

LPN Practice and Arterial Lines

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INTRODUCTION

The College of Licensed Practical Nurses and Health Care Aides of Alberta (CLHA) has the authority under the *Health Professions Act* (HPA) to carry out its activities and govern Licensed Practical Nurses (LPNs)* in a manner that protects and serves the public interest.

The *Health Professions Restricted Activity Regulation* (HPRAR) outlines the restricted activities LPNs are authorized to perform, provided they have the knowledge, skills, competence, and employer support to practice safely. This document outlines those activities related to LPNs, arterial lines, and the supporting sections from the HPRAR.

PURPOSE

The purpose of this document is to clarify the LPN role in the management of arterial lines and which arterial line activities are within their scope of practice.

ARTERIAL LINES VS VENOUS LINES

An arterial line is a catheter inserted into an artery for the purpose of continuous arterial blood pressure monitoring and arterial blood sampling. Venous lines are catheters placed into a vein for the purpose of administering medications, fluids, blood products, or nutrition, and to obtain venous blood samples. Arterial lines carry a higher risk of complications compared to venous lines because arteries are high-pressure blood vessels, making complications more serious if they occur.

As stated in the HPRAR section 20(1), a regulated member... may perform in accordance with standards of practice the following restricted activities:

Section 20(1)(b), to administer anything by an invasive procedure on body tissue below the dermis for the purpose of administering injections or for starting a peripheral intravenous line, except for the purpose of administering medication into a central venous catheter (CVC)[†], a peripherally inserted central catheter (PICC), or an implanted venous access device (IVAD).

* In this document, "LPN(s)" has the same meaning as "regulated member(s)" in the *Health Professions Act*.

[†] Central Venous Catheter (CVC) is referred to as a central venous line in the HPRAR.

Section 20(1)(b) provides LPNs with the authority to administer injections and to initiate venous access. It does not provide authority to insert a line into an artery, administer anything by an arterial line, or to draw blood from an arterial line because it requires direct access to and flushing of the arterial line to clear the blood.

As stated in the HPRAR section 20(1), a regulated member.. may perform in accordance with standards of practice the following restricted activities:

- (a) to insert or remove instruments, devices, fingers or hands, except into an artificial opening into the body for the purposes of performing dialysis...
- (vi) into an artificial opening into the body

Section 20(1)(a)(vi) of the HPRAR provides LPNs with the authority to *remove* devices that have been inserted into an artificial opening into the body, including arterial lines.

WHAT ARTERIAL LINE TASKS ARE LPNS AUTHORIZED TO PERFORM?

LPNs are required to have the knowledge, skills, and competence to perform these activities. The table in Appendix 1 provides guidance on which arterial line activities LPNs are authorized to perform.

CONCLUSION

LPNs should use this document to understand which arterial activities they are authorized to perform as long as they have the necessary competencies.

Documents are updated frequently. For the most current version and access to related documents and resources, please visit the Knowledge Hub on clha.com.

If after reading this document you have questions about this topic, please contact the CLHA's Professional Practice Team at practice@clha.com, 780-484-8886 or 1-800-661-5877 (toll free in Alberta).

APPENDIX 1

Arterial Line Tasks	Authorized?
Set up, prime, and attach the arterial line to the existing arterial catheter	Yes
Blood gas analysis	Yes
Zero line (remove cap, turn line off, zero monitor)	Yes
Level arterial line	Yes
Remove the arterial line	Yes
Care for patients with arterial lines	Yes
Assess the arterial site and change the site dressing	Yes
Monitor and record numerical blood pressures	Yes
Observe and report arterial line abnormalities	Yes
Troubleshoot/manage abnormal arterial waves or complications that <u>do not</u> involve flushing the line or any other invasive procedures	Yes
Insert a new line	No
Initiate infusions	No
Draw blood and/or arterial blood gases off the line	No
Administer medications	No
Flush the arterial line	No