HOME VISITING INTERVENTION FOR **BLOOD PRESSURE EDUCATION.**

Our Goal: All pregnant and birthing persons receiving Maternal Infant Health Program and Strong Beginnings services will be provided blood pressure education during the prenatal and postpartum periods as a strategy to reduce preventable maternal morbidity and mortality.

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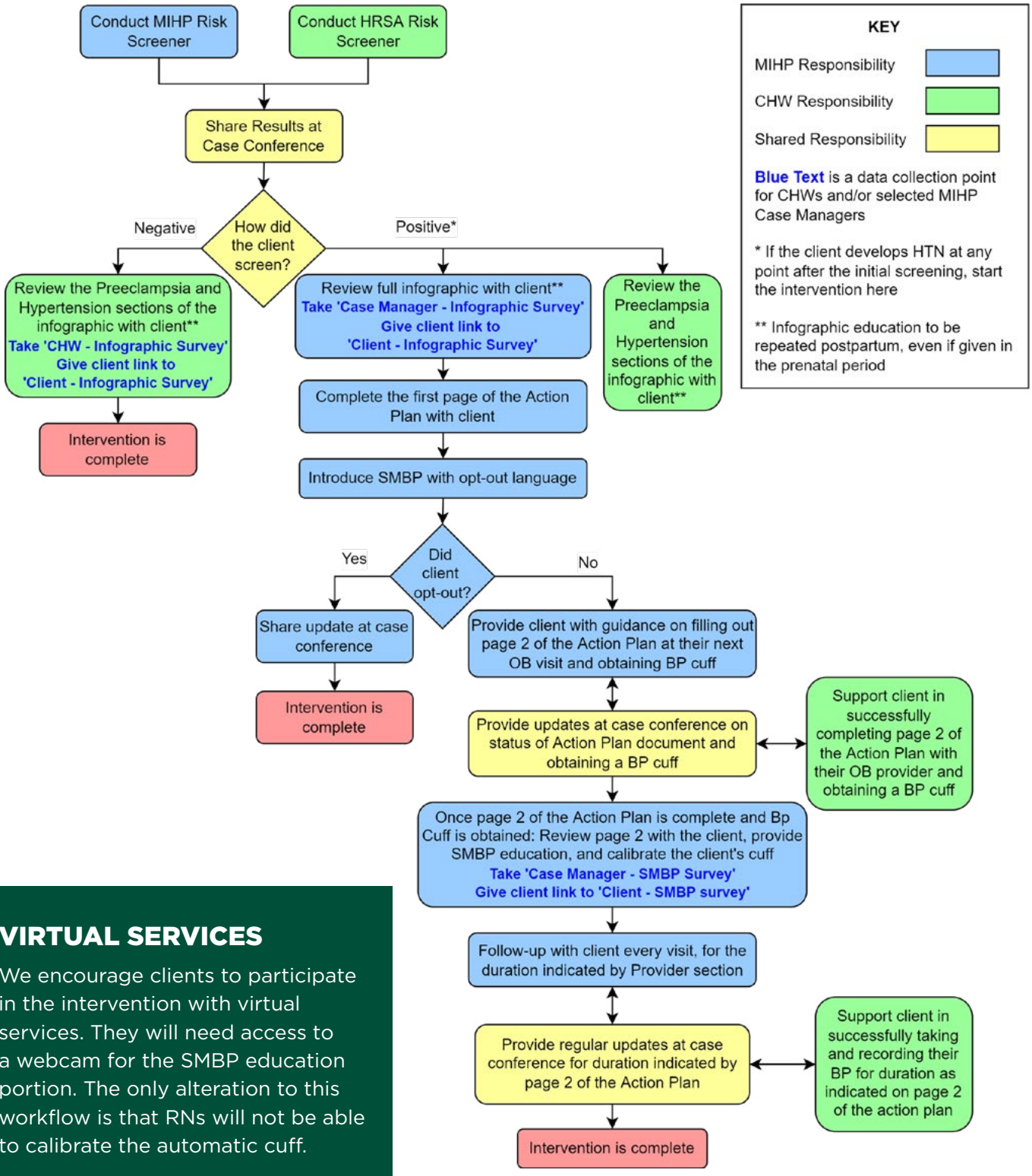
INTERVENTION WORKFLOW



VIRTUAL SERVICES

We encourage clients to participate in the intervention with virtual services. They will need access to a webcam for the SMBP education portion. The only alteration to this workflow is that RNs will not be able to calibrate the automatic cuff.

