UNIVERSITY OF LOUISIANA AT LAFAYETTE

STEP Committee

Technology Fee Application

Telehealth Robotics: Integration of Telehealth and Telemedicine Concepts for the Enrichment of Clinical Skills for Undergraduate and Graduate Nursing Students

Deedra Harrington, Assistant Professor, College of Nursing and Allied Health Professions

Christy Lenahan, Assistant Professor, College of Nursing and Allied Health Professions

Frances Stueben, Assistant Professor, College of Nursing and Allied Health Professions

Jessica McCarthy, Assistant Professor, College of Nursing and Allied Health Professions

College of Nursing and Allied Health Professions,
University of Louisiana at Lafayette

Dr. Melinda Oberleitner

Dr. Melinda Oberleitner, Dean

Title: Telehealth Robotics: Integration of Telehealth and Telemedicine Concepts for the Enrichment of Clinical Skills for Undergraduate and Graduate Nursing Students
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Name: Deedra Harrington, DNP, MSN, ACNP-BC, Frances Stueben DNP, RN, CCRN, CHSE, Christy Lenahan, DNP, FNP-BC,CNE and Jessica McCarthy, DNP, MHSA, MSN, APRN, FNP-BC
Address: VL Wharton Hall, Room 201
Phone: 2-5612 Email: dkh5421@louisiana.edu
Department/College/Org: Nursing and Allied Health Professions

ABSTRACT (250 words or less):

Telemedicine/telehealth and interprofessional collaboration are essential concepts in healthcare delivery. Telehealth and telemedicine have both evolved as a means to deliver healthcare services to underserved populations and interprofessional collaboration skills are essential competencies required of all healthcare providers. The Double iRobot is a tool that can be used to introduce undergraduate and graduate nursing students to the technologies of telehealth and telemedicine and assist them with the development of their interprofessional communication/collaboration skills. Evidence has demonstrated that interprofessional team-based practices improve patient safety and patient outcomes. In addition to introducing students to the skills required to successfully use telehealth/telemedicine, the Double iRobot can help to facilitate the implementation of interprofessional education as activities can be designed to include other healthcare disciplines physically located in areas other than the UL Lafayette campus. Double iRobot is a telepresence robot which allows someone to have virtual presence while being located in a remote physical location. Several local health care companies such as Lafayette General Health, Cardiovascular Institute of the South, Our Lady of Lourdes, LHC Group, and many national companies are fully invested in utilizing telehealth/telemedicine to improve access to care as well as patient outcomes.

Proposal Description

a. Purpose of grant and impact to the student body as a whole.

The purpose of this grant is to provide undergraduate and graduate nursing students in the UL College of Nursing and Allied Health Professions with the advanced technology required to implement telehealth and telemedicine into alternate clinical experiences in simulation. The Double iRobot would be housed in The Learning Resource Center and/or Simulation Labs in the College of Nursing and Allied Health Professions which provide educational and clinical support to approximately 550 undergraduate and 200 graduate nursing students. Students have daily access to the equipment and learning tools in these areas.

All students in the nursing curriculum are required to complete individual simulation activities throughout their nursing curriculum from the beginning sophomore level to completion of the undergraduate program and throughout many courses in the graduate program. Simulation is a significant portion of the curriculum and should provide undergraduate and graduate nursing students the knowledge required to be oriented to and familiar with telehealth and telemedicine as it is used in hospitals, outpatient clinics, and advanced practice settings.

Recent surveys have indicated that nearly 54.1% of registered nurses are currently using telehealth/telemedicine technologies in practice.[1] Further, the National Organization of Nurse Practitioner Faculties, the organization responsible for establishing nurse practitioner core competencies, published a white paper in 2018 that supports and encourages integration of telehealth as part of NP education to address problems such as limited access to care.[2]

Integration of telehealth/telemedicine into the current curriculum also allows for opportunities in interprofessional education. Evidence has demonstrated that interprofessional team-based practices improve patient safety and patient outcomes. The Institute of Medicine recommends that interprofessional education be included in the curriculum of all health professions schools.[3] Not having on campus programs for medicine, respiratory therapy, radiation therapy, and dietetics, which are disciplines nurses work with on a daily basis, makes scheduling interprofessional education activities difficult. The Double iRobot can help to facilitate the implementation of interprofessional education as activities can be designed to include other healthcare disciplines physically located in areas other than on the UL Lafayette campus.

In today's advancing technological environment, faculty must strive to use strategies that facilitate and enrich both undergraduate and graduate student learning experiences. In recent years, the integration of remote telehealth/telemedicine has emerged in the nursing field including in the local healthcare market. Lafayette General Health currently operates three telemedicine clinics.[4] Cardiovascular Institute of the South continues to grow its telemedicine program through a partnership with InTouch Health supporting more than 130 health systems, 5,800 network users, and 1,600 care locations globally.[5] Our Lady of Lourdes operates a Telestroke program through partnerships with rural hospitals and has done so since 2010.[6] LHC Group now utilizes telehealth to ease care transition and manage different disease processes.[7] Integration of the Double iRobot will allow students the opportunity experience telehealth/telemedicine prior to entering the hospital and advanced practice settings and provide

them with experiential advantage in the local healthcare market.

b. The projected lifetime of enhancement

STEP funds will be expended between December, 2019, and March, 2020. Projected lifetime of the enrichment is expected to be a minimum of 5 years. Life-cycle maintenance costs are included within the proposed budget.

c. Person(s) responsible for

i. Implementation:

Dr. Deedra Harrington and Dr. Christy Lenahan, faculty members in the CONAHP, will jointly oversee the implementation of the grant monies.

ii. Installation:

No specific installation of the requested equipment is required.

iii. Maintenance:

Double Robotics provides a three-year warranty on purchased products at no cost to the consumer. Cheryl Mack, Simulation Technologist, will provide daily maintenance of the iRobot and supported iPads. Kelly Saltzman, Information Technologist, will provide device hardware and software support.

iv. Operation:

The Double iRobot and iPads will be housed in the Learning Resource Center and/or Simulation Labs. Cheryl Mack, Simulation Technologist, will be available for troubleshooting and maintenance, per device instructions/training. Drs. Harrington, Lenahan, Stueben, and McCarthy will also assist Mrs. Mack with these tasks.

v. Training:

Training manuals are included in the purchase of the Double iRobot device at no additional cost to the consumer. After training manuals have been reviewed by Drs. Harrington, Lenahan, Stueben, McCarthy and Cheryl Mack the clinical faculty members will be oriented and trained on the use of the Double iRobot.

Budget Proposal

1.	**Equipment**	**$9300.00**
	2- Double iRobot (with double care)	$7500.00
	4- iPad-Pro (32GB with WiFi)	$1500.00
	4- Apple Protection Plan – 2 years	$300.00
2.	**Software**	**$ Included**
3.	**Supplies**	
	2 Travel Case for Double iRobot	**$1398.00**
	Adaptive HD	**$249.00**
4.	**Maintenance**	**$ None**
	2-3 year warranty included at no cost	
5.	**Personnel**	**$ None**
6.	**Other**	**$ None**
	Tax/Shipping	**$ 700.00**
	TOTAL:	**$ 11,647.00**

Timeline indicating the project implementation schedule

1. December 2019 - Funding awarded
2. December-January 2020 - Purchase requisitions completed
3. February- March 2020 - Equipment received
4. March-May 2020- Train simulation lab personal and faculty on equipment use
4. Fall 2020 – Equipment available in simulation lab for integration into existing simulations

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