Blood Pressure Measurement

With Manual Blood Pressure Monitors

- The patient should be seated for at least 5 minutes, relaxed and not moving or speaking.
- The arm must be supported at the level of the heart. Ensure no tight clothing constricts the arm.
- Place the cuff on neatly with the centre of the bladder over the brachial artery. The bladder should encircle at least 80% of the arm (but not more than 100%).
- Estimate the systolic beforehand:
  a) Palpate the brachial artery
  b) Inflate cuff until pulsation disappears
  c) Deflate cuff
  d) Estimate systolic pressure.
- Then inflate to 30mmHg above the estimated systolic level needed to occlude the pulse.
- Place the stethoscope diaphragm over the brachial artery and deflate at a rate of 2-3mm/sec until you hear regular tapping sounds.
- Measure systolic (first sound) and diastolic (disappearance) to nearest 2mmHg.

### Cuff Sizes

<table>
<thead>
<tr>
<th>Indication</th>
<th>Width (cm)*</th>
<th>Length (cm)*</th>
<th>BHS Guidelines Bladder width &amp; length (cms)*</th>
<th>Arm circ. (cm)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Adult/Child</td>
<td>10 - 12</td>
<td>18 - 24</td>
<td>12 x 18</td>
<td>&lt; 23</td>
</tr>
<tr>
<td>Standard Adult</td>
<td>12 - 13</td>
<td>23 - 35</td>
<td>12 x 26</td>
<td>&lt; 33</td>
</tr>
<tr>
<td>Large Adult</td>
<td>12 - 16</td>
<td>35 - 40</td>
<td>12 x 40</td>
<td>&lt; 50</td>
</tr>
<tr>
<td>Adult Thigh Cuff**</td>
<td>20</td>
<td>42</td>
<td>&lt; 53</td>
<td></td>
</tr>
</tbody>
</table>

* The range for columns 2 and 3 are derived from recommendations from the British Hypertension Society (BHS), European Hypertension Society (ESH) and the American Heart Association. Columns 4 and 5 are derived from only the BHS guidelines.
** Large bladders for arm circumferences over 42cm may be required
* Bladders of varying sizes are available so a range is provided for each indication (applies to columns 2 and 3).

Points to note:

- The date of next servicing should be clearly marked on the sphygmomanometer (6 monthly). All maintenance necessitating handling of mercury should be conducted by the manufacturer or specialised service units.
- Anaeroid manometers may deteriorate and so need regular checking.
- Before measuring blood pressure in pregnancy or other special circumstances, ensure that the device used is clinically validated for that setting (www.bhsoc.org).