



Innovations in Interprofessional Telemedicine Education: Preparing Future Providers for Collaborative Practice

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Objectives

1. Describe the benefits of collaborative telemedicine education in academic health science education.
2. Identify strategies to incorporate telemedicine technology into health science curricula.
3. Explore innovative and effective approaches to combine best practices of telemedicine and interprofessional competencies in education and practice settings.





Telemedicine Background

- Telemedicine vs. telehealth defined
- Specialties using telehealth
- Benefits to providers and patients
- Current market





HRSA Grant

University of Utah College of Nursing awarded HRSA ANE grant: “An Interprofessional Education (IPE) Module for Telehealth Management of Multiple Chronic Health Conditions in Rural Populations”

IPE Telemedicine teaching strategies have been incorporated into the IPE program – tailored towards promoting leadership development of DNP students

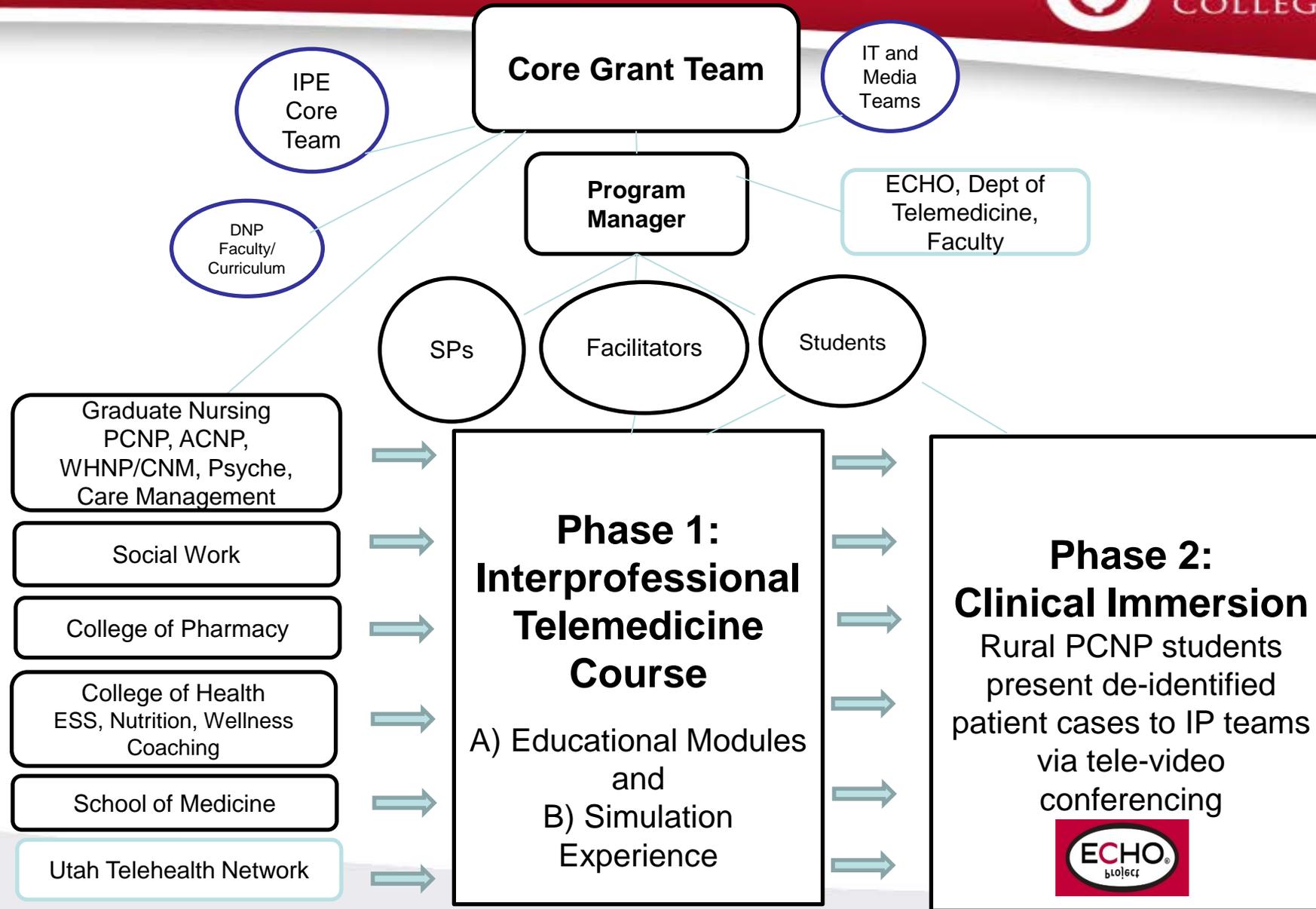




Simultaneous Movements in Healthcare and Health Sciences Education

- IOM and Interprofessional Practice Competencies recommend IPE, simulation, and leadership for patient centered care
 - IPE Competencies: Shared values/ethics, Communication, Roles/Responsibilities Teams/Teamwork
- Information technology and telemedicine also recommended to improve patient health outcomes
- Combining IPE with telemedicine education will provide future practitioners with innovative practice models along with the skills and knowledge to improve rural health care access.







