Defining the Role of the Nurse in Development of New Models of Care Using Telehealth

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Virtual Inpatient Check In/Check Out VICC

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Lehigh Valley Health Network

Problem

- Delayed discharges leading to increased LOS despite implementation of clinical pathways

- Decreased throughput for Post Anesthesia Care Unit (PACU) and ER

- Dissatisfied patients

Patient Feedback

- Press-Ganey Surveys revealed:

  - "Was told I could go home at 4p.m. after rounding surgeon forgot to see me during his first rounding and I wasn't released until 7 p.m."

  - "Advised I could go home around 9:30 a.m., not let go until about 3 p.m."

WHY?

- Surgeons not available on site due to block OR time at offsite outpatient surgical center

- Surgeons unable to round on inpatients until the completion of offsite OR block time

- Patients ready for noon discharge waiting until 1800 for surgeons to round

Nursing's Role in Leading Change

- Develop a process to improve physician access
  - Using technology to eliminate the geographic distance between the surgeon and the patient
    - To facilitate an earlier discharge
- Implement the process and evaluate the success of the telehealth intervention
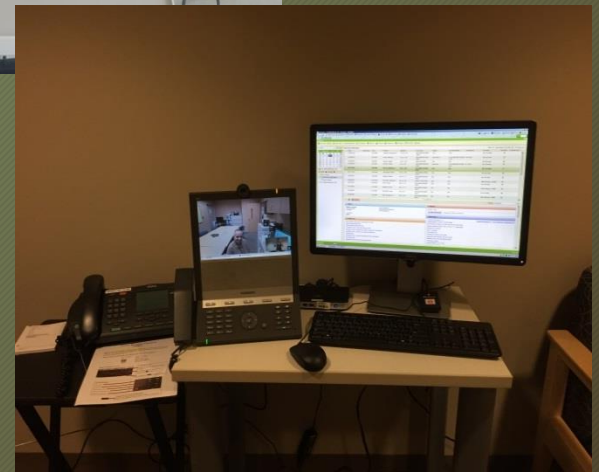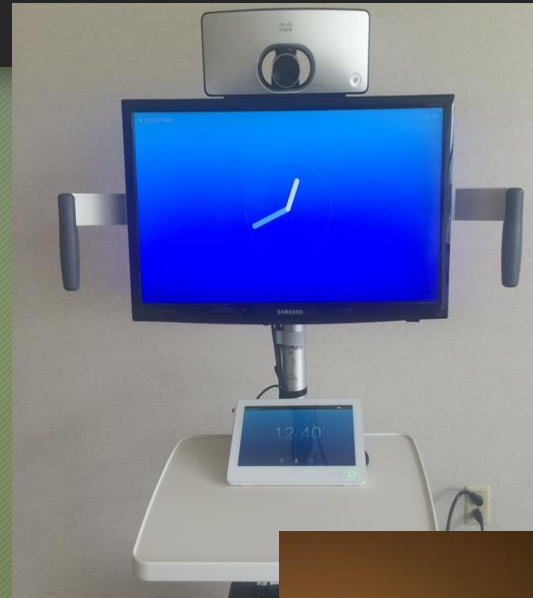
Solution

- Virtual surgeon rounding
  - Between Operating Room cases utilizing

- **Virtual Inpatient Check In/Check Out**

VICC

How does it work?

- High definition video conferencing equipment to connect the surgeon with the patient

- Access to EMR to review medical records, resident assessment notes, etc

- The scheduling process

What has it shown?

- **Decreased LOS (day:hour:minutes)**

- Pre VICC implementation LOS - 02:02:09

- Post VICC implementation LOS - 01:20:16

What has it shown?

