Telehealth: What the APRN Student Needs to Know and How to Teach Them

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Speaker Introductions

• Kelli Garber is the lead advanced practice provider and clinical integration specialist for the Center for Telehealth at the Medical University of South Carolina (MUSC). In addition to overseeing the clinical operations of the MUSC School-Based Health Program, Ms. Garber provides care via telehealth to children across the state of South Carolina. She also provides telehealth education and consultative services to healthcare providers throughout S.C. as they implement telemedicine in their respective disciplines. Ms. Garber is the president and executive chair of the NAPNAP S.C. Chapter and is a co-founder and board member of the NAPNAP S.C. School-Based Health SIG and is an active member of the NAPNAP South Carolina Chapter. She also serves on the NAPNAP Liaison Committee to the Executive Committee of the American Academy of Pediatrics Section on Telehealth Care.

• Dr. Katherine Chike-Harris graduated from August College in 1991 with a BS in chemistry/minor in mathematics; Medical University of South Carolina (MUSC) in 2007 with a BSN, 2009 with an MSN (pediatric focus) and 2011 with a master's as a nurse educator and her DNP. Since graduating with MSN, her APRN practice has been in pediatric primary care, serving the underserved populations; first within a Family Qualified Health Center and now through MUSC Center of Telehealth School-Based Telemedicine clinics part-time. Dr. Chike-Harris' full-time role is as an assistant professor for MUSC's College of Nursing, teaching in the DNP program and is currently in charge of integrating telehealth education into the BS, DNP and PhD nursing curricula. She is an active member of NAPNAP, serving as chair for both the School-Based Health Care SIG and the Education Committee of the NAPNAP S.C. Chapter and a NAPNAP Foundation board member.

Disclosures

The presenters have no disclosures

Learning Objectives

• Define telehealth and the telehealth essential elements.
• Discuss different modes of telehealth education assessment and evaluation.
• Identify how to integrate telehealth into the graduate nursing curriculum and skills training.

Funding

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Telehealth Definitions

- Sites
  - Hub/Distant
  - Spoke/Originating
  - Kiosk
- Roles
  - Telepresenter
  - Teleconsultant
  - Teleprovider

What is telehealth/telemedicine?

- telehealth
  - Health education
  - Provider education
  - Distance health administration
  - Student education

- Telemedicine
  - Public health intervention
  - Video Conferencing
  - Synchronous
  - Asynchronous

Telehealth Etiquette

- Communication technique
- Hub site
- Originating site

Types of Telehealth Practice

Telehealth Equipment

IT Needs

- Connectivity
- Broadband
- Hub site needs
- Spoke site needs
Setting up a Telehealth Practice

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TSIAM™ Process. Slide courtesy of Shawn Valenta, Administrator of Telehealth, MUSC Center for Telehealth

Legal & Finance

State/federal
Standards, guidelines and position statements
Credentialing
Billing

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Faculty Education

15

Examine Your Curriculum

• What types of tracks are offered?
• What types of courses? Didactic vs. clinical
• What are the current faculty/student demands?
• Do you have faculty and administration support?
• Do you have a telehealth champion?
• Are there local providers that provide telehealth services?

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Identification of Resources

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Mode of Teaching

- How do you want to provide telehealth education?
  - In-person
  - Online
  - Videoconferencing
- What is the length of the program?
  - A half or one-day workshop
  - A multi-week course
  - Semester long (required vs. elective)
  - Scaffolded throughout the plan of study
- Who to teach?
  - Undergraduate
  - Graduate
  - Inter-professional

One Day Telehealth Immersion at MUSC

- 8-hour event
- Participants (38)
  - DNP Graduate students (32)
  - Morning only via WebEx (14)
  - All day (18)
- Faculty (2)
- Guests (4)
- Pre- and post-quizzes (Moodle)
- End of event satisfaction survey (RedCap)
- This program development project received exempt status by MUSC’s IRB

Morning Lectures

Afternoon Hands-on Activities

Telehealth Immersion Day Results

<table>
<thead>
<tr>
<th></th>
<th>Pre-test</th>
<th>Post-test</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>High grade</td>
<td>86.67%</td>
<td>86.67%</td>
<td>0%</td>
</tr>
<tr>
<td>Low grade</td>
<td>26.67%</td>
<td>40.67%</td>
<td>+75%</td>
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<tr>
<td>Mean</td>
<td>59.41%</td>
<td>64%</td>
<td>+8%</td>
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<tr>
<td>Average</td>
<td>38.42%</td>
<td>64%</td>
<td>+8%</td>
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</table>
Participant Satisfaction Survey

• “I was a WebEx participant. Next time point the camera at the speaker, not the wall or the students. It would make me feel more engaged.”
• “I really appreciated the opportunity to view and listen to the presentations via WebEx, as I am not a SC resident and telehealth greatly interests me. The morning presentations were very informative.”
• “Wonderful immersion day, but I would suggest discussing its use in the patient population that could benefit the most from this technology.”
• “I feel better about potentially using telehealth in future practice once I understand state specific practice acts.”
• “I wish the welle group could have communicated through the hands-on lab portion.”
• “Very informative”
• “Loved it! I hope to get trained in this when I’m a NP!”
• “I loved how interactive it was, we learned lots of information.”

