High blood pressure (BP)

Resident with blood pressure > 180 / 110 mmHg with symptoms of high blood pressure - (see Practice point 1)

1. Sit resident in position of comfort and check vital signs - review Recognition of the deteriorating resident.
2. Where the resident has chest pain, refer to and manage as per the Chest pain pathway.
3. If not immediately life-threatening, review Checklist for contact and verbally contact GP*.

STABLE VITALS → Identify and escalate Red flags for deterioration (see Practice point 2)

UNSTABLE VITALS → Review advance care plan and refer to Management of residents with unstable vital signs

RED FLAGS PRESENT → Review advance care plan and refer to Management of residents with unstable vital signs

RED FLAGS ABSENT → With GP, undertake Assessment of the resident with hypertension (see Practice point 3)

With GP, undertake Assessment of the resident with hypertension (see Practice point 3) → Assess for Escalation criteria (see Practice point 4)

ESCALATION CRITERIA ABSENT →

1. Where the resident is in pain, provide analgesia - see Pain pathway or where relevant, the Chest Pain pathway.
2. Ensure usual blood pressure medications have been given.
3. GP to review medications for any medications that may contribute to hypertension.
4. Institute supportive cares - (see Practice point 5).
5. Record blood pressure hourly for 4 hours and monitor for red flags and escalation criteria.

DEVELOPS RED FLAGS → Review advance care plan and refer to Management of residents with unstable vital signs

REMAINS STABLE OR IMPROVES →

1. Regular BP measurement to determine need for antihypertensive medication adjustment.
2. If on palliative pathway, cease measurement of blood pressure in consultation with resident, health decision support person and / or substitute decision maker.

DEVELOPS ESCALATION CRITERIA →

ESCALATION CRITERIA PRESENT →

Manage as per GP direction and in concordance with resident expressed goals of care; refer to ***HHS RaSS*** at GP discretion

*Where timely, arrange telehealth or face-to-face GP review

High blood pressure practice points

1) High blood pressure: definitions

Use an electronic sphygmomanometer calibrated according to manufacturer instructions or a validated mercury sphygmomanometer with stethoscope for auscultation. Measure blood pressure with resident seated (or lying down) and relaxed for several minutes before measurement. Ensure that there is no constricting clothing and ensure cuff is appropriately sized to resident's arm. Measure the blood pressure three times and average the last two readings.

It is important to understand that hypertension risk is relative to the symptoms and signs associated with hypertension. Residents with high blood pressure are categorised into 4 groups:

1. **Transient high blood pressure** secondary to pain or distress, which improves on managing the pain or distress and their underlying cause.
2. **Asymptomatic high blood pressure** when measured on several separate occasions at least one or more weeks apart with no apparent symptoms - in the frail older person, hypertension is defined as a systolic blood pressure >/= 150 mmHg and / or a diastolic blood pressure of > / = 80 mmHg. In residents with no symptoms and a markedly elevated blood pressure routine Emergency Department intervention is not required. Whilst chronic control of blood pressure reduces long-term risk of stroke and heart attack in the general population, a number of studies in the aged care population suggest there may be no benefit from, and potential harms associated with, intensive antihypertensive therapy. A decision to treat and treatment goals should be individualised and consider a resident's preferences and goals of care.
3. **Hypertensive urgency** where blood pressure is > 180 / 110 mmHg and there are new symptoms associated with this that are not immediately life threatening e.g. headache; hypertensive urgency benefits from treatment with oral antihypertensives and follow-up within 24 hours to achieve a blood pressure below 180 mmHg systolic.
4. **Hypertensive emergency** where there is blood pressure often > 220 / 140 mmHg and there is new onset end-organ damage e.g. heart failure, pulmonary oedema, myocardial infarct, or acute focal neurology; hypertensive emergencies are managed with intravenous therapy for the blood pressure where this is aligned to the person's goals of care; aim to reduce blood pressure by no more than 25% in the first 2 hours.