- **Patient Satisfaction**
- Press-Ganey Scores
  - 6 Months pre VICC implementation
    - Physician Satisfaction -90.3%
    - Overall Satisfaction – 88.9%
  - 5 Months post VICC implementation
    - Physician Satisfaction – 94.7%
    - Overall Satisfaction – 95.3%

Next Steps

- Expand VICC to additional surgical specialties on additional inpatient surgical units at multiple sites

- Implement telehealth for virtual post-op follow-up visits to the patient's residence to improve workflow and access for "new" patients

University of Virginia Health System

Telemedicine Integration into Special Pathogen Care

Beth Mehring, MSN, RN
Nurse Manager Emergency Management
UVA Emergency Services

Project History

Background

- **The 2014 Ebola Virus Disease (EVD) outbreak posed international threat as thousands became infected and died in West Africa.**

- **As the pathogen reached the United States the healthcare infrastructure became rapidly aware of vulnerabilities for exposure of staff, patients, and the general public.**

- **We hypothesized that exposure and related risk of infection could be minimized through the deployment of iSOCOM technology to act as "virtual PPE" allowing us to optimize care while minimizing human exposures.**

Project History

Methods

- We developed a network of telemedicine technologies to serve as immediate communication, assessment, and coaching tools to reduce the number of individuals entering the proximity of potential EVD patients while allowing expert guidance to optimize outcomes.

Results

- Results of iSOCOM technology utilized to minimize human exposure to potential EVD patients exceeded our expectations
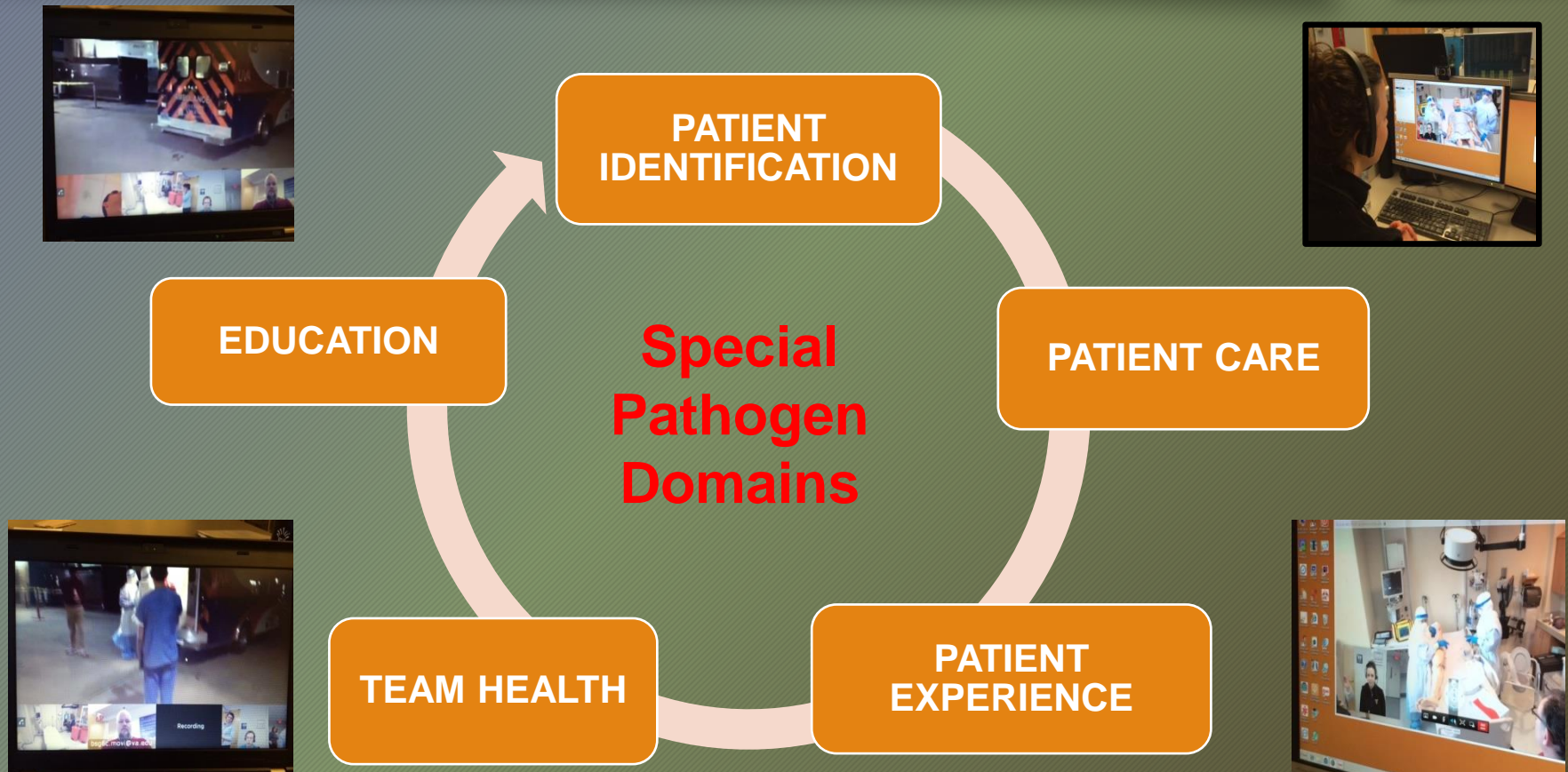
Conclusions

