UNC School of Dentistry Blood Pressure Monitoring Guidelines
(Revision of June 2008 Guidelines, Updates: Drs. George Blakey/Eric Burgon; Approved in 2015)
These blood pressure guidelines are intended to assist the provider treating the dental patient and not intended to be a substitute for consultation with the patient’s physician or the clinical judgment of the dental provider.

All references to blood pressure mentioned in this document will assume the blood pressure measurement has been performed accurately and confirmed in another limb when applicable.

Performing an Accurate Blood Pressure Measurement:
- No exercise, smoking or coffee at least 30 minutes before taking blood pressure
- Rest in a seated position for at least 5 minutes prior to taking BP
- Patient should be in a seated position with their feet on the floor and back supported
- Remove all clothing from the limb that is being used to evaluate blood pressure
- Use an appropriate size cuff. Bladder should cover 70-80% of the arm and centered over the brachial artery
- Place cuff 2.5cm (1 inch) above the antecubital fossa
- The elbow should be supported at the level of the heart

Evaluation of a Hypertensive Crisis
- Hypertensive Crisis is defined by JNC VI as any systolic blood pressure greater than 180mm Hg and/or any diastolic blood pressure greater than 110mm Hg.
- Divided into two categories:
  - Hypertensive Emergency when accompanied by signs of end organ damage
    - Requires immediate treatment in an inpatient setting
  - Hypertensive Urgency without signs of end organ damage
    - Requires treatment within 24-48 hours in an outpatient setting
- Symptoms of a Hypertensive Emergency
  - Altered mental status, blurred vision, chest pain, difficulty breathing, cough, dizziness, numbness in the arms, legs, and face, severe headache, shortness of breath

I. Adults-
Elective Dental Procedure
For a patient who presents to the UNC School of Dentistry for an elective dental procedure with a systolic blood pressure 150-180 mm Hg and/or a diastolic blood pressure 90-110 mm Hg
- Confirm blood pressure as stated above
- Record the blood pressure value in the UNC School of Dentistry patient record
- Proceed with the dental procedure as planned
- The patient must be advised to seek a consultation with his/her physician.

For a patient who presents to the UNC School of Dentistry for an elective dental procedure with a systolic blood pressure 180mm Hg or higher and/or a diastolic blood pressure 110mm Hg or higher WITHOUT symptoms of end organ damage.
- Confirm blood pressure as stated above
- Perform a detailed history and physical with focus on symptoms of a hypertensive emergency
- Record the blood pressure value in the UNC School of Dentistry patient record
- No elective dental treatment should be performed
• The patient must be advised to seek a consultation with his/her physician **WITHIN 24-48 hours**

• Documentation of consultation with patient’s physician must be obtained prior to the patient’s next appointment at UNC School of Dentistry

• Written documentation of the patient’s consultation with the physician must be entered into the UNC SOD patient record

**Urgent Dental Procedure**

For a patient who presents to the UNC School of Dentistry with an emergent dental problem and has a systolic blood pressure **180 mm Hg or higher** and/or a diastolic blood pressure **110 mm Hg or higher** **WITHOUT** signs of end organ damage.

• Confirm blood pressure as stated above

• Perform a detailed history and physical with focus on symptoms of a hypertensive emergency

• Record the blood pressure value in the UNC School of Dentistry patient record

• Proceed with the dental procedure with intraoperative blood pressure monitoring cycled every 5 minutes.

• The patient must be advised to seek a consultation with his/her physician **WITHIN 24-48 hours**.

For a patient who presents to the UNC School of Dentistry for any procedure with a systolic blood pressure **180 mm Hg or higher** and/or a diastolic blood pressure **110 mm Hg or higher** **WITH** signs of end organ damage.

• Confirm blood pressure as stated above.

• Perform a detailed history and physical with focus on symptoms of a hypertensive emergency.

• Record the blood pressure and symptoms in the UNC School of Dentistry patient record.

• Refer patient to the emergency department for immediate treatment.

• No treatment should be initiated regardless of acuity.

