

Core skill: blood pressure



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“ Select one clinical skill in which you are developing competence in and reflect upon how you have achieved the necessary level of competence for this stage of the programme” For the purpose of this essay the author has chosen to discuss blood pressure. The author has selected non-invasive blood pressure monitoring. An explanation will be provided to identify the rationale for selecting this technical skill and how the author has demonstrated knowledge base in relation to developing competence in this chosen skill. The author will also use Gibbs reflective model (1988) to facilitate critical thought and relating theory to practice where the model allows. Using the Dreyfus (1980) model of skill acquisition before commencing placement the author was classed as level one, novice, having only performed this skill once. Non-invasive blood pressure is measured externally, causes less pain, requires less expertise and is not as effective as invasive blood pressure monitoring (Wicker & O’Neill 2010, Kingsnorth & Bowley 2011) The author’s clinical placement was based in an anaesthetic room where non-invasive blood pressure was monitored frequently on a day to day basis. The author has chosen this skill as it is a fundamental skill and extensively used during practice as a baseline to monitor fluctuations in a patients’ blood pressure. The author has the ability apply both underpinning knowledge gained at university and practical experience to reflect on this clinical skill. Blood pressure is the pressure exerted against arterial walls during a cardiac cycle (Foxall 2009) The contraction of ventricles is the systolic phase, and the interval in between contractions where the ventricles refill with blood is known as the diastolic phase. During the systolic phase the aorta and large arteries stretch to a certain extent due to a large amount of energy in the vessel whereas in the diastolic phase this energy is then

released in a form of elastic recoil. This effect of squeezing is how blood pressure and the blood flow through the capillaries is maintained (Coni&Coni 2003) A pressure gradient, the difference between diastolic and systolic pressure, is required to determine a normal blood pressure (Wicker & O'Neill 2010) Blood pressure is monitored in millimetres of mercury (mm Hg) written as the systolic over the diastolic. A normal blood pressure is classed as 120mmHg systolic over 80mmHg diastolic (Bishop 2009) However in a population with increasing co-morbidities it is argued that there is no normal blood pressure. An individual may constantly have a blood pressure reading lower or higher than the normal value and suffer no ill adverse effects. Therefore the reading would become normal for this individual (Clancy &McVicar 2009) At university the author attended both practical and theoretical sessions in which a comprehensive propositional knowledge was gained. The theoretical sessions taught the author about the different techniques used to measure blood pressure, the rationale of why blood pressure is taken, how it is maintained, what effects blood pressure and how it is recorded. Theoretical sessions further informed the author that blood pressure is a fundamental skill required of all qualified practitioners. Hilton (2004) reinforces this by stating that healthcare professionals must continuously monitor and accurately record patients' blood pressure in order to determine their well-being. Timby (2008) states that numerous factors must be taken into account when determining a patients' blood pressure such as age, weight, circulating volume and pre-existing heart conditions. Anaesthesia and surgery also have a major effect on a patients' blood pressure. During practice the author witnessed most patients being anaesthetised using intravenous access, with Propofol being the most

preferred induction agent. Propofol is a soybean and egg phosphatide based induction agent that can cause vasodilation in which the vessels expand causing higher blood pressure (Allman & Wilson 2011, Cam & Cardone 2007) The author also witnessed an analgesic drug named Fentanyl being used in conjunction with Propofol to aid intubation. McClelland & Hardman (2007) state that Fentanyl lowers the blood pressure due to vasoconstriction in which the blood vessels tighten. The theoretical sessions at University reinforced the practical sessions in preparing the author for what is required and how to physically take a patient's blood pressure manually and electronically. The author attended several practical sessions in which the author participated in manually taking the blood pressure of other students' using a sphygmomanometer and a stethoscope. Beevers (2006) identifies a sphygmomanometer as an inflatable bladder attached to two tubes one of which is connected to a manometer which is used to register pressure. The other tube is attached to a device with a screw valve that allows the user to fill and release air from the bladder (Timby 2008) NICE guidelines (National Institute of Clinical Excellence 2011) state that when taking a patients' blood pressure the environment must be relaxed and temperate in which the patient must be seated with their arm stretched out and lining up mid-sternum. The author placed the blood pressure cuff around another student's upper arm, located the student's radial pulse on the inside of the wrist and inflated the cuff until the pulse disappeared. This then gave the author an idea of the student's systolic pressure. The author then inflated the cuff again, this time placing the stethoscope onto the student's brachial artery and the systolic and diastolic pressure was captured. At first the author found it difficult to hear the individuals pulse even when practising on other