- Application of iSOCOM technology as part of essential infrastructure within a special pathogen care unit proved to limit staff exposures, improve communications, optimize patient assessments, heighten staff confidence, and serve as a quality surveillance system.

Nursing Role

- Nurse Manager for Emergency Management served as the "lead planner" for Emergency Management

- Recognized unique threats and sought innovative solutions to ensure team safety—resulted in telemedicine involvement

- Resulted in ISOCOM technology
  - Decreased exposures to high risk isolation patient
  - Technology enabled assessment
  - Allowed patient to communicate with a "human"
  - "Safety officer" outside the room monitoring via telemedicine
    - Ensured co-worker safety
    - Coached through infrequent skills
    - Ensured needs were met within the patient room—communications, pages, labs, etc
    - Linked disciplines—MDs, social work, families, etc

Telehealth Foundation

Case Use Applications Based on Perceived Barriers to Care

Special Pathogen Domains

- PATIENT IDENTIFICATION
- PATIENT CARE
- PATIENT EXPERIENCE
- TEAM HEALTH
- EDUCATION

Incorporating Telehealth Technologies

Blending of technologies to meet collective needs

- **Fixed endpoints** – integrating auto-answering VTC into treatment spaces; e.g. ED, MICU, Hospital Command Center,

- **Desktop video-conferencing** – equipping warm zones, nursing stations, ambulatory settings, labs, employee health, student health

- **Mobile telehealth** – providing tablets for key medical staff, EMS, emergency planners, care providers

- **Remote patient monitoring** – developing virtual face-to-face surveillance and support for clinical staff

- **Collaborative video-conferencing** – establishing group VTC for team conferences, updates, changes, family meetings

- **On-line resources** – offering telehealth education through the web; e.g. STAR Telehealth

- **Innovations** –UVA Telemedicine has created unique telehealth solutions for high risk clinics in low resource nations; e.g. low cost camera kit for use in Liberia