All necessary education materials can be mailed, dropped off, or virtually provided to the client. The BP cuff can be dropped off to the client.

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MATERNAL INFANT HEALTH PROGRAM CASE MANAGER RESPONSIBILITIES

- Collaborate with the Strong Beginnings (SB) Community Health Worker (CHW) who is working with the client and discuss as necessary at case conferences.
- Provide all prenatal clients (enrolled in both MIHP and SB), who screen positive on the MIHP or HRSA risk screener, education regarding hypertensive disorders of pregnancy and create an action plan.
  - » Use the Infographic document to guide your conversation.
  - » Stress the recognition of warning signs associated with hypertensive disorders of pregnancy.
  - » Use page 1 of the Action Plan to create a client-tailored Hypertension Action Plan.
- When introducing self-monitoring blood pressure (SMBP), make sure to use opt-out language:
  - » "For the safety of our clients who have high blood pressure, we are now helping them get blood pressure monitors and teaching them how to take their own blood pressure. I would like to get you set up with an action plan to talk with your OB provider about this and to schedule a time to get you started with tracking your blood pressure."
- For clients that do not opt-out of SMBP (desire to implement SMBP):
  - » Review page 2 of the Action Plan document with the client, answering any questions they might have about working with their OB provider to fill it out.
  - » Work with your client and their CHW to ensure they obtain an automatic blood pressure cuff.
    - ▪ Primary source of cuff: through a prescription and paid for by Medicaid.
    - ▪ Secondary source if necessary: SB purchased cuffs.
  - » Teach your client SMBP and provide them with an American Heart Association & American Medical Association (AMA) BP Monitoring Log.
    - ▪ See AMA Patient Training Checklist document.
    - ▪ Incorporate OB providers answers from the Action Plan.
  - » Calibrate your client's automatic blood pressure cuff.
    - ▪ See AMA Device Calibration document.
  - » For the amount of time as indicated by their OB provider, provide your client with follow-up every visit to help them monitor blood pressure.
- Provide all postpartum clients (enrolled in both MIHP and SB), who screen positive on the MIHP or HRSA risk screener, education regarding hypertensive disorders of pregnancy.
  - » Provide this education even if it was completed in the prenatal period.
    - ▪ All postpartum persons are at risk for postpartum hypertensive disorders, regardless of their prenatal risk factors.
  - » Use the Infographic document to guide your conversation.
  - » Stress the recognition of warning signs associated with hypertensive disorders of pregnancy and that they can occur for up to 6 weeks after giving birth.

STRONG BEGINNINGS COMMUNITY HEALTH WORKER RESPONSIBILITIES

- Collaborate with the assigned Maternal Infant Health Program (MIHP) Case Manager and discuss.
- Provide all prenatal clients with education regarding preeclampsia and hypertension.
  - » Use the Infographic document to guide your conversation.
  - » Stress the recognition of warning signs associated with hypertensive disorders of pregnancy and that everyone is at risk for preeclampsia, regardless of their history with high blood pressure.
- Ask all clients if they have questions about blood pressure education.
  - » Assist with understanding.
    - Another way to explain blood pressure is, "The heart is like a pump and our vessels are like a hose connected to the pump. When we have high blood pressure, the pump has to work extra hard to push blood through that hose. This puts extra stress on the hose, which can lead to things like heart disease and stroke."
  - » Notify and refer to MIHP Case Manager with questions as needed in a timely manner.
- For clients who are self-monitoring blood pressure (SMBP):
  - » Work with the client and the MIHP Case Manager to ensure the client completes page 2 of the Action Plan.
  - » Work with the client and the MIHP Case Manager to ensure the client obtains an automatic blood pressure cuff.
    - Primary source of cuff: through a prescription and paid for by Medicaid.
    - Secondary source if necessary: Strong Beginnings (SB) purchased cuffs.
  - » Ensure they are self-monitoring and encourage continual self-monitoring.
    - Notify MIHP Case Manager of progress.
  - » Ask if they have questions and assist with understanding.
  - » Notify and refer to MIHP Case Manager with questions as needed in a timely manner.
- Provide all postpartum clients education regarding preeclampsia.
  - » Provide this education even if it was completed in the prenatal period.
    - All postpartum persons are at risk for postpartum hypertensive disorders, regardless of their prenatal risk factors.
  - » Use the Infographic document to guide your conversation.
  - » Stress the recognition of warning signs associated with hypertensive disorders of pregnancy and that they can occur for up to 6 weeks after giving birth.

