacy is licensed as DME vendor, they may be unable to bill for this.*

a. Example flow chart for discharging patients with BP monitor from delivery stay





**b. Example discharge order and required documentation to support**

*.PREFNAME's pregnancy was complicated by severe hypertension of pregnancy. There is a risk of hypertensive exacerbation and worsening of preeclampsia postpartum. As such, they require close blood pressure monitoring at home. Although preeclampsia usually resolves within 6 weeks of delivery, .PREFNAME is at a lifelong increased risk of hypertensive disease.*

*.PREFNAME's diagnosis is: \*\*\*. We anticipate that home BP monitoring will be required for \*\*\*months.*

*As such, .PREFNAME requires a blood pressure cuff for home monitoring, size \*\*\*.*

*.LASTHEIGHT*

*.LASTWEIGHT*

*\*\*\*Note, if patient is on Medicare, they must be receiving home dialysis to qualify for a home BP cuff\*\*\**

**c. Highlight of operational considerations/ tips to consider before starting this work from sites who have implemented this in their hospital.**

- i. Confirm roles for providing patient education on blood pressure monitor use. If you use a program such as “meds to beds” do not assume that the pharmacy provides education on the BP monitor.
- ii. An order is needed for blood pressure cuff and consideration of how easy it is for this order to be found/ used is important. Try to incorporate into established workflows for providers.
- iii. Ensure standard content for patient education on how to use blood pressure monitoring equipment is used. Providing both verbally, as well as in discharge documents for easy patient reference is recommended. Clarity on what role(s) complete this step is necessary and should be monitored for completion until hardwired.
- iv. Patient education on when to take their blood pressure and what to do with the information is also necessary and should be verbally reviewed with the patient, as well as provided in written material available on discharge. See example algorithm below.
- v. Make sure that patient is discharged home with the correct size cuff. Different cuffs may be used in the hospital than what you are discharging



patient home with. And different brands/ products use different size names/ measurements, so make sure that the patient's arm circumference is guiding determination of what you are discharging patient home with, rather than simply using same size name as used in hospital.

1. For example, a patient may have an arm circumference of 16" that required a cuff size of "XL" in hospital, whereas cuff that you discharge home with may be called "regular" or "large" for an arm circumference of 16".



#### 4) Coordination with local payer/ CCO

In some areas of the state, direct coordination with local coordinated care organizations (CCO's) has been helpful in designing a process that allows for the hospital and system OB/Gyn clinics to be reimbursed for automated BP monitors to be distributed to patients at the time of diagnosis during prenatal care or at discharge from the hospital.

Briefly, the key elements for sites that were successful included:

- Eligibility: Patient was a member of the CCO, had a diagnosis associated with hypertensive disorders of pregnancy identified during prenatal care, postpartum care or during hospital admission, and do not have a blood pressure monitor/ cuff at home.
- Process:
  - Central materials division purchased blood pressure monitors/cuffs and were stocked in OB/Gyn clinics and hospital departments.
  - These are used to distribute to patients who meet eligibility.
  - A list of patients receiving these monitors is maintained, and the hospital invoices the local CCO monthly.
  - The local CCO reimburses the local hospital monthly for the cost of distributed blood pressure cuffs.
- Key considerations identified:
  - Having a DME order in EHR for tracking is helpful, as this would allow a report to be written from the EHR directly and ensure the tracking is complete and accurate.



## 5) Example patient education for use in EMR

*Please note these need to be reviewed, adapted and built into your local EMR and are provided as an example only to help streamline this process.*

### **a. Publicly available general education**

General patient education on taking blood pressure can be found on Preeclampsia Foundation site in both English and Spanish. This can be used in combination with content within after visit summaries (AVS)/ discharge information provided to patients that includes customized content for frequency of taking blood pressure, BP parameters of when to call and who to call.