IMPORTANT:
Chosen technologies are standards-based

Patient's view of staff from wall mounted monitor

Experimenting with iPad camera with Jabber connection to the patient room

This is how the MD's would link to patients & clinics

4 Primary Measures of Success for Proof of Concept

☑ Video/audio for patient

☑ Video/audio for staff at the nurses station

☑ Augment assessment with remote stethoscope

☑ Connection with MD's to patient remotely

Serendipitous add on's…

"I can pull all the windows together so you can see them on your laptop, if that would help…"
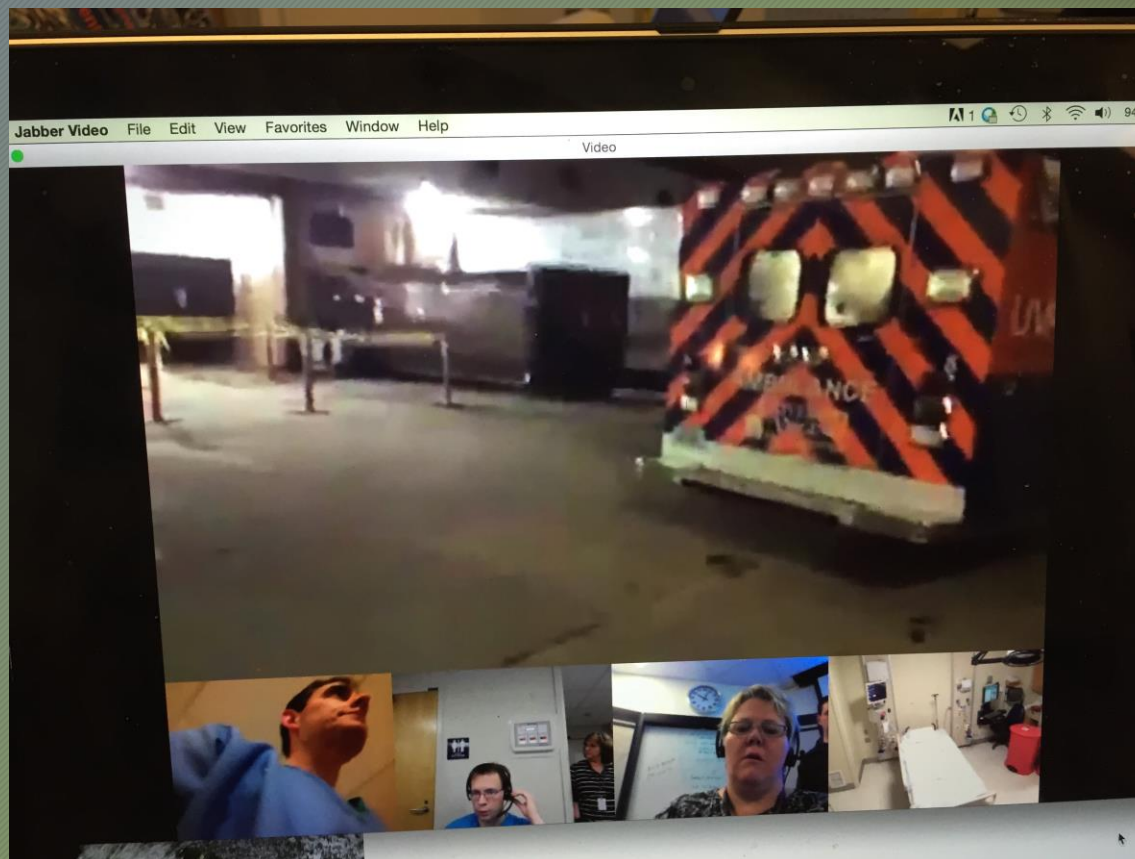
iPad & fixed point connections joined in a common Jabber window

