

# Virtual Clinical Assignment Supports Practical Nurse Education

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## Abstract

The COVID-19 pandemic restrictions affected the traditional clinical component in practical nurse education programs. Nurse educators needed to develop virtual clinical assignments to promote critical thinking. The original clinical assignment set in a sub-acute nursing unit supports the development of prioritization abilities, clinical decision making, use of reputable information sources, and written communication skills. The assignment incorporates pharmacologic knowledge in applying interventions. Discussion with the instructor and clinical peers about prioritization, interventions, and rationales promoted teacher and student contact. The use of the virtual learning case study supports the practical nurse student in the development of the critical components required for praxis.

**Keywords:** case study, clinical practice, critical thinking, practical nurse, virtual learning

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## **Introduction**

The COVID-19 pandemic continues to impact healthcare from direct care to education of healthcare personnel. Starting in 2020, the clinical rotations in nursing education were discontinued or severely limited. Nurse educators, including educators in practical nurse programs, needed to develop strategies to meet learning needs outside of the traditional student experience. For clarification, practical nurses may be called vocational nurses in California and Texas in the United States of America (USA) or enrolled nurses in Australia and New Zealand. A virtual clinical experience is developed to support critical thinking and clinical judgment. The learning approach may be used as an alternative to direct clinical, as active learning in the classroom, or to support students who would benefit from additional resources.

## **Impact of COVID on clinical experience**

The onset of the COVID-19 pandemic in 2020 caused an abrupt halt to direct care clinical experiences for nursing students. Concern over transmission and student and clinical instructor safety were paramount for educational institutions. There was the need to evaluate personal health risk and the enforced quarantine restrictions with the need to continue to educate nurses (Bliss, 2021). Programs which used in-person simulation had to change to online learning. Very often long term care and sub-acute units are sites for clinical experience in practical nurse education programs. The older adult resident populations within these settings were especially vulnerable to COVID-19 illness and mortality (Konetzka, White, Pralea, Grabowski, & Mor, 2021). The administrators of these facilities were required to maintain pandemic precautions which resulted in suspension of clinical experiences for nursing students.

The literature describes the need for educators to develop alternate clinical learning experiences. Case studies presented online are used to teach critical thinking, application of knowledge, and provide student engagement (New, Edwards, & Norris, 2022). Educators in a course with clinical practicum needed to quickly pivot and redesign the course. Meaningful learning which addressed clinical practice presented a challenge. While online or distance learning offered flexibility to students, faculty were challenged by students who are continually engaged or “plugged in” with technology around the clock (Maykut, Dressler, Harrison, Newell-Killeen, Posteraro, & Weatherall-Waldner, 2020). A qualitative study of nursing education during the pandemic involving nursing faculty and students found four themes including safety management in an ambiguous situation, perceived stress, adaptive coping, and educational facilitators and challenges (Farsi, Sajadi, Afaghi, Fournier, Aliyari, Ahmati, & Hazrati, 2021). Educators who shifted from traditional to online teaching found that strategies were needed to offset students’ perceptions that online teaching was more impersonal and provided less student-teacher interaction (Oducado & Soriano, 2021). An advantage of the COVID-19 precautions is educators now have the experience to extend beyond the traditional classroom and clinical (Yancey, 2020). The nurse educator and nursing students who embrace new ways of learning benefit from the beginning of a lifelong lesson of resiliency (Dowling, Metzger, & Kools, 2021). The educator, nursing students, and clinical partners are strengthened by a practical nurse who is resilient.

### **Role of practical nurse**

National level standards are required by the Canadian Council Practical for Practical Nurse Regulators (CCPNR/CCRSIA, 2021) but there are varying roles and scopes within each

province. Practical nurses' praxis is based on a "foundational knowledge, critical thinking, critical inquiry and clinical judgment" (BCCNM, 2021). In Canada, a practical nurse may assess a person, collaborate in a nursing plan of care, implement the care, and evaluate the person (Scope of Practice, 2022). In the USA, practical nurses perform data collection, contribute to the care plan, implement care and work under the supervision of a Registered Nurse or physician (LPN Scope of Practice, 2022). Phillips and Weis (2018) published a comprehensive review of the educational review standards (program purpose statement, curriculum, faculty, infrastructure, students, and program evaluation) in all ten Canadian provinces.

