

▲▲▲

# Individualizing Telehealth in the Home

Kimberly Shea PhD RN CHPN  
Clinical Professor



THE UNIVERSITY OF ARIZONA  
College of Nursing



# Today's Presentation

**At the end of this presentation, attendees will be able to:**

- Telehealth is here to stay but should not merely be a substitute....always improving the delivery of healthcare
- Discuss the importance of using a framework to guide telehealth practice based on the *Novice to Expert* framework
- Apply Comprehensive Patient Assessment for using Telehealth in the Home (CPATH) domains to a behavioral telehealth visit.
- US Fulbright to Chile to apply the CPATH

# Home Visits -Telehealth Compared to Clinic Visits

## Face-to-Face (telehealth)

- Rapid access to physical or psychological assessment of patient
- Traverses travel time and distances easily
- See patients in their home environment
- More frequent visits without exposure to risks
  - Fall
  - Infection
  - Exhaustion
- Senses used-Can't touch or smell
- Provider preparation can include contemplation of indicators of risks related to illness

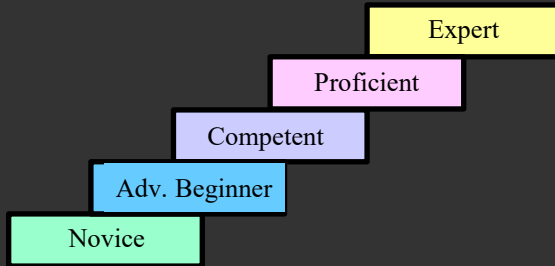
## In-Person

- Access to assessment by primary provider may be untimely, so have to go to the ED
- Travel is challenging for patients, physically and emotionally and maybe financially costly
- Symptoms and fatigue can be heightened by stress of visit
- Questions to patient about home environment
- Travel, clinics, emergency rooms and hospitals visits increase exposure to infection
- Uses all senses
- Provider preparation before is overview of illness

## Telehealth is here to stay

- Three categories of telehealth delivery
  - Synchronous (real-time)
  - Asynchronous (store and forward)
  - RPM (remote patient monitoring)
  - Combinations
- “Toothpaste out of the tube”, “Genie out of the bottle”, “Cat out of the bag”
- Public Health Emergency and telehealth
  - April 19, 2022 PHE ends
  - Telehealth regulations will continue for 5 more months
- More than 55% of providers find frustrating
  - Quality of Care and video/audio technology are sources
- **We are all novices on how to best use telehealth**

# Video Conferencing Novice to Expert



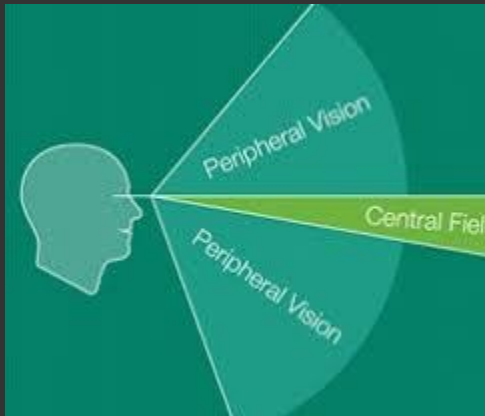
## Skill Acquisition (Dreyfus & Dreyfus 1979, Benner 1982)

- **Novice**
  - Focus on succeeding
  - Hasty mindset
- **Advanced Beginner**
  - Knowledge and information begins
  - Starts to troubleshoot
- **Competent**
  - Solves problems
  - Difficulty pinpointing which details to focus on
- **Proficient**
  - Looks at bigger picture
  - Frustrated by oversimplification
  - Desire for ongoing self-improvement
- **Expert**
  - Become source of information to others
  - Intuitive

