

Telemedicine & Telehealth Update

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With admiration and appreciation to
our participating families and their
communities, our partner sites, our
team, and our funders



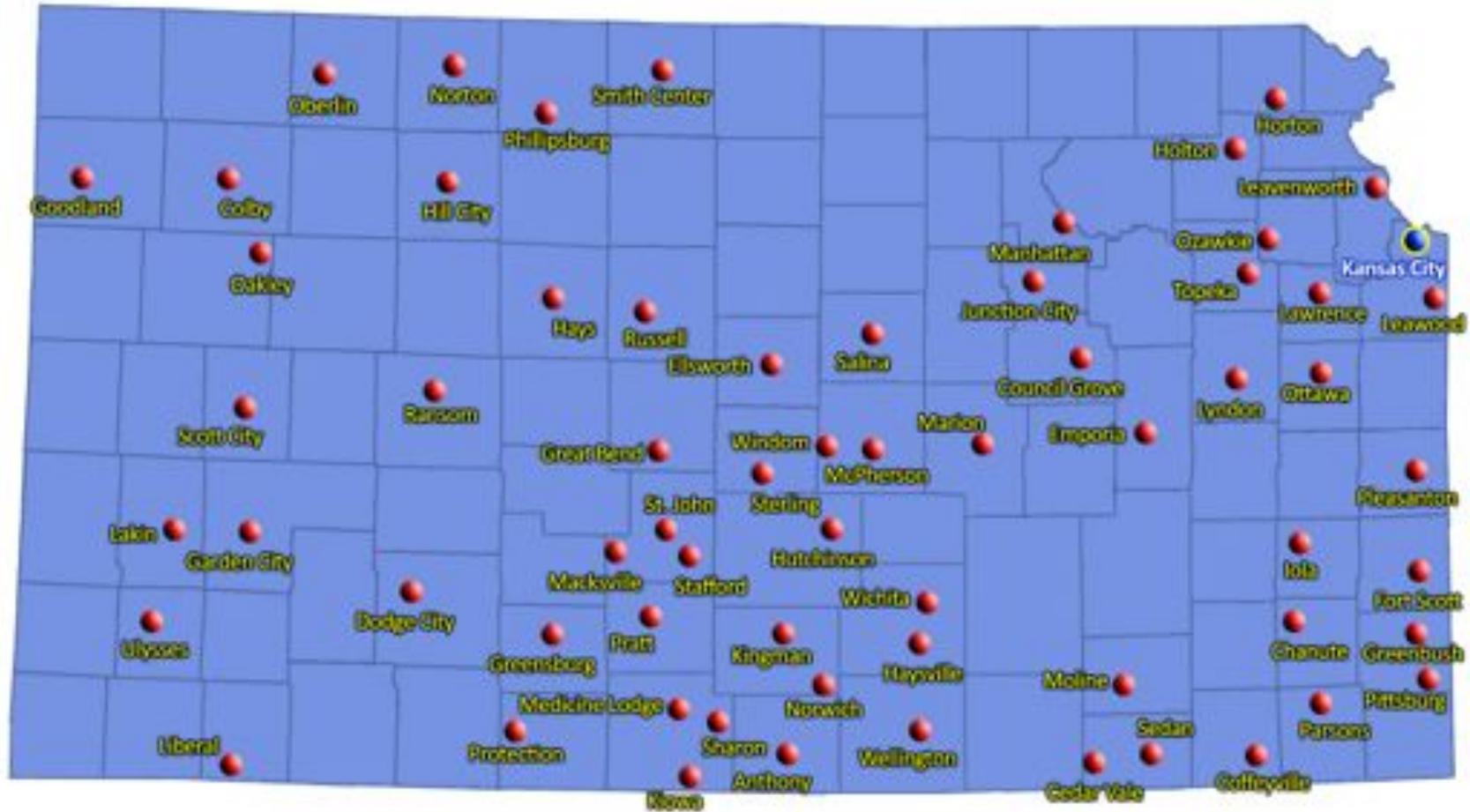


KU Center for Telemedicine & Telehealth

- Approximately **8,000** video encounters/year across 60 providers and educators
- Most clinics utilize a traditional telemedicine model in **supervised settings**, with telemedicine presenters
- Services across almost every specialty across medicine, behavioral health, chronic disease management, and prevention
- Focus on innovation and evaluation
- Additional exciting telehealth initiatives through KU-Health System & the Kansas Heart & Stroke Initiative