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individuals. To aid this, an electronic blood pressure machine was used to compare results and the author's reading was very similar to the electronic result. With comprehensive knowledge gained from university the author felt prepared and confident for clinical practice, however it was important for the author to work within the scope of practice as a student. Practice skills are acquired when the theory learned has been identified and the gap between theory and practice can be reduced by simply observing other multi-disciplinary staff during practice (Kenward & Kenward 2011) The HPC (2008) code of conduct in performance and ethics further reinforces this by stating that a practitioner must be aware of limitations in practice and only work in areas where deemed competent. The author's first placement was based in a large hospital where non-invasive monitoring was attached in the anaesthetic room. The author observed a mentor in dealing with patients arriving to the department and how non-invasive monitoring was attached. After observing a mentor attaching non-invasive monitoring the author was then asked to try it. This aided the author in building a rapport with the patient while attaching the monitoring as the mentor was gathering patient information. The AAGBI (2010) state that building a rapport with patients may relieve anxieties and fears the patient may have. The author was made aware of the importance of collaboration and communication in the anaesthetic room, especially when patients feel vulnerable and anxious. The Health Professions Council (HPC 2008) agrees stating that the practitioner must show empathy and support which is proven to relax the patient. The author found it very important to ask the patients permission before attaching any monitoring and inviting them to ask questions as they are empowering the patient and giving them back the control patients often

feel they have lost when entering theatre (Martin 2007) The first stage of Gibbs (1988) model of reflection requires a description of events. During practice the author was asked to place monitoring on a large lady undergoing abdominal surgery. The author attempted placing a long adult's blood pressure cuff around the patients arm with difficulty. The patient happily pointed out that the nurses always have trouble placing the cuff around her upper arm and that the blood pressure cuff is usually placed around her lower arm. The second stage of Gibbs (1988) model of reflection is a discussion about thoughts and feelings. The author apologized and felt embarrassed stating that they were a student and did not realize a cuff could be placed around the lower arm. Evaluation is the third stage of Gibbs (1988) model of reflection and requires the reflector to with state what was good and bad about the event. The author later discussed this event with a mentor stating that they had felt embarrassed and hoped they had not humiliated the patient, however felt a little better as the patient reacted in a positive way offering support to the author. Stage four of Gibbs (1988) reflection model is an analysis of the event, where the reflector is encouraged to make sense of the situation. Further discussion with a mentor explained in depth the different areas a blood pressure cuff can be applied and provided constructive feedback on the different ways in which the situation could be improved if it were to occur again. Subsequent research indicated that that a blood pressure cuff may be applied on the upper or lower arm, the thigh or the calf (Martin 2007) During practice the author witnessed one patient who suffered high anxiety levels. The author was advised not to proceed in attaching the monitoring as the anaesthetist communicated with the patient until the patient felt safe and comfortable.

The anaesthetist later stated their rationale was that the patient may be distracted by the practitioner attaching monitoring rather than listening to the person talking to them. Stage five and six of the Gibbs (1988) model can be used here in concluding that this is a good example of collaboration by recognizing the importance of other professional roles and how these other roles can contribute to the patients' welfare. Stage six can be applied in that the author can now act differently if the situation arose again by reassuring the patient first before attaching monitoring. When the practitioner is attaching non-invasive monitoring it is important to ensure that the cuff fits the patient correctly and that all leads are connected appropriately. The bladder inside the cuff must extend around at least 80% of the patients upper arm or a false reading may occur. If a blood pressure cuff is too wide it may present a low reading or if the cuff is too narrow it may present a higher reading (Williams et al 2004, Timby 2008) During practice the author attached a blood pressure cuff to an elderly patient without checking the size of the cuff which resulted in the cuff moving around and sliding down the patients arm. The anaesthetist informed the author that the cuff was too large and giving a false reading of a low blood pressure as the patient usually suffers from high blood pressure. The author changed the cuff and the reading indicated high blood pressure (Hypertension) and was very similar to the baseline observation taken on the surgical ward and at pre assessment. Stage six of Gibbs model can be applied here as the author understands that the patients' baseline observation and weight must be checked prior to attaching monitoring to give an indication of the patients' usual blood pressure and size. Following Gibbs' third stage of the reflection model the author was able to identify good situations as well as bad. During

