Evaluating a Telehealth Simulation for APRN students

Heather Jones DNP, Beth Ammerman DNP, Kevin Joiner PhD, Deborah Lee PhD, April Bigelow PhD, Elizabeth Kuzma DNP

BACKGROUND & SIGNIFICANCE

The broad expansion of telehealth as a care delivery model dramatically increased since the beginning of the COVID-19 pandemic. As health care delivery changes, providers must learn to use telehealth technology safely, effectively, and confidently. Nurse educators need to prepare APRN students to meet the challenge of managing this important mode of care delivery.
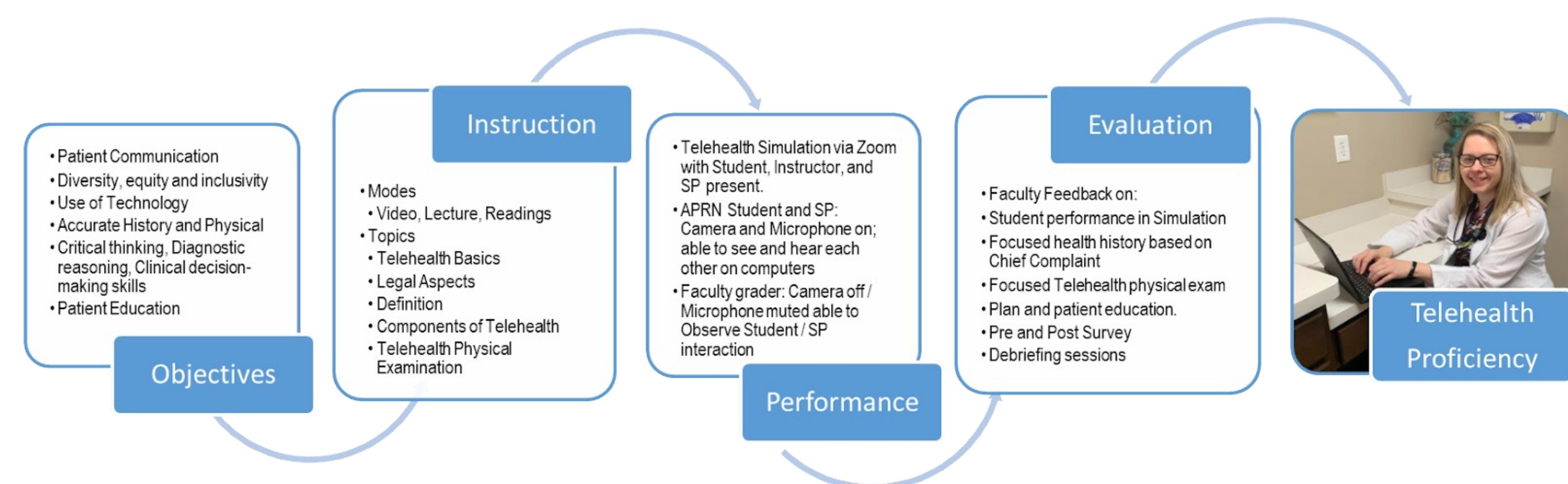
PURPOSE

Explore students' beliefs about the value of telehealth and confidence performing telehealth

HYPOTHESIS

With adequate formal educational and training in telehealth, APRN students will be well positioned to provide high quality telehealth care.

METHODS/DESIGN

- A single group comparison study was conducted.
- Participants were recruited from among APRN students of an Advanced Health Assessment course.
- An intervention that included telehealth didactic content and a telehealth simulation was performed.
- The design of this study entailed:
  o A pre and post-test survey about their beliefs of the value of telehealth and their confidence in performing telehealth as a method of care delivery.
  o A required multimodal telehealth instruction between the pre and post test surveys.
  o A formative graded assignment where faculty evaluated a telehealth simulation involving application of the learned concepts with Standardized Patients.
- Data was used from the surveys to evaluate a simulated telehealth SP experience.
- Domains of beliefs and confidence regarding telehealth were described using univariate statistics.
- Wilcoxon signed rank sum test was used to explore the difference between individual item and summary scores pre- and post- simulated telehealth standardized patient experience.