Practical nurses are expected to engage in evidence based practice. A descriptive study describes the top five prevalent ways of accessing knowledge for practical nurses are: individual clients, nursing school, personal experience, in-services or conferences, and policy and procedure manuals (Phillips & Neumeier, 2018). Nursing journals and nursing research journals are least accessed. LPNs working in long term and community care have decreased access to educational resources as compared to LPNs in acute care. Phillips & Neumeier (2018) call on practical nurse educators to understand how LPNs source knowledge in preparation for entry into practice. In long-term care, LPNs and RNs are often interchangeably used in direct care/staff nurse positions (Mueller, Duan, Vogelsmeier, Anderson, McConnell, & Corazzini, 2018). A survey of newly graduated licensed practical nurses showed a small to moderate use of information literacy (Wadson & Phillips, 2018). The use of the educational case study, such as the one in this article can direct students to reputable, current sources to guide the practical nurse's decision making.

### **Virtual Clinical Case Study**

The purpose of the online case study, created by co-author Efendic, is an exercise in critical thinking for the licensed practical nursing (LPN) student. The case study is intended for students who progressed in the program where pharmacology content is included. As shown in Appendix A, the case study sets up a scenario in which the student LPN is already a licensed professional working on a sub-acute unit with a census of nine patients. The sub-acute unit is located within a section of a skilled nursing facility. Patients on this unit require more skilled nursing care than typical long term care residents but less than acute care hospitalized patients. The case study outlines the nursing report that the previous LPN gives to the oncoming LPN, which is who the student is role playing. This nursing report is crucial in the critical thinking exercise as it outlines any incidences that have occurred with each patient overnight. Some patients have had no changes, while others have needed special monitoring. For example, in Appendix A, patient in “bed 5” has had no issues overnight while the patient in “bed 3” has fallen overnight and as a result has two bruises on their face. This nursing report provides some information for the LPN student, as the student completes the nursing report, they are given a set of instructions for the assignment. Given the information the LPN student has received in their nursing report they must prioritize who they will see first for the morning med pass and patient data collection. The student is given more information on each patient which contains each patient’s profile, their other diagnoses, and their scheduled morning medications. Given all this information, the student must then prioritize in which order they will see their patients during the beginning of their shift. The final two portions of this assignment ask the LPN student to provide a rationale for each patient regarding the order in which they have chosen to see them and interventions they will conduct when they do see the patient.

The virtual clinical assignment is given at the start of the clinical day. Students are given three hours to submit their responses in writing to the clinical instructor. Students are directed to work independently on their submissions. Subsequently, the instructor and students meet to discuss the virtual clinical assignment either remotely using video conference software or direct contact at the school. The objectives of the virtual clinical assignment are to use critical thinking in prioritizing nursing care; to make clinical decisions for interventions and medication administration; and to support written communication in sharing information.

The virtual clinical assignment was created to replace an eight hour clinical day. Initially, it was given to two clinical groups of eight to ten students who were displaced from the clinical site due to COVID-19 precautions. Feedback from the practical nursing students expressed satisfaction with the content of the virtual clinical case study. The students also expressed feedback on the complexity of the decision making based on rationales. The virtual clinical assignment has been shared with other clinical faculty in the practical nursing student program who have provided positive feedback as educators.

The assignment does not come with an answer key. There is not a single, right answer. There is only the best answer or answers based on the student's knowledge and experience and use of reputable resources. This assignment is meant to promote discussion of the choices made by the student LPN's and thus spark a discussion regarding prioritization. Through this discussion students can share their choices, their rationales, and their interventions with the instructor and their peers. This assignment promotes critical thinking because it compels the student to take the knowledge learned from previous courses in their nursing education and put it to the test in this critical thinking exercise.

Strengths of the virtual clinical case study include experience with critical thinking and continued learning opportunity when students are unable to attend clinical. This case study would benefit from being paired with psychomotor skills in the simulation lab. For example, it supports decision making regarding medication but does not replace the actual experience of medication administration. A recommendation is made to include student feedback on this activity at the end of the course evaluation. Areas for future study include use of an instrument to measure student engagement and an analysis of the virtual clinical case study and measurement of learning outcomes.

### **Conclusion**

In an editorial, Parse (2020) writes nursing education can't go back to pre-pandemic ways of teaching and learning. The virtual clinical assignment may be used when circumstances external to the education program, such as COVID-19 restrictions require students to be away from the clinical site. Alternately, it provides a robust opportunity for student engagement in the classroom or laboratory. The virtual clinical assignment may be modified to increase complexity or to include critical information which may not be present at clinical sites. It is an educational strategy to prepare students for practical nurse competence.