Serendipitous add on's…

"Want me to Jabber as they unload so you can see what is happening…"
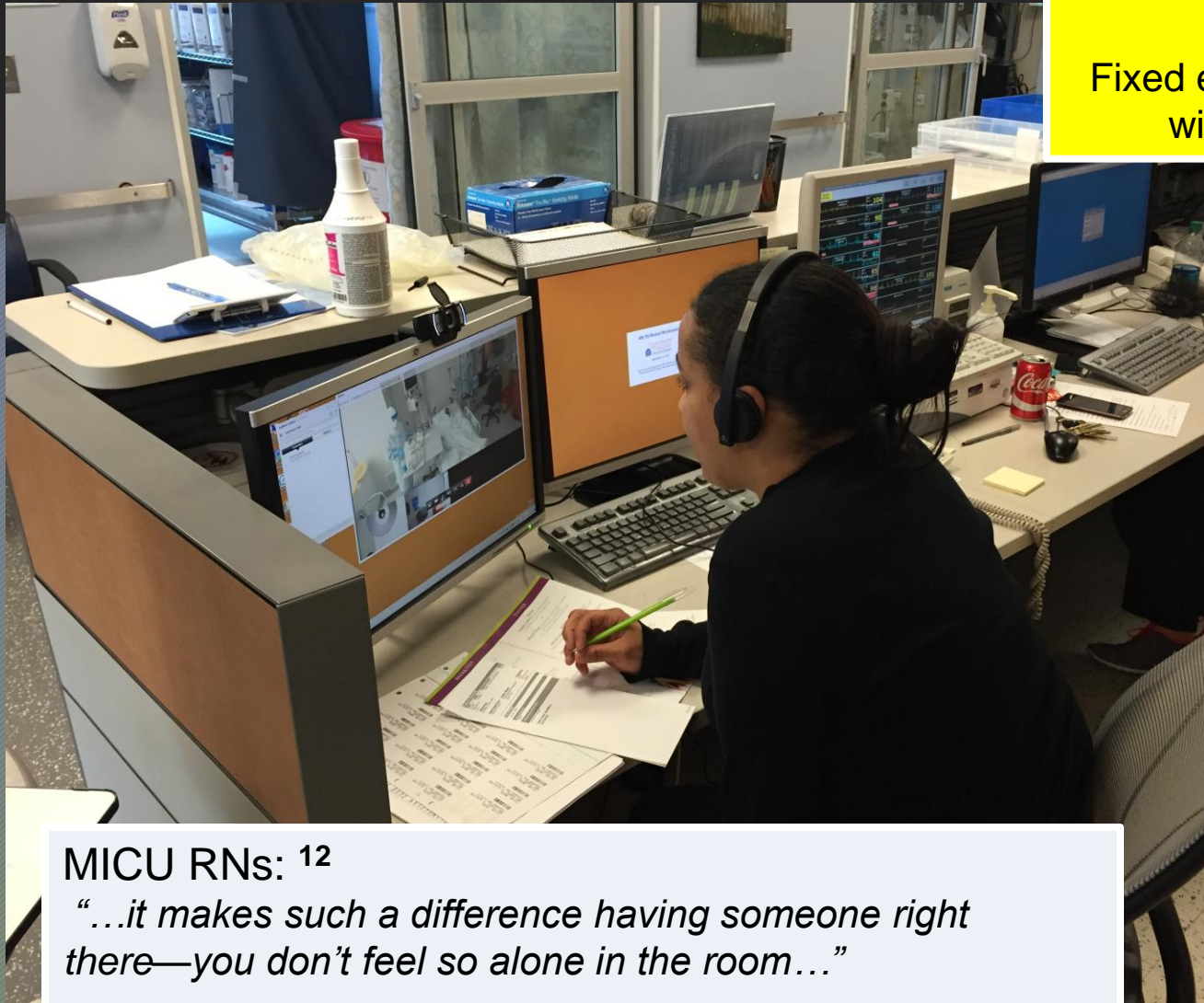
iPad with Jabber Connection

Admission Process

- ✓ **Hand-off of care between MICU and Medical Transport Team**
- ✓ **Dr. Sifri can hear hand-off first hand and ask questions as needed**
- ✓ **External team assists with documentation of the patient history, assessment, care**
- ✓ **Experts (ie. Lab Services) available for coaching on infrequent or specialty tasks**

This person monitors the room for:
- ✓ Potential breeches in PPE
- ✓ Distress in the nurse or patient [6]
- ✓ Tactical needs (ie. Supplies, medications, etc)
- ✓ Makes needed communications for nurse in the room (ie. Pages, calls, etc)
- ✓ Coaches through infrequent tasks
- ✓ Documents care
- ✓ Coordinates support services

MICU RNs: [12]

"…it makes such a difference having someone right there—you don't feel so alone in the room…"

"…I really like having someone right there to ask questions—we don't do this everyday!"
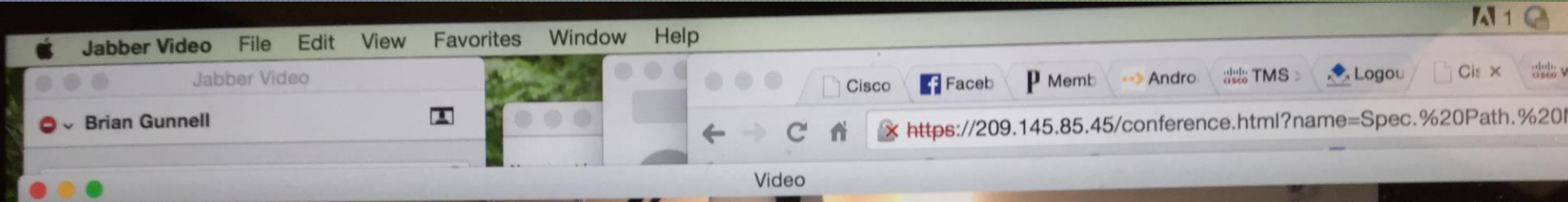
Concluding Thoughts