Didactic Only Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Info</th>
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</thead>
<tbody>
<tr>
<td>Informatics</td>
<td>Intro to various telehealth concepts/modes</td>
</tr>
<tr>
<td>Policy &amp; Advocacy</td>
<td>APRN telehealth policies</td>
</tr>
<tr>
<td>Role Practice (didactic portion)</td>
<td>Telehealth understanding &amp; licensing</td>
</tr>
<tr>
<td>Organizational Theory</td>
<td>Telehealth related policy development and</td>
</tr>
<tr>
<td></td>
<td>implementation</td>
</tr>
<tr>
<td>Economics &amp; Finance</td>
<td>Budget and cost analysis</td>
</tr>
<tr>
<td>Leadership &amp; Interprofessional (IP) Collaboration</td>
<td>IP collaboration and telehealth leadership</td>
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</tbody>
</table>

Informatics Module

- Independent modules
- Discussion forum
- Assessments
- Pre/post quizzes
- Satisfaction survey

Post-BSN DNP Plan of Study

Potential classes where telehealth can be embedded
- Didactic only
- Didactic & skills training

Lessons Learned - Scaffolding
Informatics Module Results

<table>
<thead>
<tr>
<th></th>
<th>Pre-test</th>
<th>Post-test</th>
<th>Difference</th>
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<tr>
<td>Average</td>
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<td>90.71%</td>
<td>+24%</td>
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<tr>
<td>Median</td>
<td>68.75%</td>
<td>90.91%</td>
<td>+32%</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>14.31%</td>
<td>9.01%</td>
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</table>

Informatics Module Student Feedback

- The Telehealth presentation was very beneficial in presenting information that was unknown before this. Particularly in defining terms and going more into depth on the impact of Telehealth.
- I do think this presentation was beneficial. Telehealth is a growing field that is a major component of modern health care. Having a working understanding of telehealth and regulations that govern telehealth is crucial. I think there is constant need for improvement as telehealth is a dynamic field and there are constant changes.
- The presentation was extremely beneficial; especially, through its high level overview and detailed descriptions for telehealth and telemedicine. It improved my baseline knowledge surrounding telehealth and telemedicine.
- May not feel like an expert but gained valuable information that I was previously unaware of. The video was the perfect length for feeling engaged and not overwhelmed by information. It was organized and easy to follow/understand.
- This presentation was very helpful because it displayed the information in basic terms and was organized from basic information to more in depth information.

Telehealth Policy Module

Policy Module Results

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<th>Pre-test</th>
<th>Post-test</th>
<th>Percent Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Grade</td>
<td>64.34%</td>
<td>90.5%</td>
<td>+41%</td>
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<tr>
<td>Median Grade</td>
<td>70%</td>
<td>92.9%</td>
<td>+32%</td>
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<td>Standard Deviation</td>
<td>15.13%</td>
<td>7.6%</td>
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Policy Module Student Feedback

- Very beneficial and wish we had gotten to talk about telehealth more throughout the semester!
- This presentation was very educational in an area that we do not know much. Gives you the main concepts and problems regarding telehealth.
- I would have also liked some visual examples of how it works.
- This was a great telehealth policy presentation. As I was aware of telehealth, I was unaware of topics such as insurance reimbursement for telehealth services.
- This is an important topic for all HCPs!
- It was very beneficial to understand the laws and regulations, reimbursement, and how telemedicine affects patient care.

Telehealth Etiquette Module

Lectures:
- Telehealth Professionalism
- Telepresenter & Teleconsultant Roles

https://youtu.be/QuOu1EA45x8

OB Depression Case
- PBL casebook
- Link lecture w/ video presentation
### Telehealth Etiquette Module Results

<table>
<thead>
<tr>
<th></th>
<th>Pre-test</th>
<th>Post-test</th>
<th>Percent Difference</th>
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</thead>
<tbody>
<tr>
<td>Average Grade</td>
<td>67%</td>
<td>90.57%</td>
<td>+30%</td>
</tr>
<tr>
<td>Median Grade</td>
<td>67%</td>
<td>92.31%</td>
<td>+32%</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>14%</td>
<td>14.34%</td>
<td>-</td>
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</tbody>
</table>