REFERENCES

American Heart Association & American Medical Association - Target: BP, Patient Measured BP

CDC - Hear Her Urgent Maternal Warning Signs: HEAR HER Campaign | CDC

HIGH BLOOD PRESSURE
DURING & AFTER PREGNANCY

WARNING SIGNS

GET MEDICAL CARE RIGHT AWAY IF YOU START HAVING ANY OF THESE WARNING SIGNS:

- Severe stomach pain that won't go away
- Severe swelling of the hands and face
- Severe headache that won't go away
- Severe nausea and throwing up (not like morning sickness)
- Dizziness or fainting
- Chest pain or fast-beating heart
- Changes in vision
- Trouble breathing

This does not list every warning sign you might have. If something doesn't feel right, contact your health care provider.

HIGH BLOOD PRESSURE:

High blood pressure (also called hypertension) happens when your blood pushes too hard against the walls of your blood vessels. High blood pressure does not usually cause symptoms until a severe or life-threatening stage. It can start before you get pregnant, while you are pregnant, or after your pregnancy.

RISKS FOR HAVING HIGH BLOOD PRESSURE

- Not being physically active
- Having a close relative with high blood pressure
- Smoking
- Being pregnant for the first time
- Blood pressure issues with a previous pregnancy

Also, being overweight and having diabetes.

RISKS TO YOU AND YOUR BABY

- Preeclampsia
- Stroke
- Heart disease
- Your baby being born too early or being too small

PREECLAMPSIA:

Preeclampsia is high blood pressure with signs of other problems. Some of these signs can be protein in your urine or seizures. Your provider will test your blood and urine to see if you are having these problems.

Preeclampsia can happen after the 20th week of pregnancy. It can also happen after giving birth, even if you did not have high blood pressure during pregnancy.

RISKS FOR HAVING PREECLAMPSIA

- Diabetes*
- Being pregnant with more than one baby
- Chronic high blood pressure
- Autoimmune conditions (like lupus)
- Being overweight*
- Preeclampsia with a previous pregnancy
- Kidney disease

**Also a risk for developing high blood pressure.*

RISKS TO YOU AND BABY

- Stroke
- Seizures
- Organ damage
- Death
- Your baby being born too early

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MANAGING HIGH BLOOD PRESSURE DURING & AFTER PREGNANCY

TAKE CARE OF YOURSELF

NUTRITION

Focus on eating:

- **Fruits and veggies**
- **Whole grains (oatmeal and whole grain bread/ pasta)**
- **Low-fat milk, yogurt and cheese**
- **Skinless chicken and fish**
- **Nuts, peas and beans**

Fresh, canned, and frozen fruits and veggies are all healthy choices.

Look for veggies labeled low-sodium, reduced-sodium, or no-salt-added.

PHYSICAL ACTIVITY*

5 days a week, 30 minutes a day is best. But, even just 10 minutes a day can help.

Pick a few exercises that work for you.

Examples - walk, dance, yoga, or find simple exercises online.

**Talk with your provider before changing your activity levels.*

DON'T SMOKE, USE DRUGS, DRINK ALCOHOL, OR USE MARIJUANA PRODUCTS.

MANAGING STRESS

It's normal to experience stress during and after pregnancy.

To help manage stress:

Make a list. What needs to be done and what can wait?

Try deep breathing or meditation.

Remember, it's okay to ask for help.

Work with your provider to address any mental health concerns you may have.

