



Small TLEF Project – Final Report

Report Completion Date: 2018/04/09

1. PROJECT OVERVIEW

1.1. General Information

Project Title:	Cutting Edge Real Patient-Based Videos to Enhance Teaching and Learning for Entry-to-Practice PharmD Students		
Principal Investigator:	Larry Leung		
Report Submitted By:	Larry Leung		
Project Initiation Date:	April 2, 2017	Project Completion Date:	April 2, 2018

1.2. Project Summary

With the expansion of a pharmacist’s scope of practice and the new Entry-to-Practice PharmD program, there is greater emphasis on experiential learning and patient-centered care. This advancement necessitates increasing student exposure to real patients and pharmacists to better prepare them for practice. The Faculty of Pharmaceutical Sciences has an on-site Pharmacists Clinic, which is a licensed pharmacist-led patient care clinic, that models best-practice patient care and provides hands-on learning opportunities.

In this project, the Clinic will create recordings of real-life care interactions between patients and licensed pharmacists. These recordings will be edited into videos and integrated into case-based learning within the pharmacy program. These videos will provide an authentic pharmacist-patient care interaction to enhance the theoretical and on-site practice education of. Student and educator feedback will be collected to measure the effectiveness of using videos of real patient cases versus traditional paper case-based learning in the classroom.

1.3. Team Members – (Please fill in the following table and include students, undergraduate or graduate, who participated in your project).

Name	Title/Affiliation	Responsibilities/Roles
Larry Leung	Lecturer, UBC Pharmacists Clinic	Principal Investigator and project lead.
Jillian Reardon	Lecturer, UBC Pharmacists Clinic	Featured pharmacist in the video case.
Barbara Gobis	Director, UBC Pharmacists Clinic	Provided support for IT infrastructure and privacy impact assessment.
Stephanie Mah	Undergraduate student, UBC	Assisted in BREB application, student survey questions and creation of poster presentation for TLEF showcase and Canadian



		Pharmacy Education and Research Conference (CPERC) 2018
Jamil Devsi	Undergraduate student, UBC	Assisted in editing video case and creating case questions. Also assisted in the creation of the poster presentation.
Annie Yu	Undergraduate student, UBC	Review all recorded videos and inform project lead on which video was the most interesting for student learning. Created case questions for 2 videos.
Terin Lovesar	Undergraduate student, UBC	Review all recorded videos and inform project lead on which video was the most interesting for student learning. Created case questions for 2 videos.
Boris Trinajstic	Undergraduate student, UBC	Create policies and procedures for privacy impact assessment, patient consent form, AV recording procedures, responsible use agreement for students

1.4. Courses Reached – Please fill in the following table with **past**, **current**, and **future** courses and sections (e.g. HIST 101, 002, 2017/2018, Sep) that have been/will be reached by your project, including courses not included in your original proposal (you may adapt this section to the context of your project as necessary).

Course	Section	Academic Year	Term (Summer/Fall/Winter)
PHRM 212	001, L01-L06	2017/18 and ongoing	Winter
PHRM 141	001	2018/19 and ongoing	Winter

2. OUTPUTS AND/OR PRODUCTS

2.1. Please **list** project outputs and/or products (e.g. resources, infrastructure, new courses/programs). Indicate the current location of such products and provide a URL if applicable.

Product(s)/Achievement(s):	Location:
Privacy Impact Assessment Approval	Shared Drive
BREB Application	REB, UBC
Student Consent Cover Letter	Canvas
Student Survey Questionnaire	Canvas
Responsible Use Agreement – Statement	Canvas
Responsible Use Agreement – Student Quiz	Canvas
Literature search and summary of relevant articles	Sync
AV Consent Form	Pharmacists Clinic Policies and Procedures
AV Recording Policies and Procedures	Pharmacists Clinic Policies and Procedures
Headache Case	Canvas
25-min video case	Canvas



Project evaluation results	Poster Presentation
Poster Presentation for TLEF Showcase 2018 and The Association of Faculties of Pharmacy of Canada’s Annual Canadian Pharmacy Education and Research Conference 2018	Poster Presentation

****All products have been attached for your information***

2.2. Item(s) Not Met – Please list intended project outputs and/or products that were not attained and the reason(s) for this.