# Visualization

## Human Eyes

- Wide focal area with peripheral vision



## Camera lens

- Narrow focal area with no peripheral vision



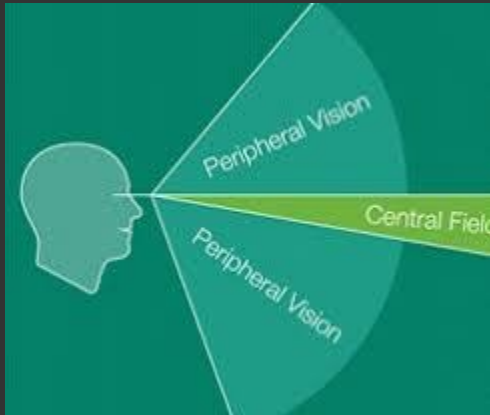
# Visualization

## Human Eyes

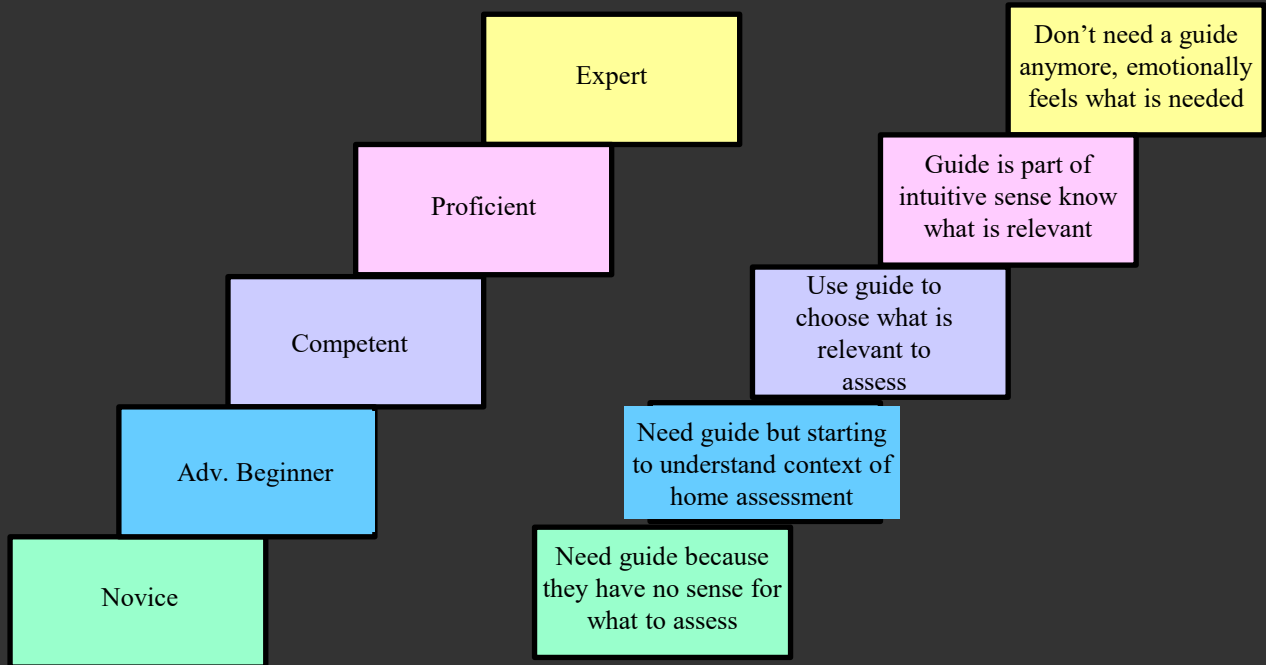
- Wide focal area with peripheral vision

## Camera lens

- Narrow focal area with no peripheral vision



# Application to Telehealth Synchronous Video





# Intentional Steps for Telehealth Visit

1. Small talk
  - Comfort
  - Relationship
2. Shared Understanding
  - Why the visit
  - Why looking around
  - What will do with information
3. **Consent** to use a camera along the way
4. Inform that you will be looking at four areas
  - a) Domains
    - Environment
    - Equipment
    - Medications
    - Patient Characteristics
    - Caregiver Characteristics



# Before video visit

## Ergonomics

- ❑ Simplify patient Access
  - ❑ One click
  - ❑ Familiar with software
- ❑ Prepare **your** Technology
  - ❑ Audio
  - ❑ Video
  - ❑ Microphone
  - ❑ Signal
- ❑ Prepare **your** space
  - ❑ Minimize distractions
  - ❑ Lighting
  - ❑ Camera positioning
    - ❑ Eye contact
    - ❑ Distance
  - ❑ Background

## Efficiency

- ❑ Risk review
  - ❑ Diagnosis
  - ❑ Comorbidity
  - ❑ Lack of care
  - ❑ Safety
- ❑ Prepare for the Flow
  - ❑ Items to discuss
    - ❑ Test results
  - ❑ Items to share
    - ❑ educational
- ❑ Review CPATH Domains
  - ❑ Critical items in Domains
  - ❑ Questions

# Guide for Telehealth Visits

## Diagnosis- congestive heart disease

### Comprehensive Patient Assessment for using Telehealth at Home

<b>Environment</b> <ul style="list-style-type: none"><li>• fans, airflow</li><li>• safety</li><li>• bedding</li></ul> <b>Equipment/treatments (as appropriate)</b> <ul style="list-style-type: none"><li>• urinary collection</li><li>• oxygen delivery</li><li>• feeding</li><li>• non-medical therapies</li></ul>	<b>Medication</b> <ul style="list-style-type: none"><li>• types</li><li>• dosages</li><li>• administration guidance</li></ul> <b>Patient characteristics</b> <ul style="list-style-type: none"><li>• breathing</li><li>• Skin- color, edema, integrity</li><li>• Non verbal gestures</li><li>• positioning in bed</li></ul> <b>Caregiver/family Characteristics</b>
---	---