WORK WITH YOUR PROVIDER

MONITOR YOUR BLOOD PRESSURE AT HOME

If you are taking your own blood pressure at home, talk with your provider about important things to know.

What symptoms could mean I'm having problems with my blood pressure? What should I do if I'm having symptoms?

If a reading is higher than normal, when should I call the provider's office or go to the emergency room?

What is a healthy blood pressure reading for me?

GO TO YOUR APPOINTMENTS

Your provider will monitor your blood pressure readings, symptoms and changes in your urine and blood.

MEDICATION

If you and your provider decide that medication is needed:

- Do not stop taking it without talking to your provider.
- Follow the directions written on your bottle.
- Talk with your provider about side effects and how to manage them.

SHARE YOUR BLOOD PRESSURE LOG

Use a blood pressure log to write down your readings. Share this log with your provider at appointments.

Created by Michigan State University and Strong Beginnings, a Federal Healthy Start Program. This project was supported in part by funding from the Michigan Department of Health and Human Services. The content is solely the responsibility of the authors and does not necessarily represent the official views of the Department.

SELF-MONITORING BLOOD PRESSURE ACTION PLAN

What concerns you most about high blood pressure?

What is most important to you about managing your high blood pressure?

Choose 1-3 goals that you can do over the next two weeks:

- ☐ Monitor my blood pressure
- ☐ Be more active
- ☐ Manage stress/Practice self-care
- ☐ Quit smoking
- ☐ Take medications given to me by my doctor
- ☐ Other:

Some things that may stop me from completing my goals are:

If this happens, I will:

My support people are:

How sure are you that you can follow this plan?

- ☐ Very Sure
- ☐ Sure
- ☐ Somewhat sure
- ☐ Not sure at all

MY CARE TEAM

OB Provider:

MIHP Case Manager:

Community Health Worker:

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SELF-MONITORING BLOOD PRESSURE OB PROVIDER VISIT

Bring this sheet to your next visit with your health care provider. Use the guide below to help start the conversation and to write down your provider's answers.

Start the Conversation (example):
"Thank you for seeing me. As you know, I've been diagnosed with high blood pressure. I'm planning to work with my home visiting providers to track my blood pressure at home. Before I start, I wanted to ask you some questions"

ASK YOUR HEALTH CARE PROVIDER AND WRITE DOWN THEIR RESPONSE.

Can you write me a prescription for a blood pressure cuff?
When should I report my readings to you and what is the best way to report them?
What is a healthy blood pressure for me? **If my reading is higher than this, when should I call your office?** **When should I go to the emergency room?**
What symptoms could mean I am having problems with my blood pressure? **What should I do if I'm having them?**

Ask your health care provider any other questions you may have about high blood pressure.

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How to measure your blood pressure at home

TARGET:BP™ | American Heart Association. AMA

Follow these steps for an accurate blood pressure measurement

1. PREPARE

Avoid caffeine, smoking and exercise for 30 minutes before measuring your blood pressure.

Wait at least 30 minutes after a meal.

If you're on blood pressure medication, measure your BP *before* you take your medication.

Empty your bladder beforehand.

Find a quiet space where you can sit comfortably without distraction.

2. POSITION

3. MEASURE

Rest for five minutes while in position before starting.

Take two or three measurements, one minute apart, twice daily for seven days.

Keep your body relaxed and in position during measurements.

Sit quietly with no distractions during measurements—avoid conversations, TV, phones and other devices.

Record your measurements when finished.

Content provided by

AMA | MAPBP™

Self-measured blood pressure:
Seven-day recording log

TARGET:BP™ | American Heart Association. | AMA

Instructions: Complete the information below each time you take a measurement. It is best to take two measurements in the morning and two measurements in the evening for a week. If you miss any blood pressure measurements, leave that section blank and continue for the next time.