KUCTT Sites



KUCTT Telemedicine
Clinical/Educational Sites
2017

Benefits of Telemedicine

1. Family benefits:
<https://www.youtube.com/watch?v=KFa1W3bXtm4&list=PL3FCD12D5CAF553DC&index=19>
2. Improve health care access to high quality, evidence-informed care from specialists and teams
3. Reduce unnecessary patient transport
4. Enhance care coordination
5. Addresses provider shortages
6. Reduce provider travel time/cost to outreach sites
7. Retain patients locally in their home communities and medical homes
8. Reduce provider isolation

Under Dr. Doolittle's leadership, telemedicine with cancer patients since 1995

- Direct oncology service
 - Approximate all of the same elements as onsite care
 - Critical importance of the onsite nurse champion
 - Ability to connect with more of the patient's loved ones
- Second opinion
 - Provider-to-provider consults with the patient participating
 - Reassurance as well as additional ideas together
- Psycho-oncology services (Dr. Krigel)
- Genetic counseling (Dr. Klemp)



Support Groups via Televideo?

- Collie et al., (2007)—breast cancer support for rural women
- Doorenbos et al., (2010)—cancer survivor support for rural tribal communities
- Lounsberry et al., (2010)—support for stem cell transplant patients

Televideo groups

- Turning Point, part of KU-Health System
- Turning Point Mission: “to empower and transform the mind, body, and spirit of individuals, families, and friends living with serious or chronic physical illness”
- Offers comprehensive programming to address the psychological, social, emotional, and physical needs that accompany a serious or chronic physical illness
- Psychoeducational groups also supported through the Midwest Cancer Alliance (MCA) and KU Center for Telemedicine

7 Habits of Humorously Healthy People

Distant Site Perspective



Distant Site Coordinator and Participants



7 Habits of Humorously Healthy People

Distant Site
Perspective
with Two
Screen
Capability





Kitchen therapy —Midwest cancer alliance

- If you or someone you care for is dealing with a chronic disease like cancer, diabetes or hypertension you are invited to join us for free cooking demonstrations & tips on ways to make food appealing and enhance appetites.
- At 12 pm on the 3rd Thursday of each month from January-October, KU Integrative Medicine dietitians will prepare recipes, share nutrition advice and answer questions to help patients cook-up comfort in the kitchen. The program takes place in the KU Clinical Research Center Test Kitchen at 4350 Shawnee Mission Parkway and is currently available via I-TV at Stormont-Vail Cancer Center in Topeka and Heartland Cancer Center in Great Bend, KS.

TeleHospice Project

- **TeleHospice:** the use of telemedicine technology to overcome the geographic distances in the delivery of hospice care at the end of life. TeleHospice has been designed to **augment** traditional hospice care
- Under Dr. Gary Doolittle's leadership, the KUCTT established **one of the first telehospice programs in the country in 1998** (Whitten, Doolittle, et al., 2003). Telehospice care throughout the United States has expanded over the last decade and a half with innovation both in technology delivery and models of staff and family participation (Oliver, Demiris, et al., 2012).
- **Cost and lack of home-based telehealth reimbursement** remain key barriers
- **GOAL:** Complement, NOT to replace visits
- **TeleHospice 1.0:** 1997-2002
- **TeleHospice 2.0:** 2015-present