- Effort Exceeded our expectations—value added was immeasurable

  "I don't know how we would do this without Telemedicine"

- All team members readily adapted to the technology
  - Consistent with technology used in personal lives every day

- The case use's exploded once the technology was in place!
  - Staff of all levels intuitively integrated this into care and found expanded applications

- Translation of capabilities to other programs or expanded use is limitless

- Tele-health enables instant communication—both visual and audio

Polling questions and Discussion on Nursing Role

- o Strongly agree
- o Agree
- o Neutral
- o Disagree
- o Strongly disagree

1. Using telehealth technology in nursing practice is within the scope of practice of nursing.
2. Nurses are comfortable integrating telehelath into nursing practice
3. Effective nursing communication skills are vital to leveraging telehealth into nursing practice.
4. Nurses should gain telehealth knowledge, skills, and training to lead interprofessional teams of stakeholders to develop telehealth projects.
5. Nursing should enable safe and accurate patient assessments and care delivery using telehelath technology.
6. There is an important role of nursing in delivering patient care using telehealth.
7. Nurses should gain telehealth knowledge and skills to combine clinical care with technology
8. Telehealth should be used to support nurses in the delivery of nursing care.

Purpose

- To determine the feasibility of communicating with the caregivers of stroke survivors through telehealth.

- Outcomes related to the telehealth visit as well as the caregivers satisfaction with the telehealth were also investigated.

Evidence Based Research Questions

- <u>RQ 1</u>: Was there a difference between the telehealth intervention group and the usual care group related to:
  - Self-identified anxiety
  - Ability to care for oneself and others
  - Perception of emotional support

- <u>RQ 2</u>: Was the telehealth group satisfied with the telehealth visit?

Methods: Sample

- Two groups:
  - Intervention n=15
  - Control n=12
- Inclusionary Criteria:
  - Informal caregivers of UVA stroke patients
  - Unpaid, untrained, typically family members
  - Ages 18 years and older
  - Able to read, write, and understand English
- Exclusionary Criteria:
  - Not a stroke patient (TIA, seizure, etc)

I — C

Methods: Tools

VARIABLE	Tool
Anxiety	PROMIS Item Bank v1.0 – Emotional Distress-Anxiety – Short Form 6a
Ability to Care for Oneself and Others	PROMIS Item Bank v2.0 – Ability to Participate in Social Roles and Activities
Perceived Emotional Support	PROMIS Item Bank v2.0 – Emotional Support
Satisfaction with Telehealth Intervention	Telehealth Satisfaction Survey (researcher developed)

Methods: Intervention

- <u>Telehealth intervention</u>

- Connect between week 2 and week 3 after discharge via video chat
  - Google hangout/ skype/ face time
- Five standardized questions were asked:
  - 1: How are you feeling/ doing?
  - 2: How are you caring for yourself (eating, sleeping, social interaction, etc?)
  - 3: Where is the stroke survivor currently residing?
  - 4: Do you have any questions?
  - 5: Is there anything I can help you with now?