- i. [English Preeclampsia Foundation Patient Education](#)
- ii. [Spanish Preeclampsia Foundation Patient Education](#)

### **b. Example from a hospital EMR**

*NOTE: Below example highlights specific information provided, with \*\*\* noting where information is individualized for the patient within the EMR.*

## Monitoring your blood pressure after delivery

### How to use a home blood pressure monitor

- **Get a blood pressure monitor.** Some home monitors are better than others. We recommend using an arm cuff. Wrist devices can be used if the arm cuff does not fit due to arm size or other medical reasons but often are not as accurate. Do not use finger devices because they are less accurate. Make sure you have the correct cuff size. Additional instructions are here: [ama-assn.org/system/files/2020-11/smbp-cuff-selection.pdf](http://ama-assn.org/system/files/2020-11/smbp-cuff-selection.pdf). To determine your cuff size, measure the distance around your mid upper arm (circumference). If you are between cuff sizes, use the larger cuff. Using a cuff that is too small will result in an inaccurate blood pressure reading. Find devices approved for home use here: [validatebp.org/](http://validatebp.org/)
- **Be still.** Don't smoke, drink caffeinated beverages or exercise within 30 minutes before measuring your blood pressure. **Sit for at least five minutes** before taking your blood pressure.
- **Sit correctly.** Sit with your back straight and supported (on a dining chair, rather than a sofa). Your feet should be flat on the floor and your legs should not be crossed. Your arm should be supported on a flat surface (such as a table) with the upper arm at heart level. Make sure the middle of the cuff is placed directly above the bend of the elbow. Check your monitor's instructions for an illustration or have your healthcare provider show you how.



- **Be consistent.** When you check your blood pressure, take it at the same time of day and in the same arm. Take your blood pressure at least two times.
- **Keep track.** Write down or record your blood pressure readings so you can share them with your physician or pregnancy care provider.

**Frequency of home blood pressure monitoring: \*\*\***

**Action Plan**

Systolic blood pressure (top number)		Diastolic blood pressure (bottom number)	Advice
Less than 150***	and	Less than 100***	OK to monitor. Call if you develop symptoms below.
150 to 159***	or	100 to 109***	Re-check in 4-6 hours. Call if continues to be elevated or if you develop symptoms below.
160 or higher	or	110 or higher	Call immediately

**Call if you develop symptoms at any time:**

- Chest pain
- Trouble breathing or shortness of breath
- A severe headache that will not go away with rest, hydration, or Tylenol
- Seeing spots or noticing a change in your eyesight often (not just occasionally)
- Trouble walking or feeling off balance
- Numbness or weakness in your face, arms(s), or legs(s)
- Difficulty speaking
- Seizures
- If something just doesn't feel right

During regular business hours (Monday to Friday, 8 a.m. to 5 p.m.), call your clinic to speak to a nurse

After hours or on weekends and holidays, call \*\*\*.

For an emergency, go to the emergency room or call 9-1-1.