TeleHospice 2.0 Team

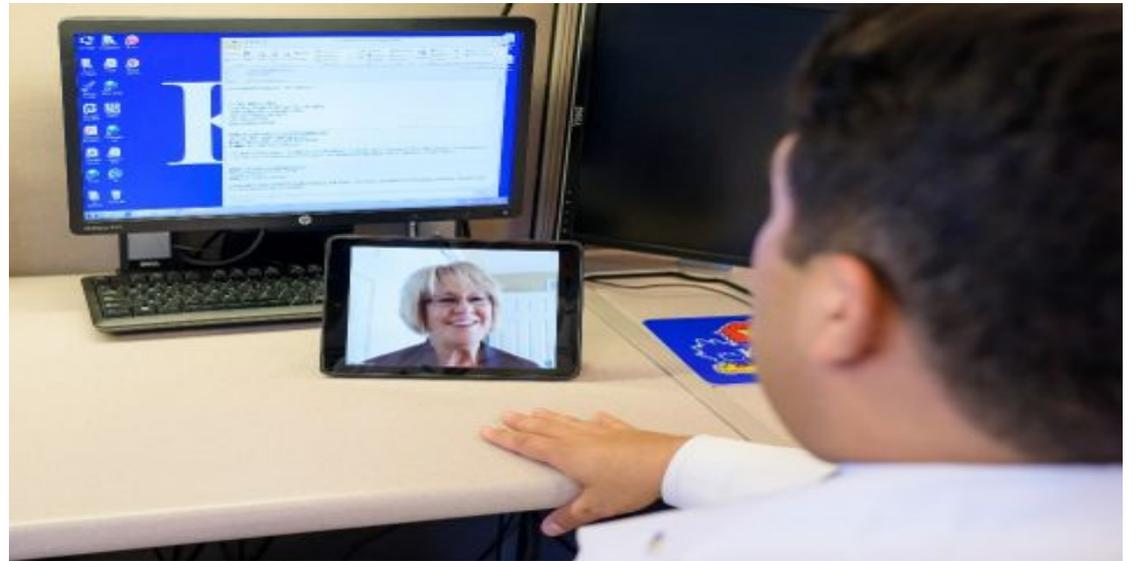
Founders: Sandy Kuhlman, RN, BSN & Gary Doolittle, MD

Team: Eve-Lynn Nelson, PhD; Ashley Spaulding, MA; Hope Krebill, RN, BSN, MSW; Joe Barnes, MD; Dedrick Hooper, BA; Jeremy Ko, MA

Students: Natasia Adams, MA, MPH; Christine Khou, MA; Araba Kuofi; Adam Lomenick

Consultants/Guidance: Tami Gurley-Calvez, PhD; Karin Porter Williamson, MD; Jessica Williams, PhD; Sue Noll and Hays team; others





TeleHospice 1.0 Implementation Lessons Learned

- Overall, the technology overall worked in the early iteration, yet glitches with bandwidth dampened nurse enthusiasm
- Training and practice with the nurses was important
- Cost savings observed even with the more expensive equipment and connectivity charges (Whitten et al., 2003)
- Staff perceptions regarding the technology's impact on provider-patient relationship and job satisfaction were significant barriers
- Consistent with most telemedicine successes, the importance of organizational leadership buy-in and local champions cannot be overemphasized
- Early Kansas adoption favored frontier hospices (rather than urban counterparts)
- Reimbursement challenges limited sustainability

TeleHospice 2.0

- Need remains or exacerbated, limited workforce capacity to provide comprehensive hospice care
- Interest from original sites and others
- Inexpensive technology and widespread connectivity
- Organizational Change Manager (OCM, Gustafson et al., 2003) to assist with allocating very limited resources and addressing challenges early on
 - a 60-item survey with 15 domains
 - Alternative site overall on negative side for almost all metrics
 - HSI rated on positive side for almost all metrics
- Inform continuous performance improvement
 - For example, some confusion about the site champion
 - Update to attend the staff meetings

Survey Item / Statement	Respondents in Agreement
Telehospice will save travel time and enhance my job.	75%
Telehospice will help HSI meet its goals.	73.3%
The project will help meet staff needs.	81.3%
I know how the project will connect the hospice medical director with the clinical team at patient homes.	81.3%
I know how the project will connect clinical staff with each other.	86.7%
I know how the project will connect clinical staff with families in their homes.	81.3%
HSI leaders have endorsed telehospice in visible ways.	86.7%
A clear project aim has been specified.	75%

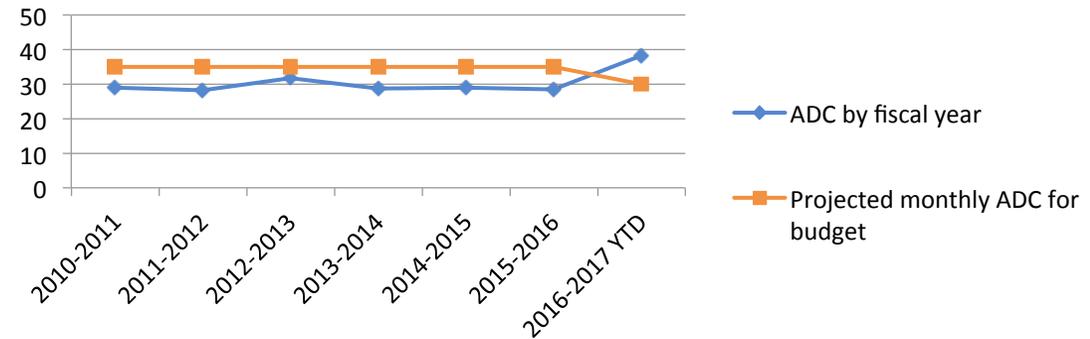
16 Counties Served by Hospice Services, Inc.