Content provided by AMA | MAPBP™

Blood pressure arm: ☐ **Left** or ☐ **Right** (check one)

Day 1 _____ (Date)	Day 2 _____ (Date)	Day 3 _____ (Date)	Day 4 _____ (Date)	Day 5 _____ (Date)	Day 6 _____ (Date)	Day 7 _____ (Date)
Morning ☀	Morning ☀	Morning ☀	Morning ☀	Morning ☀	Morning ☀	Morning ☀
1 SYS / DIA	1 SYS / DIA	1 SYS / DIA	1 SYS / DIA	1 SYS / DIA	1 SYS / DIA	1 SYS / DIA
PULSE	PULSE	PULSE	PULSE	PULSE	PULSE	PULSE
2 SYS / DIA	2 SYS / DIA	2 SYS / DIA	2 SYS / DIA	2 SYS / DIA	2 SYS / DIA	2 SYS / DIA
PULSE	PULSE	PULSE	PULSE	PULSE	PULSE	PULSE
Notes	Notes	Notes	Notes	Notes	Notes	Notes
Evening ☾	Evening ☾	Evening ☾	Evening ☾	Evening ☾	Evening ☾	Evening ☾
1 SYS / DIA	1 SYS / DIA	1 SYS / DIA	1 SYS / DIA	1 SYS / DIA	1 SYS / DIA	1 SYS / DIA
PULSE	PULSE	PULSE	PULSE	PULSE	PULSE	PULSE
2 SYS / DIA	2 SYS / DIA	2 SYS / DIA	2 SYS / DIA	2 SYS / DIA	2 SYS / DIA	2 SYS / DIA
PULSE	PULSE	PULSE	PULSE	PULSE	PULSE	PULSE
Notes	Notes	Notes	Notes	Notes	Notes	Notes

For office use

Patient name: _____

Patient ID: _____

PCP: _____

SMBP average: _____SYS / _____DAY

Report back results by:

- ☐ Appointment _____
- ☐ Phone _____
- ☐ Email _____
- ☐ Patient Portal _____
- ☐ Other _____

Important information

Please call your doctor's office if:

- **Your blood pressure is above _____ SYS or _____ DIA**
- **Your blood pressure is below _____ SYS or _____ DIA**
- **You have symptoms that concern you or have a question about your blood pressure.**

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Device calibration test[1]

Self-measured blood pressure

Use the process below to calibrate a patient's self-measured blood pressure (SMBP) device.

Step 1

Complete the table below.
Care team member should take five blood pressure readings using a combination of the patient's SMBP device and the office's method of blood pressure measurement.

Measurement	Device	Systolic blood pressure (SBP)
A	Patient's	
B	Patient's	
C	Office's	
D	Patient's	
E	Office's	

SBP Example
133
132
141
134
139

Step 2

Part 1: Average measurements B and D ☐

Part 2: Compare average of B and D to measurement C ☐

Part 3: If the *difference* is …

- **Less than 5 mm Hg**, this device can be used for SMBP
- **Between 6 and 10 mm Hg**, proceed to Step 3
- **Greater than 10 mm Hg**, *replace* the device before proceeding with SMBP

Example
Part 1: (132 + 134) / 2 = 133
Part 2: 133 - 141 = 8 (note: if the difference is a negative number, ignore the negative sign)
Part 3: Difference is 8, which is between 6 and 10 mm Hg, so proceed to Step 3

Step 3

Part 1: Average measurements C and E ☐

Part 2: Compare average of C and E to measurement D ☐

Part 3: If the *difference* is …

- **Less than or equal to 10 mm Hg**, this device can be used for SMBP
- **Greater than 10 mm Hg**, *replace* the device before proceeding with SMBP

Example
Part 1: (141 + 139) / 2 = 140
Part 2: 140 - 134 = 6 (note: if the difference is a negative number, ignore the negative sign)
Part 3: Difference is 6, which is less than or equal to 10 mm Hg, so proceed with SMBP

1. Eguchi et al. A Novel and Simple Protocol for the Validation of Home Blood Pressure Monitors in Clinical Practice. *Blood Press Monit.* 2012;17(5):210-213.

Patient training checklist: In-person encounter

Self-measured blood pressure

Instructions: To ensure all necessary steps and components are covered, use this checklist when training your patients on how to perform self-measured blood pressure (SMBP).