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practice one patient was undergoing a shoulder arthroscopy in which keyhole surgery (laparoscopic) is used to look inside and repair any damage to the shoulder which can be caused by some type of injury, arthritis or other particular injuries (Bradbury et al 2007) In this case the operating table was turned so the patient's feet were facing the anaesthetic machine so the surgeons had better access to the shoulder. The blood pressure cuff was placed around the opposite arm to which the surgery was taking place and the leads were neatly tucked down the side of the patient. Documentation is vital when patient observations are taking place as in the event of a legal case the general law is, if it wasn't documented it did not take place. It is crucial that the practitioner accurately documents observations in a clear and concise manner and stores this with the patients notes (Wicker & O'Neill 2010, Martin 2007) During practice the author observed patients' blood pressure being recorded before and after administration of anaesthesia and the anaesthetist would closely observe the patient's blood pressure throughout the anaesthetic procedure and document every reading from the screen. At the end of the anaesthetic placement, the author was deemed competent in this particular skill as well as being identified as having an acceptable knowledge base at this stage in the programme. The author has now undergone transition to level four, which is proficient, in the Dreyfus model of skill acquisition. In conclusion the author has discussed the principles of blood pressure and non-invasive monitoring devices used and a concise rationale has been provided for this particular clinical skill. It is to be concluded that blood pressure is a vital skill in which all healthcare professionals must use to monitor patients' vital signs. It is important for the healthcare practitioner to recognize the different factors influencing a

patients' blood pressure as described above. Good documentation, communication and collaboration skills must be used in conjunction with this skill to ensure the patients' welfare at all times. References Allman, K, Wilson, I & Baker, B (2011) Oxford Handbook of Anaesthesia. Third Edition. Oxford University Press: Oxford. Beevers, D. G (2006) Understanding Blood Pressure. Family Doctor Association: Dorset. Bishop, T (2009) Measuring Blood Pressure. Practice Nurse. Volume: 38, Issue: 9, Pg. 6-11 Bradbury, W. A, Garden, O. J, Forsythe, R. L. J, Parks, W. R (2007) Principles & Practice of Surgery. Fifth Edition. Churchill-Livingstone: London. Cam, P. C. A & Cardone, D (2007) Propofol Infusion Syndrome. Anaesthesia. Volume: 62, Issue: 7, Pg. 690-701. Clancy, J, &McVicar, A (2009) Physiology & Anatomy for Nurses and Allied Healthcare Practitioners: A Homeostatic Approach. Third Edition. Hodder Arnold: London. Coni, H &Coni, N (2003) Blood Pressure: All you need to know. Royal Society of Medicine Press Limited: London Foxall, F (2009) Haemodynamic Monitoring and Manipulation: An Easy Learning Guide. M & K Publishing: Cumbria. Health Professions Council (2008) Standards of Conduct, Performance and Ethics [Online] Available at: <http://www.hpc-uk.org/publications/standards/index.asp?id=38> Accessed: May 4th 2012. Hilton, P. A (2004) Fundamental Nursing Skills. Whurr Publishing: London Kenward, L &Kenward, L (2011) Promoting Inter-professional Care in the Perioperative Environment. Nursing Standard. Volume: 25, Issue: 41, Pg. 35-39. Proquest [Online] Available at: <http://proquest.umi.com/> Kingsnorth, A &Bowley, D (2011) Fundamentals of Surgical Practice: A Preparation Guide for the Intercollegiate Mrcs Examination. Third Edition. Cambridge University Press: Cambridge Martin, S (2007) Minor Surgical Procedures for Nurses and Allied Healthcare Professionals. Wiley & Sons: Chichester. McClelland, S. H & <https://assignbuster.com/core-skill-blood-pressure/>

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