**II. Children and Adolescents**

For a child or adolescent **10–17 years of age**, the blood pressure must be obtained at the initial visit to UNC School of Dentistry and at each subsequent 6 month appointment. Patients under 10 years of age will have their blood pressure read if indicated by the medical history.

**Pediatric Blood Pressure** standards are based on sex, age, and height provide a precise classification of BP according to body size.

**Elective Dental Procedure**

For a child or adolescent patient **10–17 years of age** who presents to the UNC School of Dentistry for an elective dental procedure with a systolic or diastolic blood pressure **greater than the 95th percentile but less than the 99th percentile plus 5 mm Hg**:

• Confirm blood pressure as stated above

• Record the blood pressure value in the UNC School of Dentistry patient record

• Proceed with the dental procedure as planned

• The patient’s parent or guardian must be advised to obtain a consultation with the patient’s physician

For a child or adolescent patient **10–17 years of age** who presents to the UNC School of Dentistry for an elective dental procedure with a systolic or diastolic blood pressure **greater 99th percentile plus 5 mm Hg or higher** **WITHOUT** signs of end organ damage:

• Confirm blood pressure as stated above
• Perform a detailed history and physical with focus on symptoms of a hypertensive emergency
• Record the blood pressure value in the UNC School of Dentistry patient record.
• No elective dental treatment should be performed
• The patient must be advised to seek a consultation with his/her physician **WITHIN 24-48 hours**
• Documentation of consultation with patient’s physician must be obtained prior to the patient’s next appointment at UNC School of Dentistry
• Written documentation of the patient’s consultation with the physician must be entered into the UNC SOD patient record

**Emergent Pediatric Dental Procedure**
For a pediatric patient who presents to the UNC School of Dentistry with an emergent dental problem and has a systolic blood pressure **180mm Hg or higher** and/or a diastolic blood pressure **greater 99th percentile plus 5mm Hg or higher WITHOUT signs of end organ damage:**
- Confirm blood pressure as stated above
- Perform a detailed history and physical with focus on symptoms of a hypertensive emergency
- Record the blood pressure value in the UNC School of Dentistry patient record
- Proceed with the dental procedure with intraoperative blood pressure monitoring cycled every 5 minutes.
- The patient must be advised to seek a consultation with his/her physician **WITHIN 24-48 hours**

For a patient who presents to the UNC School of Dentistry for any procedure with a systolic blood pressure **greater 99th percentile plus 5mm Hg or higher WITHOUT signs of end organ damage:**
- Confirm blood pressure as stated above
- Perform a detailed history and physical with focus on symptoms of a hypertensive emergency
- Record the blood pressure and symptoms in the UNC School of Dentistry patient record
- Refer patient to the emergency department for immediate treatment
- No treatment should be initiated regardless of acuity

**Definition:**
**End Organ Damage:**
- End organ damage is any of the signs or symptoms of a hypertensive emergency (crisis)
  - Symptoms of a Hypertensive Emergency
    - Altered mental status, Blurred vision, Chest pain, Difficulty breathing, cough, Dizziness, Numbness in the arms, legs, and face, Severe headache, Shortness of breath
  - Signs of a Hypertensive Emergency
    - Papilledema, Retinopathy, Pounding peripheral pulses, Pulmonary edema, Murmurs or gallops, Abdominal Bruit

**References:**
1. Paul A. James, MD; Suzanne Oparil, MD; Barry L. Carter, PharmD; William C. Cushman, MD; Cheryl Dennison-Himmelfarb, RN, ANP, PhD; Joel Handler, MD; Daniel T. Lackland, DrPH; Michael L. LeFevre, MD, MSPH; Thomas D. MacKenzie, MD, MSPH; Olugbenga Ogedegbe, MD, MPH, MS; Sidney C. Smith Jr, MD; Laura P. Svetkey, MD, MHS; Sandra J. Taler, MD; Raymond R. Townsend, MD; Jackson T. Wright Jr, MD, PhD; Andrew S. Narva, MD; Eduardo Ortiz, MD, MPH. 2014 Evidence-Based Guideline for the Management of High