☐ Gather supplies

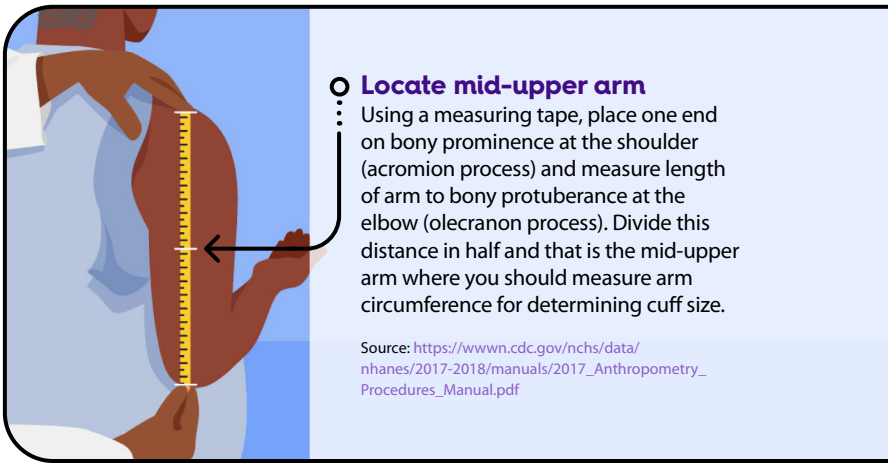
- ☐ Tape measure
- ☐ What is SMBP? (PDF)
- ☐ SMBP infographic (PDF in English or Spanish)
- ☐ SMBP recording log (PDF in English or Spanish)
- ☐ SMBP device accuracy test (PDF)
  This can be used to calibrate a patient's BP measurement device when needed.

☐ Provide background information on SMBP to patient (if not explained by provider)

- ☐ Explain how SMBP allows the provider to get a more accurate and complete picture of the patient's blood pressure outside of the office (more readings, over a longer period of time, in the patient's usual environment)
  Tip: Hand out the "What is SMBP?" document.

☐ Determine SMBP cuff size

- ☐ Use tape measure to measure the circumference of patient's mid-upper arm in centimeters (refer to SMBP cuff selection resource for more detail)



Locate mid-upper arm

Using a measuring tape, place one end on bony prominence at the shoulder (acromion process) and measure length of arm to bony protuberance at the elbow (olecranon process). Divide this distance in half and that is the mid-upper arm where you should measure arm circumference for determining cuff size.

Source: https://wwwn.cdc.gov/nchs/data/nhanes/2017-2018/manuals/2017_Anthropometry_Procedures_Manual.pdf

☐ Teach patient how to properly prepare for self-measurement

- ☐ Avoid caffeine, tobacco and exercise for at least 30 minutes before measurement
- ☐ Empty bladder if full
- ☐ Take BP measurements before blood pressure medications
  Tip: Show SMBP training video (also available in Spanish) and/or the SMBP infographic to train patients.

☐ Teach patient the proper positioning for self-measurement

- ☐ Seated with back supported
- ☐ Feet flat on floor or firm surface
- ☐ Legs uncrossed
- ☐ Cuff placed on bare upper arm
- ☐ Arm supported with middle of cuff at heart level

Tip: Use SMBP training video *to teach these points and save time.*

☐ Teach patient how to use device* (if applicable)

- ☐ How to turn on device
- ☐ How to start measurement
- ☐ How to troubleshoot
- ☐ Calibrate device if needed

** Refer to device manual as needed.*

☐ Teach patient how to properly self-measure

- ☐ Rest quietly for five minutes
- ☐ Take two measurements, one minute apart
- ☐ Avoid conversations and electronic devices during measurement
- ☐ Perform this process once in the morning and once in the evening for seven consecutive days

Tip: Show SMBP training video *and/or the* SMBP infographic *to reference later.*

☐ Teach patient how to record SMBP measurements and how and when to share results

- ☐ Educate patient on what to do if blood pressure measurements are above or below specified ranges
- ☐ If using mobile application, portal or other digital health tool, ensure patient is able to use technology to collect and share results. If possible, assist patient in downloading app and syncing SMBP device.
- ☐ If using paper SMBP Recording Log, complete the 'For office use', 'Report back results by' and 'Important information' sections

☐ Use teach back or return demonstration methods to ensure patient understands education provided and address any additional questions or concerns from patient

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