RESULTS

Table 2. Beliefs and confidence of advanced practice nursing students about providing clinical care via telehealth before and after the simulation exercise (n=68)

Belief Questions	Pre-Intervention				Post-Intervention				
	Strongly agree	Agree	Disagree	Strongly disagree	Strongly agree	Agree	Disagree	Strongly disagree	p-value*
• I believe that telehealth services are important to advanced practice nursing practice.	37 (54%)	31 (46%)	0	0	47 (69%)	21 (31%)	0	0	0.02
• I believe that I should understand how to provide telehealth services as a future advanced practice nurse.	49 (72%)	19 (28%)	0	0	47 (69%)	21 (31%)	0	0	0.62
• I believe that telehealth is important to my advanced practice nurse specialty area.	34 (50%)	32 (47%)	2 (3%)	0	39 (57%)	27 (40%)	2 (3%)	0	0.13
• I believe that telehealth can improve patient care outcomes.	35 (51%)	30 (44%)	2 (3%)	0	39 (57%)	28 (41%)	0	0	0.12
• I believe that telehealth can improve patient access to care.	50 (74%)	18 (26%)		0	51 (75%)	17 (25%)	0	0	0.76
• I believe that telehealth is a safe and effective way to manage some patient health concerns.	26 (38%)	40 (59%)	1 (2%)	0	31 (46%)	37 (54%)	0	0	0.08
Sum of scores	Mean (SD) 18.0 (2.1)		Median 19.0		Mean (SD) 18.2 (2.0)		Median 19.0		p-value* 0.09

Confidence Questions	Pre-Intervention				Post-Intervention				
	Strongly agree	Agree	Disagree	Strongly disagree	Strongly agree	Agree	Disagree	Strongly disagree	p-value*
• I understand the rules and regulations for providing telehealth services.	6 (9%)	30 (44%)	31 (45%)	1 (2%)	16 (23%)	48 (71%)	4 (6%)	0	<0.0001
• I understand how to document the necessity of telehealth services.	2 (3%)	26 (38%)	40 (59%)	0	17 (25%)	43 (63%)	8 (12%)	0	<0.0001
• I feel prepared to effectively provide telehealth services.	0	25 (37%)	37 (54%)	6 (9%)	9 (13%)	44 (64%)	13 (19%)	2 (3%)	<0.0001
• I feel comfortable providing telehealth services.	0	30 (44%)	35 (52%)	3 (4%)	10 (15%)	43 (63%)	13 (19%)	2 (3%)	<0.0001
Sum of scores	Mean (SD) 9.7 (2.1)		Median 9.0		Mean (SD) 12.1 (2.1)		Median 12.0		p-value* <0.0001

*Wilcoxon signed rank sum test used to compare scores of individual items and sums of scores of belief, knowledge, and confidence items in the pre- and post-intervention surveys.

- Several areas were without any significant change in students' beliefs regarding telehealth
  o all of these areas were rated high pre-intervention
- Several areas showed significant positive change (all with p<0.0001) in student outcomes post-intervention including:
  o overall confidence related to providing telehealth
  o understanding the rules and regulations for providing telehealth
  o understanding how to document the necessity of telehealth services
  o feeling prepared to provide telehealth service
  o feeling comfortable providing telehealth services

CONCLUSION/LESSONS LEARNED

This innovative telehealth simulation and didactic content for APRN students provided the opportunity to demonstrate use of telehealth equipment and develop telehealth competencies. Simulation is one strategy available to expose students to telehealth and improve telehealth skills. With adequate formal education and training in telehealth APRN students will be well-positioned to provide telehealth care services for patients in their future practice settings, further expanding access to care.

FUTURE APPLICATIONS and NEXT STEPS

Integration of telehealth into the nursing curriculum is essential to instill confidence as health care technology advances. Since most students did not feel comfortable prior to the multimodal telehealth instruction but felt very comfortable after the instruction and demonstrating a simulated telehealth SP experience, we feel this intervention was very effective. We felt it affirmed the need to use this learning tool in the upcoming advanced health assessment courses to instill confidence in performing telehealth.