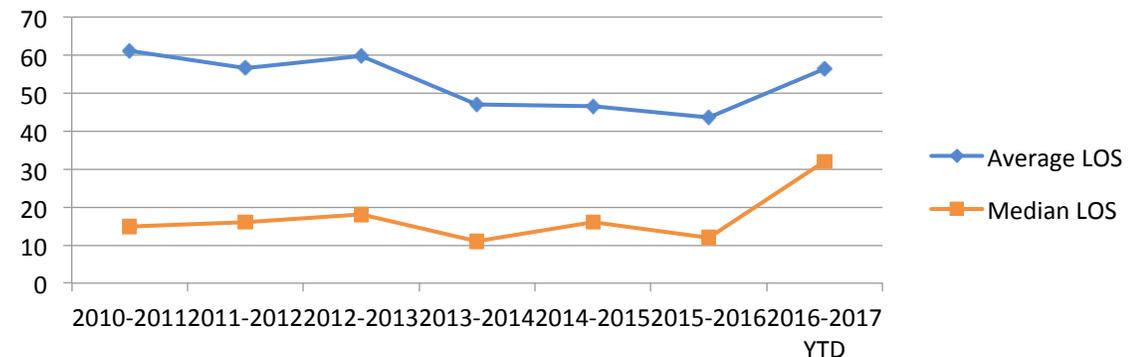
Hospice Services, Inc.

- Originally formed – 1982
- Medicare-certified – 1992
- 16 staff + 3
 - 6 nurses
 - 2 social services
 - 1 social worker and bereavement coordinator (MSW)
 - 1 spiritual coordinator
 - 3 office staff (1 works remotely)
 - 1 clinical nurse coordinator
 - 1 hospice and palliative care medical director (FT)
 - 1 executive director
 - 2 associate medical directors and 1 APRN

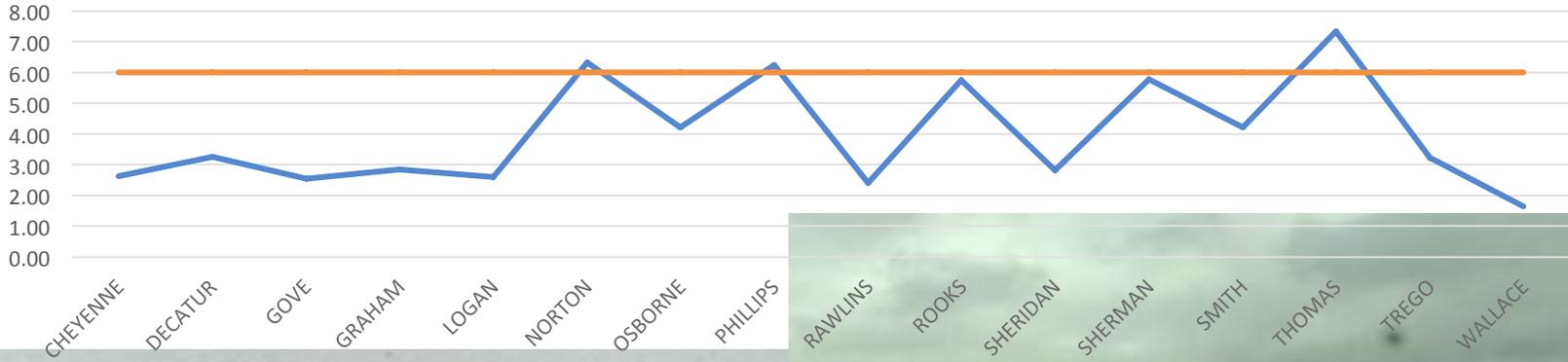
ADC by Fiscal Year



Average Length of Stay by Fiscal Year



Hospice Services of Northwest Kansas



From the windshield of a northwest Kansas hospice nurse...