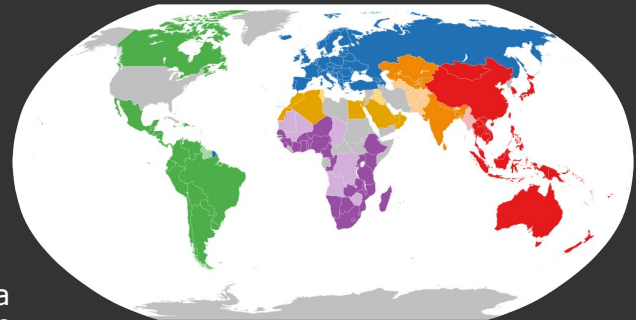
1. Shea K, Silva G, Evans BA. A Best Practice Assessment Protocol for Mobile Technology Home Visits. Western Institute of Nursing's Annual Communicating Nursing Research Conference. Portland, OR 2017.

2. Shea, K. D., Towers, V., Koon, M., & Silva, G. (2021). Development of an Intentional Telehealth Viewing Guide for Home-Based Patient Assessment. *Telemedicine Reports*, 2(1), 32-38. doi:10.1089/tmr.2020.0017

# Fulbright Program

## History

- Senator J. William Fulbright (1945)
- Congress created Fulbright Program (1946)
- U.S. Cultural Exchange Program
  - Students and faculty



## Mission

- “to bring a little more knowledge, a little more reason, and a little more compassion into world affairs and thereby increase the chance that nations will learn at last to live in peace and friendship”

# Fulbright U.S. Scholars Awards



## Overview

- Teach
- Carry out Research
- Carry Out Professional Projects
- 130 Countries
- College/University Faculty
- Wide range of fields

## Scholars Programs

- Scholar
  - Opportunities for professionals of all types at midlevel careers
  - Teaching/Research
- Distinguished Scholar
  - Scholars with more than 7 years
  - Mutual sharing of knowledge
- Postdoctoral
  - Within 5 years of graduation with doctoral degree
- International Education Administration
  - 2 week intensive to learn about host country's education
  - Establish network between US and host country

# Assessment of Need



## Geographical

- Country shape
- Population distribution
- Healthcare structure
- Healthcare access
  - **dual health care system**



## Academic

- Private/Public University
  - Universidad Mayor
- Health Professions
  - 5 years
- Postgraduate Certificates
  - Informatics Certificate (UM)
  - Telehealth Certificate (UC)
  - Not applied...very high level
  - Online for working professionals

# Award Activities

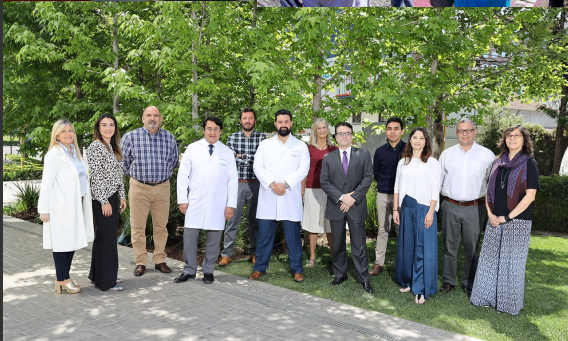


## Teaching

- Telehealth use for health sciences
- Postgraduate certificates
- Use of telehealth equipment
- Current informatics certificate
  - theoretical
- Telehealth Certificate
  - Focus on application
  - Human factor interaction
  - Asynchronous



# Award Activities



## Research

- Original- Evaluate use of smartphones for home telehealth in Chilean culture, and further validate a guide for comprehensive home viewing, *Comprehensive Palliative Assessment for using Telehealth at Home (CPATH)*.

- Pilot CPATH for genetic counseling with patients diagnosed with Gastrointestinal Stromal Tumors (GIST)

- Clinical Trials Group - Centro de oncología de precisión (COP)

- 150 participants

- Procedure for setting up Telehealth encounters for genetic consultations and palliative care patients.



# Conclusions

- Telehealth enables access to healthcare and limits risks to patients
- One type of telehealth, synchronous video visits are useful for visualization, communication and hearing
- Narrow camera lens limits what can be seen
- Using a guide aims for standardization
- Preparing before the video visit provides a more seamless and complete visit.
- The CPATH domains provide a framework for intentional viewing and allows for a more comprehensive visit
- Fulbright Scholarship teaching and research activities have disseminated the importance of considering human factors for efficiency and effectiveness of using a guide.

**THANK-YOU to many who have contributed to this program of research!!**

- Arizona Telemedicine Program
- Graciela Silva PhD, MPH
- Janice Crist PhD, RN, FWAN, FAAN
- Claire Bethel MSN, RN-BC
- Victoria Towers MSN, FNP-BC
- Melissa Koon MSN, APRN, FNP-BC, NP-C,
- Bre Chamoff DNP, CPNP

**THANK You for Attending**

Questions?

[Kshea@email.Arizona.edu](mailto:Kshea@email.Arizona.edu)