



Clinical Practice Procedures: Assessment/Invasive blood pressure

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Date	July, 2022
Purpose	To ensure a consistent procedural approach to determining invasive blood pressure.
Scope	Applies to Queensland Ambulance Service (QAS) clinical staff.
Health care setting	Pre-hospital assessment and treatment.
Population	Applies to all ages unless stated otherwise.
Source of funding	Internal – 100%
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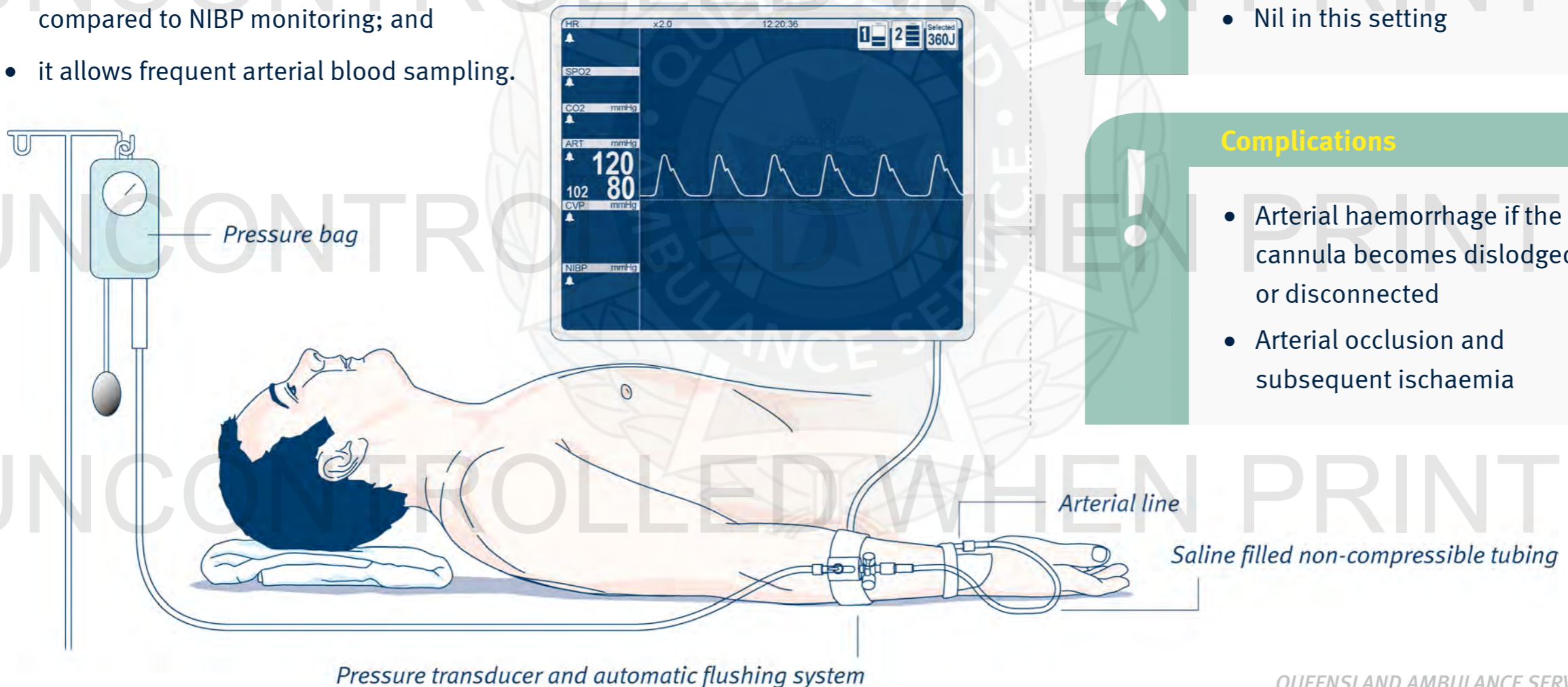
Invasive blood pressure

July, 2022

Intra-arterial blood pressure (IABP) monitoring involves the conversion of fluid pressure into an electrical signal via a transducer that is connected to a patient's artery.

It is commonly used during critical care patient transfers and has several advantages over traditional non-invasive blood pressure (NIBP) monitoring techniques, for example:

- it allows for continuous 'beat-to-beat' blood pressure monitoring;
- it prevents regular NIBP measurements that may cause the patient pain or discomfort;
- it uses less monitor battery power when compared to NIBP monitoring; and
- it allows frequent arterial blood sampling.



Indications

- Critical care patients with haemodynamic instability where continuous blood pressure monitoring is beneficial

Contraindications

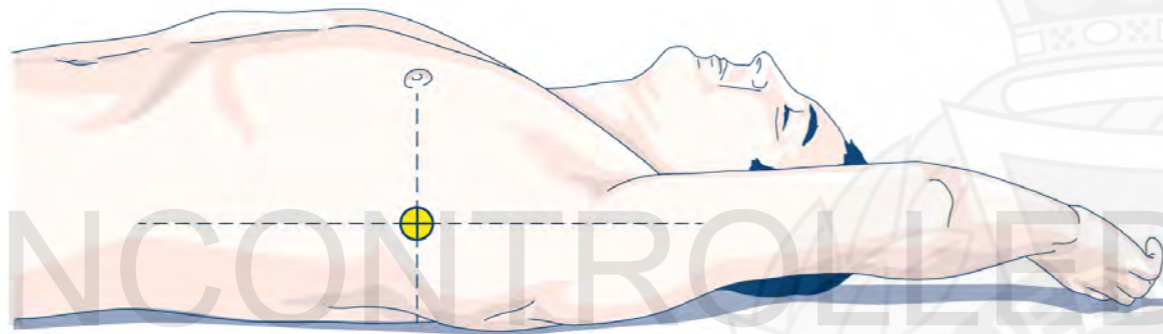
- Nil in this setting

Complications

- Arterial haemorrhage if the cannula becomes dislodged or disconnected
- Arterial occlusion and subsequent ischaemia

Procedure – Invasive blood pressure

1. Prepare the 'flush line' and transducer according to the product specific operating instructions.
2. Place the transducer at the patient's phlebostatic axis (4th intercostal space, mid axilla line and 1/2 anterior posterior diameter of the chest).



3. Connect the invasive pressure cable to the transducer of the 'flush line' and to the P1 connection on the monitor.

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- a) Close the transducer stopcock to the patient.
- b) Open the transducer's venting stopcock to atmospheric air.
- c) Open the transducer's stopcock to air to zero the transducer.
- d) Use the navigational keys to highlight and select transducer's IBP channel and display the IBP Channel's parameter control panel.
- e) Select 'Zero probe' from the menu, ZEROED will appear when zeroing is complete.
- f) Close the transducer's stopcock to air. The patient's pressure waveform should be displayed.

+ Additional information

- To ensure an unobstructed view of the fluid container, only transparent pressure bags should be used.
- IABP measurements can be affected by the following:
 - patient movement;
 - air bubbles in the cannula, flush line or transducer;
 - cannula placement; or
 - inaccurate transducer placement.