Online IPE Telehealth Course Overview – Part A

4 Educational Modules

- Course and simulation full roll out began Fall 2014
- Interactive pages and videos
- Modules updated based on student feedback



*Best practices of online learning incorporated



Telehealth Module Content

- Uses, benefits, and best practices of telemedicine
- Telepresenting
- Clinical applications
- Ethics of practice
- IP core competencies
- Scope of various health professionals
- Cultural aspects of rural health
- Preparation materials for IPE telehealth simulation



*Best practices of online learning incorporated



IPE Telehealth Simulation Activity – Part B

Simulations conducted through TVC technology

- 3 Hour Simulation Timeline:
 - Facilitator Setup
 - Warm-up Activity
 - Case presentation by (DNP or SOM) student moderator
 - Interdisciplinary consultation
 - Treatment plan summary
 - Debriefing by facilitator



*Best practices of simulation/debriefing incorporated



IPE Telehealth Simulation Cases

- Variety of cases/charts have been developed
- Each patient has multiple chronic conditions including mental illness and social issues
- Scripts developed by faculty for each discipline and level of schooling
 - Primary care elderly rural widowed farmer patient/DM
 - Primary care woman in rural community/obesity and depression
 - Adolescent patient (asthma) and grandmother
 - Women's health/PCOS pregnancy planning
 - Acute care Veteran transfer to urban med center
 - Complex discharge from acute to rural setting



*Best practices of simulation/debriefing incorporated



IPE Telehealth Simulation Participants

- Graduate Student Roles:
 - Rural primary care provider- PCNP or medical student “Specialists”
 - DNP student (ACNP, WHNP/CNM, Mental Health)
 - Medical student (endocrine, cardiology, pulmonology)
 - Social worker
 - Nutritionist
 - Wellness coach
 - Care management
 - Pharmacist





IPE Telehealth Simulation Sessions

- Fall 2014 – Fall 2017 (738 student participants)
 - 24 -28 sessions each semester
 - 5-6 disciplines represented each session
 - 20 faculty facilitators from across health sciences
- Semester Trainings
 - Standardized patient actor case training
 - IP faculty facilitator training





Course Modules & Simulation Evaluation

IPE Telemedicine Course

- Pre and post module surveys: Assessment of student **knowledge** regarding telemedicine, rural healthcare needs, and IP competencies

Knowledge increased or remained the same in 89% of questions asked

- Pre and post simulation survey: Readiness for Interprofessional Learning Survey (RIPLS/IPASS) and Technology Acceptance Model (TAM) assessing **beliefs and attitudes** towards IP learning and telemedicine

Attitudes and beliefs increased in 85% of questions asked

- Responses towards simulation activity was positive overall (71-91%)





Sample Data

1 = Strongly Disagree 2 = Disagree 3 = Neither Agree Nor Disagree 4 = Agree 5 = Strongly Agree	Pre-Survey	Post Survey	Difference
Telemedicine technology could improve patient care and management	2.64	3.44	+ 0.8
Telemedicine technology could make patient care and management easier	3.03	3.35	+ 0.32
Telemedicine technology is something I would like to use in my future practice	2.71	2.94	+ 0.23
I would find it easy to incorporate telemedicine technology in my future practice	2.42	2.8	+ 0.38
I can promote telemedicine as a mode of collaborative communication to improve patient care	--	2.91	--



Reflection

What students learned about telemedicine, interprofessional practice and providing care to patients with multiple chronic conditions

“This simulation was a great experience. It reminded me that we don’t always have the answers and it is OK to ask for help. Healthcare is constantly evolving and it is great to witness such a huge step toward advancing care of the patient through collaboration.”

“Telemedicine provides a wonderful option to care for certain populations that are not able to have direct access to healthcare. It is not only a new way of providing care, but an excellent method of interprofessional communication.”