### Telehealth Etiquette Module Student Feedback

- This module was very informative and made several points that I never considered to be important during a video encounter. Overall, it was great!
- I believe the presentations were very informative! However, I believe that tele-health is something that one has to experience and be a part of to have well-rounded knowledge.
- Telehealth is so beneficial to our patients especially in those that are located in rural areas. As APNPs, we maybe acting as tele-consultants or tele-presenters, and we need to be aware of what is expected on a basic level in professionalism. These two presentations were very detailed and thorough with professionalism related to telehealth.
- Discussing the roles was, very helpful as well as the tips and tricks to how you should set up the environment for both the presenter and the consultant.
- Very beneficial. A reminder of the necessity to keep a patient’s trust in useful. A telehealth visit is much more than a basic video chat.
- I love learning about telehealth. This is an idea that I am interested in, so it is nice to have it integrated into our learning. I love how it is included as part of this PBL.

### Didactic and/or Skills Development

<table>
<thead>
<tr>
<th>Course</th>
<th>Plan</th>
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<tr>
<td>Advanced Clinical Assessment &amp; Reasoning</td>
<td>1. Introduction to telehealth cart</td>
</tr>
<tr>
<td></td>
<td>2. Augment physical assessment/learning</td>
</tr>
<tr>
<td>Advanced Clinical Management I</td>
<td>1. N/A</td>
</tr>
<tr>
<td>Advanced Clinical Management II</td>
<td>1. Introduction to telehealth roles</td>
</tr>
<tr>
<td></td>
<td>2. Assignment</td>
</tr>
<tr>
<td></td>
<td>3. Lecture</td>
</tr>
<tr>
<td></td>
<td>4. Teleconsultant &amp; patient recording</td>
</tr>
<tr>
<td></td>
<td>5. Learning Intensives: Practice teleconsultant &amp; telepresenter roles (utilize telehealth cart)</td>
</tr>
<tr>
<td>Advanced Clinical Management III</td>
<td>1. Perform a full telehealth visit</td>
</tr>
<tr>
<td>Role Practicum</td>
<td>1. Mock televisit</td>
</tr>
<tr>
<td></td>
<td>2. Graduate student = teleprovider</td>
</tr>
<tr>
<td></td>
<td>3. Undergraduate student = telepresenter</td>
</tr>
<tr>
<td>Residency</td>
<td>1. DNP QI Projects</td>
</tr>
<tr>
<td></td>
<td>2. Clinical opportunities</td>
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</tbody>
</table>

### Learning Immersions – OSCE day

18/FA Adv Care Management II (NRDNP-865-CW1)

**Telehealth Preparation**

Please read and complete preparation for our telehealth experience on Tuesday. We will need to be present in the video when we tour.

Please save tour dates.

For more information about the "Learning Immersions - OSCE day", please visit the American Telehealth Cart Service.

**OSCE Student Feedback**

- Viewing the introduction to the Avizia cart video made me comfortable where to find buttons.
- If possible, view live consult.
- Use patient actors/actresses with known heart/lung conditions.
- It was great! Maybe watching a real session?
- Very informative. Now understand capabilities of telehealth program and its extensiveness.
- Wonderful to hear better than own stethoscope.
- I was exhausted from learning intensives and did not view videos before tour.
- No improvements, it was great! (maybe make it on a non-OSCE day)
- Not at the time of OSCEs. Our minds are elsewhere.
Learning Intensives – Mock Televisit

- Teleconsultant/tel epresenter video
- 2 hour session
- Two student groups (N = 63)
- Case study
- "Patient" x 2
- Telepresenter x 2
- Room monitors x 4

<table>
<thead>
<tr>
<th>Response rate</th>
<th>Strongly Agree</th>
<th>Yes/Agree</th>
<th>No/Disagree</th>
<th>Unsure</th>
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<tbody>
<tr>
<td>Video benefits</td>
<td>88%</td>
<td>12%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role of telepresenter &amp; provider</td>
<td>88%</td>
<td>12%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased comfort</td>
<td>100%</td>
<td>0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telehealth visit competency</td>
<td>11.8%</td>
<td>70.6%</td>
<td>5.9%</td>
<td>11.8%</td>
</tr>
<tr>
<td>Welcome tele career</td>
<td>20.5%</td>
<td>58.8%</td>
<td>0%</td>
<td>14.7%</td>
</tr>
</tbody>
</table>

Learning Intensives Student Feedback

- Strengths
  - Exposure to a "real life" telehealth visit
  - Faculty discussion after simulation
  - Provided actual simulated experience of telehealth rather than learning about it
  - This activity allowed me the opportunity to see that I can provide appropriate patient care via telehealth

- Weaknesses
  - Hard in a big group
  - There are too many people so it made it harder
  - The group was a little too big and it was hard to stay focused throughout the activity
  - We have had multiple sessions on telehealth during learning intensives. This last session was the most beneficial, but I do not think 3 session are needed.

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  843-792-8709