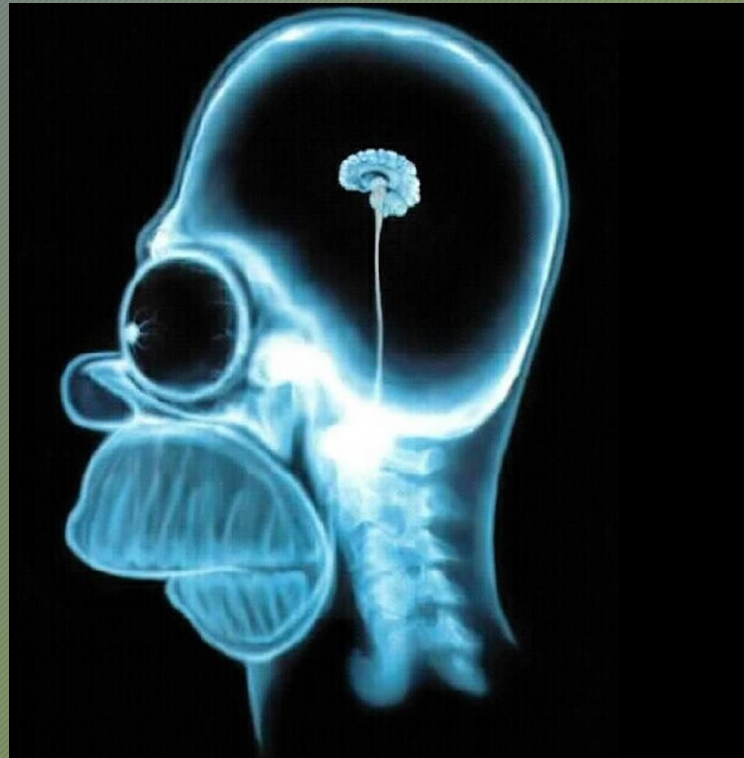 - No specific time limit for the visit

Outcomes
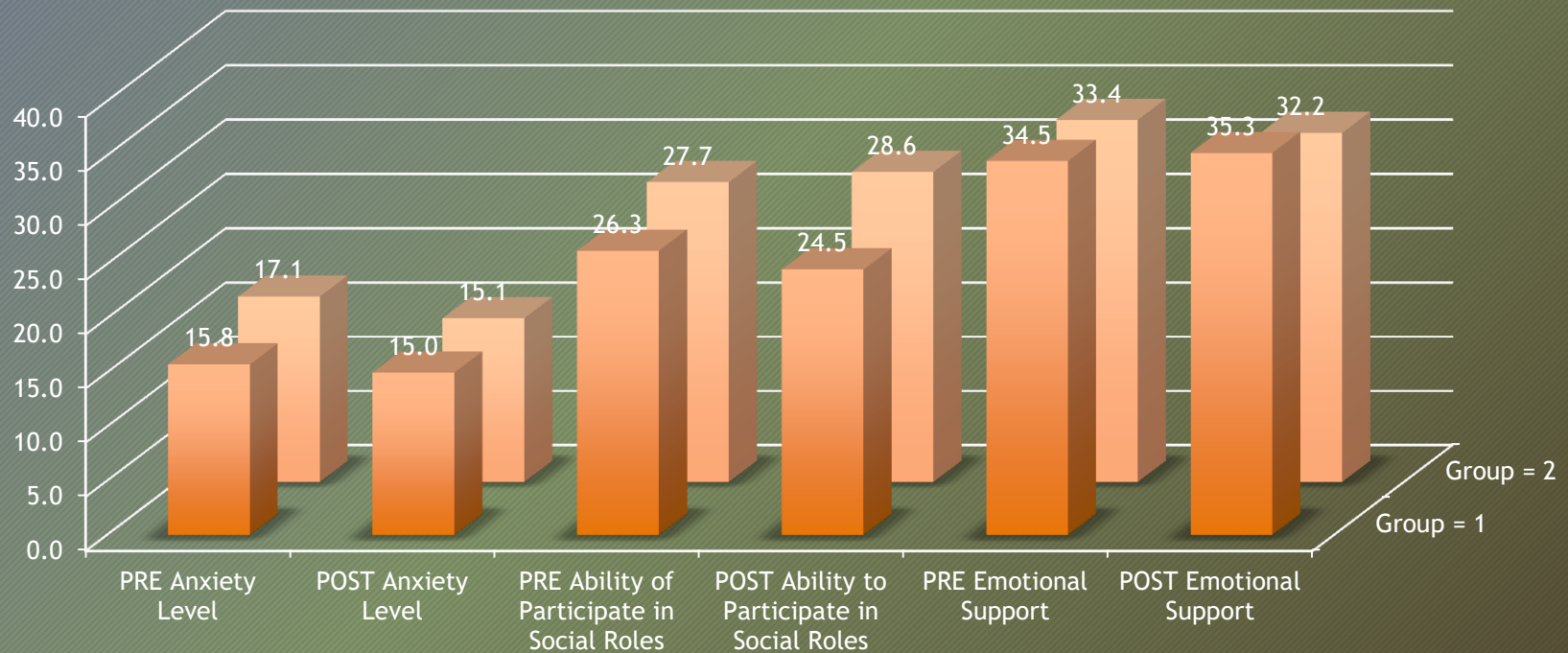
Nursing Role in Developing New Models of Care Using Telehealth