HSI Rationale for TeleHospice

- Communication
 - Text/email 7%
 - Telephone 38%
 - In person 55%
 - Interdisciplinary team via conference calls
- Resources
 - Access to specific resources across entire service area
 - Routine and on-call
- Staff Meeting – physically all in one place
 - Travel TIME based on miles: approximately 17.44 hours
 - MILEAGE reimbursement (car pooling): 486 miles round trip
- Average miles traveled by staff per month: 17,164.91
 - If average 50 mph, then 343.30 hours per month or 1.98 FTE's

Performance Improvement Roll-out

- Roll-out of iPads and videoconferencing
- From February 2016 through January 2017, 116 TH encounters occurred, encompassing over 7,462 minutes
- Qualitative follow-up through HSI staff meeting and 1:1 calls

Customer-Centered Technical Support

- **Rationale for videoconferencing system:** ability to connect the range devices, good experience with quality of service
- **Introduction to Zoom videoconferencing,** Center for Telemedicine individual calls and Youtube videos
 - **App Installation**
 - **Join a meeting**
 - **Chat function**
 - **Share screen**
- Practice calls with Telehospice team and each other
- Staff members rotating hosting the administrative calls

Administrative applications and cost-savings

- For staff meetings alone, the rural hospice has saved approximately **\$2,500/month in travel**, with TH staff noting increased **morale** driven by the increased team communication
- Staff networking/teambuilding: connecting for staff meetings other than weekly inter-disciplinary team (IDT) meetings
- Upcoming opportunities with staff orientation and ongoing mentoring/support, particularly crucial due to turnover challenges

Professional-to-professional encounters

- With HSI staff in the home with the patient, connect to add'l HSI resources
 - Medical Director located northeast part of service area – 198 miles one-way to southwest part of service area
 - Linking social workers and chaplain to the nurse in the home
 - Wound Care certified APRN located western part of service area – 135 miles one-way to northeast part of service area





Hospice and Palliative Care Lecture Series

Presented by the Central Plains Geriatric Education Center in collaboration with
Kansas City Hospice and Palliative Care and the KU/KCHPC Palliative Care Fellowship Program

Hospice & Palliative Medicine Core Competencies	Televideo Presentation Examples
Patient & Family Care	<i>Grief and Bereavement; Identifying Spiritual Needs</i>
Medical Knowledge	<i>Cancer Pain Syndrome; Managing Addiction and Comfort at End of Life</i>
Practice-Based Learning & Improvement	<i>Quality Improvement</i>
Interpersonal and Communication Skills	<i>How Doctors Think; Communication and Family Meetings; I'm not dying! Denial and Ambivalence</i>
Professionalism	<i>Self-Care: Reflections; Ars Moriendi</i>
Systems-based Practice	<i>Physician Billing Issues in Palliative Care; Care Across the Continuum - Understanding Safe Transitions</i>

Patient and Family support

- Connecting to families to “say goodbye” when travel is infeasible or delayed
- Honoring veterans—pinnings from US Senator’s office
- Other examples of involving family from distance
 - Admissions process
 - Medication reconciliation with patient and patient’s family present
 - Family Meetings
 - Patient met his great, great grandchild for the first time
 - Social worker and hospice nurse connected with patient’s daughter so she could facilitate communication

Patient/caregiver-initiated calls

- Protocol for the unsupervised setting established and training moving forward, especially to support enhanced symptom management
- Decision to roll-out to patient homes and nursing facilities
- *What could be augmented above current phone calls?*
- Will utilize multi-point features of the technology when needed
- Patient access to:
 - Medical director and other introductions at admission
 - Access to full team and Additional palliative care expertise
 - For emergent concerns
 - For “tuck in” calls and other scheduled interactions
- Caregiver supports
 - Support as assist the patient, practicing dressing change example
 - Individual supports and Grief/bereavement services
 - Access to support group services such as Turning Point

Patient/caregiver-initiated calls

- Protocol, including back-up plans
- Tracking inclusion/exclusion through admission notes
- Initial limitations anticipated in home environments in which the caregiver is not technology literate and space-related concerns
- Nurse champion, ***“We are available to the families 24/7 and work on God’s time”***
- Check-in and triage
 - Triage evenings and nights (visual capacity)
- Connect to friends and families from a distance
- Bereavement services
- Explore what data is needed for CMS to allow assessment at a distance

How could telehospice be valuable in your work?