### 6) Example algorithms for postpartum blood pressure management

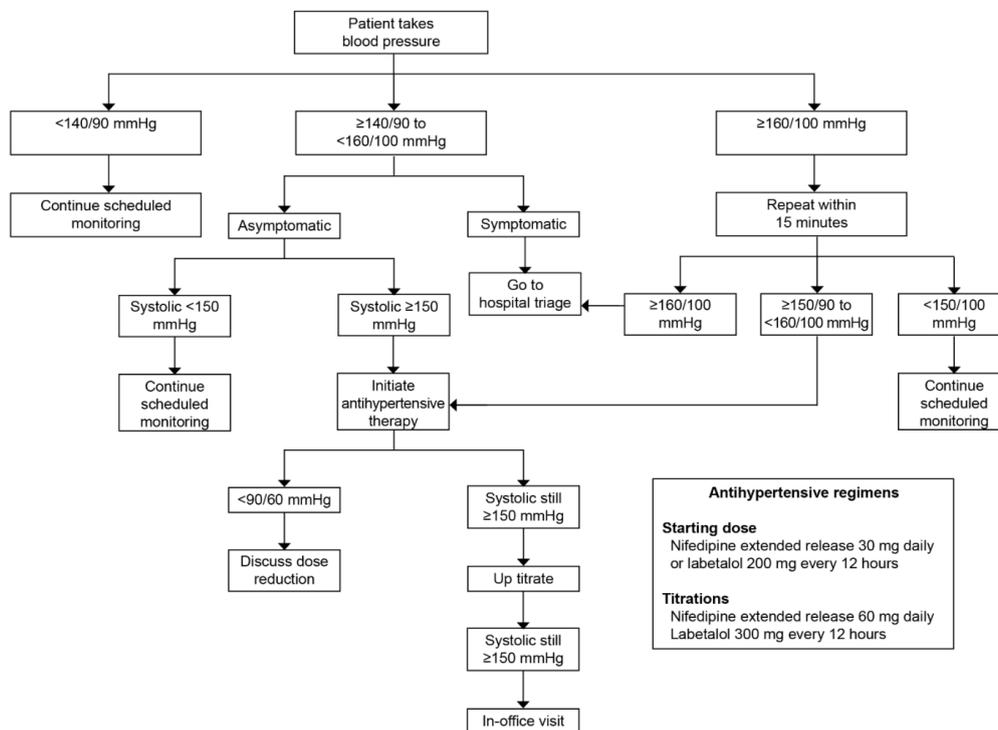
Please note these should be reviewed and adapted by your clinical teams.

a. *Arkerson BJ, Finneran MM, Harris S, Schnorr J, McElwee ER, Demosthenes L, et al.*

*Remote monitoring compared with in-office surveillance of blood pressure in patients with pregnancy-related hypertension: a randomized controlled trial.*

*Obstet Gynecol 2023;142*

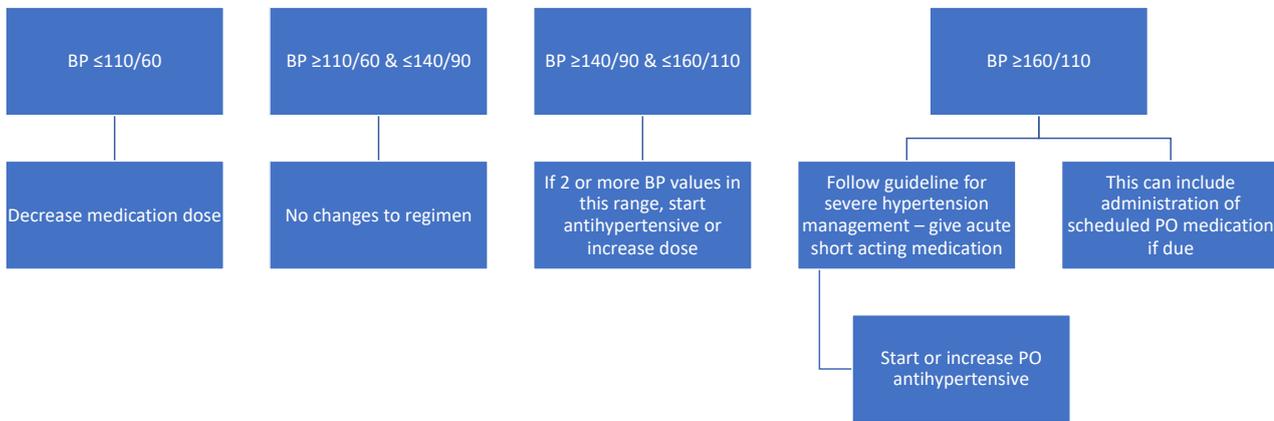
Appendix 1. Protocol flow chart.





**b. Hospital Example: Guidelines for Inpatient Postpartum Antihypertensive Management**

Guidelines for Inpatient Postpartum Anti-Hypertensive Management



**c. Hospital Example: Guidelines for Outpatient Postpartum Antihypertensive Management**

Guidelines for Postpartum Outpatient Follow Up of Pregnancy Associated Hypertension

