BP measurement in AF

- Take multiple readings
- Competent operator
  - Appropriate cuff size
  - Deflate the cuff slowly (2-3mmhg/s)
  - Accurately discriminate Korotkoff's sound

T Watson, G Y H Lip. Journal of Human Hypertension, 2006, vol 20, 638–640

Oscillometric BP Measurement in AF

- Automated BP pressure monitoring should be used with caution in AF, as many automated machines are unable to generate reproducible and/or reliable readings with this arrhythmia.
- Most automated blood pressure monitors are validated and calibrated for patients in sinus rhythm (SR).
- For clinical/office settings, manual auscultatory blood pressure measurement is recommended.

Home or clinic based automated BP measurement

- When automated devices are used, compare them with multiple auscultatory clinic blood pressure readings for all individuals.
- Taking a sequence of at least three device readings alternating with three auscultatory readings made on the same arm

Clarck CE et al. J of Human Hypertens, 2019:33;763–765

Detection of AF in patients with BP Monitor

- There are two companies that currently market Home BP Monitoring devices which detect pulse irregularities
  - Microlife
  - Omron
- Both appear to record AF with high sensitivity but about 10% false positive results
- **Suspected AF always needs confirmation with an ECG**
- *Preliminary* evidence suggests that HBPM may represent a valid way to detect AF in the community

Conclusions

- Interobserver and intra-observer variation in auscultatory BP measurement is increased in AF because of increased beat-to-beat BP variability.
- Multiple BP readings are required (3-4x for each BP examination)
- Automated monitors appear to be appropriate for self-home monitoring, but office BP measurement should use manual auscultatory measurement