2) Red flags for deterioration in resident with high blood pressure

If any of the following red flags are identified in residents with a blood pressure of more than 180 / 110 mmHg, review the resident's advance care plan, consult resident or substitute health decision maker (or nominated decision support person) and refer to Management of residents with unstable vital signs pathway. The following are considered red flags in the resident with a blood pressure of more than 180 / 110 mmHg:

- Altered mental state or difficult to rouse relative to baseline
- Syncope
- Chest pain unresponsive to management as per Chest pain pathway
- New neurological deficit or new onset confusion
- Significant shortness of breath
- Severe headache

Note: a decision to transfer a resident to hospital with any of the above red flags should always consider resident goals of care and be respectful of informed choice by the resident (or substitute decision maker).

3) Assessment of the resident with hypertension

Goals of assessment of the resident with high blood pressure are to:

1. Identify reversible contributors.
2. Determine whether there is a hypertensive emergency or urgency.

Identify reversible contributors to the resident's high blood pressure

- Assess the resident for pain using a cognition appropriate pain assessment tool - pain may cause high blood pressure
- Blood pressure may also be elevated as a result of significant emotional distress - ask the resident whether there is anything causing them distress

High blood pressure practice points (cont'd)

3) Assessment of the resident with hypertension (cont'd)

- Recent medication changes:
  - Introduction of medications that may increase blood pressure (e.g. non-steroidal anti-inflammatory drugs, corticosteroids, clozapine, monoamine oxidase inhibitors, serotonin-norepinephrine reuptake inhibitor [SNRI e.g. venlafaxine], mirabegron)
  - Introduction of herbal supplements (e.g. bitter orange, ginseng, guarana, St John's wort)
- Frequent ingestion of liquorice or sarsaparilla

Determine whether there is a hypertensive emergency or urgency

- Ask resident if they have new onset of any of the following:
  - Chest pain
  - Headache
  - Shortness of breath
  - New weakness or diplopia (double vision)
- Examine resident from head to toe:
  Airway / breathing:
  - Assess respiratory rate, oxygen saturations
  - Listen to chest for bibasal crackles (left ventricular failure)

  Circulation:
  - Assess pulse rate and rhythm
  - Reassess blood pressure in both arms (a difference of more than 20 mmHg between arms in systolic blood pressure should be notified to the GP in the resident with acute onset chest or inter-scapular back pain)
  - Assess lying and standing blood pressure where a resident mobilises (wait for 2 minutes after standing prior to re-measuring) - a drop in systolic blood pressure of more than 20 mmHg when associated with pre-syncope/ dizziness should be notified to the GP
  - Assess for peripheral oedema and elevated jugular venous pressure (right heart failure)

  Disability:
  - Assess for new focal neurological deficit
  - GP to assess fundus for retinal haemorrhages or papilloedema
- Where available, perform ECG to look for new ST elevation / depression

4) Escalation criteria in a resident with high blood pressure

First screen for red flags as above. Where there are no red flags, presence of any of the following may prompt escalation to HHS RaSS at GP discretion (or in residents nearing end of life, to the resident's palliative care provider):

- Red flags in a resident who has conservative goals of care and does not wish to be transferred to hospital
- Significant postural drop (more than 20 mmHg) with postural pre-syncope or dizziness in the resident with persistently high blood pressure
- Difference in blood pressure of more than 20 mmHg between arms

5) Supportive care of the resident with high blood pressure

Supportive care for residents with high blood pressure includes:

1. Assess regularly for pain and manage pain.
2. Falls risk management plan and regular monitoring for postural blood pressure drop for residents commencing, or having a change to dose of, antihypertensives.
3. Reduce salt intake.
4. Where appropriate for the resident, institute an individualised program of physical activity.
5. Encourage resident to cease smoking.

High blood pressure references

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High blood pressure version control

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