TeleHospice Next Steps

- The feasibility and QI data will inform broader research evaluations related to **key Quadruple Aim questions: *access, cost, quality, and provider satisfaction***
- Working toward pushing services downstream for a **technology-supported continuum of care** across palliative services and primary care, hospice care services, and bereavement services, to promote symptom management, enhance quality of life, and encourage communication and collaboration across systems of care
- Pairing with other statewide telehealth initiatives such as the telementoring approach, **Project ECHO**

Project ECHO (Extension for Community Healthcare Outcomes)



ECHO Mission

The mission of Project ECHO[®] is to expand the capacity to provide best practice care for common and complex diseases in rural and underserved areas and to monitor outcomes.



Project ECHO in action

- Moving knowledge, not patients
- Collaborative virtual learning – built on existing technology
- Utilizing case-based learning to master complexity
- Promotes evidenced-based best practices
- Proven method to enhance Workforce Capacity

ECHO: Promising Outcomes

- **General:** *The Impact of Project ECHO on Participant and Patient Outcomes: A Systematic Review (Zhou et al., 2016)*—Studies to date suggested that Project ECHO changed provider behavior (n = 1), changed patient outcomes (n = 6), and can be cost-effective (n = 2).
- **Hepatitis C:** In a randomized trial reported in the *New England Journal of Medicine* (Arora et al., 2011), ECHO founder Dr. Arora and his team found that the ECHO capacity building model was an effective way to treat HCV infection in underserved communities.
- **Pain Management:** Positive impact has been noted across settings (rural states such as New Mexico, VA, Dept. of Defense, and Indian Health Services)(Katzman et al. 2014). Emerging literature indicates the potential for ECHO to reduce ED visits & inpatient hospitalizations in rural communities (Becevic, Matrux, & Edison, MetaECHO poster presentation, 2016)

Recognized a problem – developed a solution



Sanjeev Arora, MD, MACP, FAGC
Director of Project ECHO

Department of Internal Medicine,
UNM School of Medicine



History of ECHO in 80 seconds:

<https://youtu.be/VAMaHP-tEwk>

TEDxABQ

<http://echo.unm.edu/join-the-movement/>

Changing the world, fast!

