 <p>PHILIPPINE HEART CENTER INCIDENT COMMAND POST</p>	Document Type	Document Code:
	<p>GUIDELINES</p>	GL-ICP-047
		Effective Date:
		June 2020
Document Title	Revision Number:	
<p>INTERIM GUIDELINES FOR ARTERIAL BLOOD GAS EXTRACTION DURING COVID-19 PANDEMIC</p>	0	
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I. OBJECTIVES

This policy for arterial blood gas (ABG) extraction shall serve as the interim guidelines for Healthcare Professionals performing ABG analysis testing to ensure the safe and accurate performance of this procedure during the Novel Corona Virus Pandemic.


II. DESCRIPTION

Coronavirus disease (Covid-19) is an infectious disease caused by a newly discovered coronavirus. To date, Covid-19, also known as Severe Acute Respiratory Syndrome 2 (SARS-CoV-2), has been responsible for millions of infections globally, causing hundreds of thousands of deaths. Acid-base disturbances are common - especially in patients with severe viral infections such as COVID-19. The accurate analysis and interpretation of lab tests, including arterial blood gases, in patients with acid-base problems is key to managing patients in critical condition.

The sample for ABG can be obtained either through a catheter placed in an artery, or by using a needle and syringe to puncture an artery. These syringes are pre-heparinized and handled to minimize air exposure that may alter the blood gas values.

III. REQUIREMENT

- A. Choice of site
 - a. Radial artery
 - b. Brachial artery
 - c. Femoral artery
- B. Equipment and supplies
 - a. Pre-heparinized syringes with needle
 - b. Dry and wet (alcohol) cotton balls
 - c. Bandage to cover the puncture site after collection
 - d. Container with crushed ice for transport (if the analysis is not done at the point of care)
 - e. Arterial Blood Gas Machine
- C. Personal Protective Equipment\
 - C.1. Covid Ward/ ICU
 - a. Disposable Isolation gown/ coverall
 - b. N95 mask/ respirator
 - c. Disposable gloves

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d. Face shield

C.2. Non- Covid ward/ICU

a. Medical mask

b. Disposable gloves

c. Face shield


d. reusable Isolation gown

IV. PROCEDURE FOR BLOOD GAS SAMPLING

1. Follow the correct procedure for donning of appropriate PPEs and standard hand hygiene protocol before entering the patient's room.
2. Observe the recommended guidelines on arterial blood gas extraction (see guidelines)
3. Discard used cotton balls and used syringes in the correct trash bin (yellow). All used needles shall be placed in the sharps container.
4. Put in a separate container or plastic bag the blood specimen for immediate transport.
5. Adhere strictly to recommended doffing guidelines and hand hygiene protocols.
6. For patients with indwelling catheters (A- line, arterial line), ABG sample shall be drawn by the nurse and sent to the laboratory immediately. The sample shall be properly labelled and placed in a container or plastic bag. The correct charge slip shall be taped outside of the plastic bag/ container.

V. COMPLICATIONS RELATED TO ARTERIAL BLOOD SAMPLING

1. Arteriospasm- involuntary contraction of the artery maybe prevented simply by helping the patient to relax through explaining the procedure and positioning the patient comfortably.
2. Haematoma- or excessive bleeding can be prevented by inserting the needle without puncturing the far side of the vessel and by applying pressure immediately after blood is drawn.
3. Nerve damage- can be prevented by choosing an appropriate sampling site and avoiding redirection of needle.
4. Fainting or vasovagal response- can be prevented by ensuring that the patient is supine with feet elevated before beginning blood draw or, for pediatric patients, it maybe preferable for the child to sit on the parent's lap.
5. Other problems include drop in blood pressure, complaints of feeling faint, sweating or pallor that may precede a loss of consciousness.

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VI. REFERENCES

<https://emedicine.medscape.com/article/1902703-overview>

<https://www.medcram.com/courses/take/COVID-19-ABG-Interpretation>

https://www.ncbi.nlm.nih.gov/books/NBK138650/pdf/Bookshelf_NBK138650.pdf