How students plan to apply what they have learned into future practice

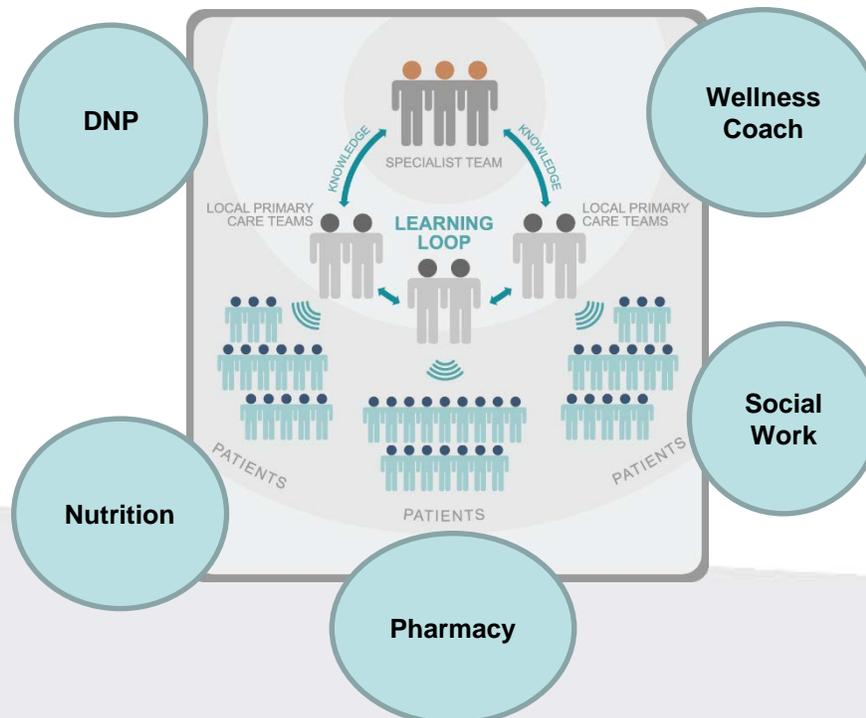
I think this technology would be wonderful for scheduled well care follow-up appointments, medication refill appointments, and when reviewing labs, diagnostics and other applications.”

“I will be based out of a rural community health care clinic that has limited resources. Telemedicine would be a great addition to our plan of care and compiling many resources for our patients.”



Clinical Immersion in Partnership in Project ECHO

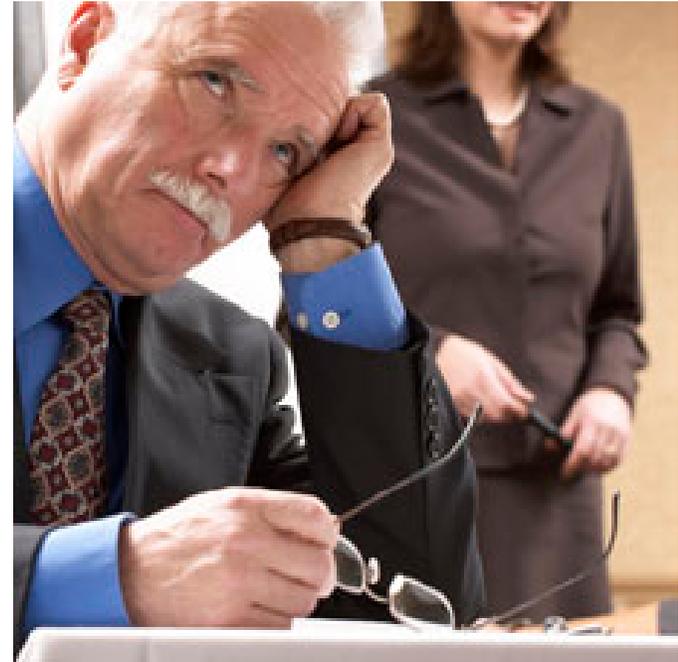
- Project ECHO (Extension for Community Healthcare Outcomes)
 - Link expert specialist teams in an academic center with primary care clinicians in rural communities (telementoring/teleconsulting)
- Model expanded to include graduate students from multiple disciplines





Challenges/Lessons Learned

- Faculty facilitator recruitment and training
- Recruitment of students from certain colleges
- Scheduling issues
- Standardized patient charts/scripts
- Developing scenarios and scripts based on:
 - participating colleges and
 - level of students





Conclusion & Implications

- Familiarity and Comfort with Technology
- Practice with Telepresenting
- Variety of Uses in Clinical Practice
- Benefits to Patients
- Benefits to Providers
- Leadership in Consultation
- Partnerships Across Health Sciences
- Collaboration/Teamwork Skills
- Meets Accreditation Standards and Goals of Triple Aim





Questions

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