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**Appendix A. Virtual Clinical Assignment** (With Creative Commons Zero Images)

You are a practical nursing student on a nine-bed sub-acute unit. You arrived to work for your 0700 shift and are getting ready to receive report. This is the report that you receive from your nightshift colleague. The patients are listed by bed location.

Bed 1 – no issues overnight, however no bowel movement in 3 days, hypoactive bowel sounds

Bed 2 – cough and crackly lung sounds overnight, oxygen saturation and vitals stable overnight

Bed 3 – Fell on his face while trying to go to the bathroom overnight, post fall evaluation overnight showed patient had two bruises on his face as well as purpura to his feet. No open wounds.

Bed 4 – no issues overnight, very aggravated this morning, tried to hit the patient care assistant, threatening self-harm but no plan.

Bed 5 – No issues overnight

Bed 6 – Blood pressure and heart rate elevated overnight. BP 140/90 and heart rate 115, has been in this range all night.

Bed 7 – Blood glucose levels stable overnight, no other issues overnight

Bed 8 – Complaining of heart burn and nausea this morning

Bed 9 – Got up several times overnight to go to the bathroom to urinate, patient re-educated on calling the PCA or nurse when he needs to get up, since he is unsteady on his feet.

Patient Profiles + Medications

**Bed 1** – Q.W is an 85 year old female. PMH dementia, depression, chronic constipation.

Medications:

9am: escitalopram 10 mg, donepezil 5 mg, polyethylene glycol 3350 17g



**Bed 2** – E.R. is a 78 year old male. PMH Dementia, depression, and COPD.

Medications:

9am: sertraline 50mg, donepezil 5 mg, 1 L Nasal cannula as needed for SOB.



**Bed 3** – T.Y is a 90 year old male. PMH Dementia, atrial-fibrillation, HTN, and stroke 6 years ago.

Medications:

9am: aspirin 81 mg, amlodipine 5 mg, acetaminophen 325 mg, and clopidogrel 75 mg, metoprolol 50 mg



**Bed 4** – U.I is a 92 year old female. PMH dementia with behavioral disturbance, major depressive disorder, osteoporosis.

Medications:

9am: sertraline 100 mg, quetiapine 25 mg PRN for agitation, donepezil 5 mg.



**Bed 5** – O.P is a 77 year old male. PMH dementia without behavioral disturbance, osteoarthritis, hyperlipidemia.




Medications: 9am: atorvastatin 10 mg, donepezil 10 mg, and calcium supplement.



**Bed 6** – A.S is an 80 year old female. PMH HTN, dementia, myocardial infarction 3 years ago, atrial-fibrillation, Hyperlipidemia.

Medications: 9am: metoprolol 100 mg, hydralazine 40 mg, apixaban 2.5 mg, atorvastatin 10 mg.



<p><b>Bed 7</b> – D.E is a 79 year old female. PMH diabetes mellitus, dementia, hip replacement 2020, degenerative bone disease. <u>Medications:</u> 9am: acetaminophen 325 mg, donepezil 5 mg, insulin aspart sliding scale, insulin glargine 10 units.</p> 	<p><b>Bed 8</b> – F.G is 75 year old male. PMH GERD, dementia, hyperlipidemia. <u>Medications:</u> 9am: famotidine 20 mg, donepezil 5 mg, atorvastatin 20 mg.</p> 	<p><b>Bed 9</b> – H.J is a 99 year old male. PMH BPH, osteoporosis, degenerative bone disease, dementia, history of falls. <u>Medications:</u> 9am: finasteride 5 mg, calcium supplement, acetaminophen 325 mg.</p> 
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As you are getting ready to evaluate and medicate your patients for the morning, you need to prioritize who you will see first. Below are the patient profiles for this 9 bed unit and their morning medications. Given the information you have received in report you must decide who will receive your care first. This assignment is intended to get you to start critically thinking about your patients.

**Part 1:** Make a list of the order in which you will see your patients

**Part 2:** Discuss the rationale for each patient and when you have decided to see them. For example, if you have decided to see bed 1 first you must explain why. Do this for each patient.

**Part 3:** Explain what you will do for each patient when you see them. This means you must explain what you will evaluate, what interventions you will take, and what medications you will give and which ones you will hold.