Item(s) Not Met:	Reason:
Integration of video case in PHRM 161	End product did not fit with course content as originally expected. Video quality from the Pharmacists Clinic cameras were not high enough for further integration. Video quality will be upgraded with subsequent versions of this project and this will be revisited.

3. PROJECT IMPACT

3.1. What were you hoping to change or where were you hoping to see an impact with this project? – Please list the intended benefits of the project for students, TAs, instructors and/or community members.

The project was expected to improve the quality of case-based learning in the pharmacy program by incorporating real-life patient cases and pharmacists providing care. The purpose was to pilot one real video case with students and evaluate their perceptions of this style of teaching and learning. We were hoping that students would have the opportunity to see a pharmacist provide care in real practice, which is expected to provide an enriched educational experience. The working model and policies and procedures generated from this project will be used to create additional videos from the Pharmacists Clinic for case-based learning. Once the pilot and evaluation have been completed, the information can be disseminated to other health faculties as well to encourage more integration of real-patient cases into CBL.

The project will develop the following tangible outcomes and deliverables:

- One online video of an in-clinic patient encounter and associated case integrated into neurology module in pharmacy; video will demonstrate an in-depth pharmacist consultation with a patient and promote student reflection.
- A working model and policies and procedures manual for recording in-clinic patient consultations by licensed pharmacists and creating videos for the purposes of integration into case-based learning; allows for the creation of additional videos in the future.
- Student evaluations of the pilot activity detailing strengths and areas for improvement
- An increased engagement of faculty members with the on-site Clinic.
- A greater integration of the Clinic in the academic program.
- Submission of oral or poster presentations of project findings to pharmacy conferences. Pharmacy schools across Canada are interested in creating their own on-site Clinic. They would be interested in hearing about how the Clinic can enhance student learning from licensed pharmacists and patients.



3.2. Were these changes/impacts achieved? How do you know they occurred? – *To what extent were intended benefits achieved or not achieved? What evaluation strategies were used? How was data collected and analyzed? You are encouraged to include copies of data collection tools (e.g. surveys and interview protocols) as well as graphical representations of data and/or scenarios or quotes to represent and illustrate key themes.*

I believe we were able to achieve all the intended benefits as outlined in 3.1. As you can see from the attachments, we were able to successfully create and pilot a video case in an undergraduate pharmacy course for second-year pharmacy students and evaluate their perceptions.

A privacy impact assessment was conducted at the beginning of the project, which took more time and attention than originally anticipated. Given that the videos contained real patient and health data, it was important to ensure a proper assessment of the video recording equipment and consent forms was conducted by UBC Risk Management Services. Patient consent forms, student responsible use agreements, and policies and procedures for recording videos were all created as part of this pilot project. This will serve as a foundation to continue building more video cases based on real patient/pharmacist interactions in the future.

Online surveys were deployed to 224 students post-activity to evaluate the effectiveness of the video case and improvements that could be implemented in the future. Questions included:

- Likert-style questions (5=strongly agree; 4=agree, 3=neutral, 2=disagree, 1=strongly disagree)
 - The video case made it clear what the students were expected to learn
 - The video case facilitated achievement of the stated learning objectives
 - The video case communicated the subject matter effectively
 - The video case helped inspire interest in learning the subject matter
 - The video case was more engaging than a paper-based case
 - I feel better prepared to provide patient-centred care
 - The difficulty of the video case was appropriate
 - Real patient-based video cases should be incorporated into other modules
 - Considering everything, I learned a great deal from this video case
- Open-ended essay style questions
 - Please comment on the strengths of this patient-based case video
 - Please comment on the ways this patient-based case video might be improved

Review of the data collected showed that students enjoyed watching a genuine pharmacist/patient interaction to learn about the nuances of delivering patient centered care. One theme that was identified for improving this case centered around the video and audio quality. Unfortunately, existing video equipment at the UBC Pharmacists Clinic, which has mainly been used to view live encounters, was not able to capture the encounters at a high quality. This project was critical in determining the AV needs for the future. Despite the less than ideal audio and video quality, the evaluation results were still very positive. In future iterations, we plan to use better cameras to capture these interactions. Please see attachments for the evaluation results.