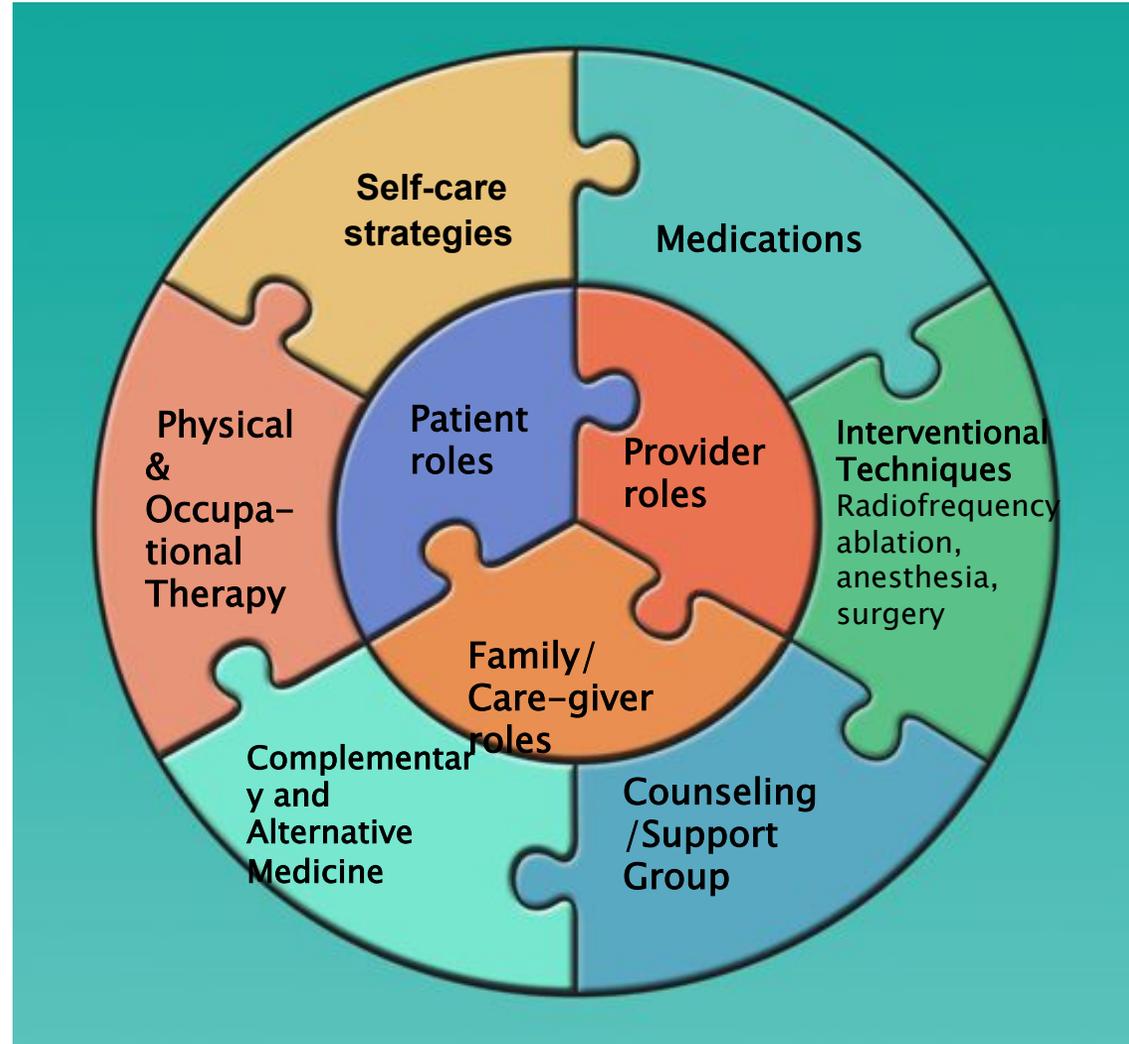


Global ECHO – Hubs

Project ECHO Focus

- Patients – right care, right place, right time
- Providers – new knowledge, treat rather than refer, reduce stress
- Community – reduce disparities, retain providers, keep patients local
- System – access, quality, cost





Building Connections



Making geography irrelevant

Specialty Team – offering **Tele-Curbsiding**

- Power of sharing
- Power of problem solving
- Power of enhanced medical care for patients
- <https://www.youtube.com/watch?v=b8VKzLpxvq0>



ECHO Participants

- Physicians
- Physician Assistants
- Advanced Practice Nurse Practitioners
- Nurses
- Medical Assistants
- Administrators
- Pharmacists
- Psychologists
- Social Workers
- Physician Therapists
- Occupational Therapists
- School Nurses



What ECHO might be of interest to your teams?





Heartland
Telehealth Resource Center

Eve-Lynn Nelson, PhD, PI

Janine Gracy, Project Director

A HRSA-Funded Telehealth Resource Center

Grant Program

Provides Technical Assistance

- Assist health care organizations, networks and providers to implement cost-effective telehealth programs
- Advance the effective use of telehealth technologies
 - Equipment
 - Practice Guidelines
 - Program Design
 - Reimbursement
 - Business Models



National Picture

- Today, 50 million U.S. consumers would switch providers to one that offers telehealth.
- Willingness to switch to a doctor that offers telehealth is highest among parents of children under age 18 and 35-44 year olds.
- 60 percent of consumers who are willing to have an online telehealth visit would see a doctor online for help managing a chronic condition.
- 67 percent of adults ages 45-64 who are willing to have an online telehealth visit would see a doctor online for help managing a chronic condition.
- 79 percent of consumers currently caring for an ill or aging relative say a multi-way video telehealth service would be helpful.

Telehealth Index: 2017 Consumer Survey



At the Root of Telemedicine



Heartland
Telehealth Resource Center

Get started with

eSTART ✓

The Most Successful
Telehealth Programs Begin
with Assessment!

HTRC

Heartland
Telehealth Resource Center

KanTel: Advancing Virtual Healthcare in Kansas

Organized by KUCTT's Project Director Janine Gracy, a grass roots advisory group that grew out of the need to connect, network and move telehealth forward in Kansas





TRC
TELEHEALTH
RESOURCE CENTERS

Federal telehealth resource centers
www.telehealthresourcecenter.org
 Kansas: Heartland TRC
<http://www.heartlandtrc.org/>




TTAC
TelehealthTechnology.org

Center for
Connected
Health Policy

2 National Resource Centers

NRTRC	gpTRAC	NETRC
CTTRC	HTRC	UMTRC
SWTRC	SCTRC	MATRC
PBTRC	TexLa	SETRC

12 Regional Resource Centers



Appreciate your ongoing input about telehealth opportunities within rural hospice practice