- It is not as difficult as you think
  - Many phones, computers, and tablets are set up for video chatting
  - Any age can be involved—don't rule out the older populations
- If you can think it, make it happen

  - Phones calls are good communication—video chats give more insight into the person on the other end
  - "Nurses intuition"
  - Trouble getting patients back in follow up? Set up a telehealth clinic day
  - Uses for telehealth are limitless

Thank You

The Impact of an Interdisciplinary Virtual Healthcare Neighborhood on Dementia Caregivers

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Carolyn Rutledge PhD, FNP
Kaprea Johnson PhD, NCC
Meg Lemaster BSDH, MS
Karen Kott, PhD, PT
Ajay Gupta MS

Special focus on older adults and their caregivers

Thanks also to the caregivers.....

Photographs by:
D. Michael Geller

Purpose & Timetable

- Evaluate the effectiveness of a Virtual Healthcare Neighborhood (VHN) - an asynchronous website – in assisting caregivers of individuals with Alzheimer's and related dementias.

- Delivered over a 4 month period of time.

- 28 participants in 2 groups (control & experimental).

- Both groups uses sleep actigraphy bands, experimental group only had access to VHN site.

Specialized Training

- Knowledge of dementia and caregiver challenges
  - Stages of dementia
  - Physical changes
  - Special needs of individuals with dementia
  - Common caregiver issues
  - Resources
  - Coping strategies

Leveraging Technology

- VHN looked at caregivers of homebound older adults with dementia.
    - Unique population
    - Often homebound themselves due to care needs
    - Technology effective way to meet some of their needs
    - VHN evaluated feasibility, could be greatly expanded

Provide Education & Support

- Caregivers required education and support on many topics – Website technology worked well

- Blog site for peer support – monitored by investigators

- VHN covered:
  - Social Support
  - Home safety
  - Communication
  - Tips for ADL care
  - Behavior issues
  - Sleep
  - Community resources
  - Oral health

Measures & Technology

- Demographic questionnaire

- General Self-Efficacy Scale

- Insomnia Severity Index

- Katz Index of Independence with Activities of Daily Living†

- MOS Social Support Survey

- Agitation Scale†

- Periodic sleep actigraphy measurements

† Measured for care recipient

Results

- Self efficacy scores declined for control group
- Sleep scores remained low for both groups
- No significant difference between the two groups pre/post concerning care recipient behavior issues. However,
  - 53% of CG reported caring for someone who frequently resisted activities
  - 42% of CG reported frequency of behavior issues were moderately to very severely distressing
  - 56% of CG reported that their CR behavior caused them mild to very severe emotional distress.

Polling questions and Discussion on Nursing Role

o Strongly agree
o Agree
o Neutral
o Disagree
o Strongly disagree

1. Nurses should provide health promotion through patient, family, and caregiver support using telehelath.
2. Therapeutic nurse-patient-family-caregiver relationships can be fostered using telehealth.
3. Empathy and the human factor in nursing care can be delivered using telehealth.
4. Nurses can deliver private and confidential care using telehealth.
5. Nurses should gain skills to use technology to promote health for patients, families, and caregivers.
6. Proving education to patients, families, and care givers via technology is a practice nurses should engage in.
7. Leveraging technology with nursing expertise to enhance and provide healthcare, healthcare education, and support is within the nursing realm.
8. Nurses have an important role in the integration of telehealth technology to improve patient care outcomes.

Many thanks for attending this breakout session!!