3.3. Dissemination – Please provide a list of **past** and **upcoming** scholarly activities (e.g. publications, presentations, invited talks, etc.) in which you or anyone from your team have shared information regarding this project.

The following is a list of upcoming scholarly activities that have already been accepted for presentation:

- Leung L, Mah S, Devsi J. “Privacy impact assessment and pharmacy student perceptions of real patient/pharmacist videos in case-based learning.” TLEF Showcase 2018. Vancouver, Canada. May 3, 2018.
- Leung L, Mah S, Devsi J. “Privacy impact assessment and pharmacy student perceptions of real patient/pharmacist videos in case-based learning.” Association of Faculties of Pharmacy of Canada’s Annual Canadian Pharmacy Education and Research Conference 2018. Ottawa, Canada. June 12-14, 2018.

I also plan to submit abstracts for poster or oral presentations to the following upcoming scholarly activities:

- BC Quality Forum
- The Centre for Health Education Scholarship’s Celebration of Scholarship

4. TEACHING PRACTICES – Please indicate if **your** teaching practices or those of **others** have changed as a result of your project. If so, in what ways? Do you see these changes as sustainable over time? Why or why not?

We piloted this video case as a pre-activity in PHRM 212’s interprofessional education activity with pharmacy, dentistry, and physical therapy students. In the past, students worked through a paper-based case with pre-readings, which, based on past feedback, was not engaging or interesting. The purpose of the pre-activity and pre-readings is for students to gain a better understanding of the role of a pharmacist in chronic pain management, specifically with medication-overuse headaches. Instead of this more passive learning experience, students were able to see a real pharmacist/patient encounter, which I believe better illustrates the role of the pharmacist when compared to a paper-based article and reading.

The videos are based on the real patient/pharmacist encounters in our faculty’s own Pharmacists Clinic, Canada’s first university-affiliated, pharmacist-led patient care clinic. These videos allow us to further utilize the fantastic learning experiences from the Clinic and make them available to more students. This allows faculty members working in the Clinic to disseminate their experiences to students. Through this activity, we also discovered that patients are more fantastic partners and welcome the opportunity to be part of student learning. Receiving patient consent was originally deemed as a potential barrier, but many patients agreed to be recorded for future teaching and learning purposes.

The evaluation results of the activity will also inform on future case-based learning activities and further integration of video cases in the curriculum. This current pre-activity will be updated with better video and audio quality and these changes to teaching practices will be sustainable over time, as the funding from TLEF has allowed the proper framework for recording procedures to be completed. The same video will be reused again for next year’s activity.



5. PROJECT SUSTAINMENT – *Please describe the sustainment strategy for the project components. How will this be sustained and potentially expanded (e.g. over the next five years). What challenges do you foresee for achieving the expected long-term impacts listed above?*

Given the primary feedback was for better video and audio, a new privacy impact assessment will be completed this year for the use of another camera, instead of the in-clinic cameras that already exist. Using a different recording device will greatly improve the student perceptions of the activity, as this was the number one suggestion from students. Patient consent forms, student responsible use agreements, policies and procedures for recording videos, and student evaluation surveys can all be reused for subsequent versions of the video case. The Pharmacists Clinic has a vast array of patients with different medical conditions and new video cases can be created, should there be interest from other faculty members. Most of the upfront work has already been completed as part of this project and there will be minimal upkeep of the current project components, which can largely be updated.

The main challenge will be securing an appropriate camera that will be suitable by UBC Risk Management standards. Current camera set-up is secured in each consultation room in the Pharmacists Clinic. New cameras will likely need to abide by similar constraints to ensure security of patient health information. Another challenge will be finding the appropriate time, resources and staff to edit the videos that are recorded. This takes a significant amount of time, as uncut videos are raw and over an hour long for patient/pharmacist interactions. Videos must be edited to shorter 10-20 minute segments for easier consumption by student learners.