Using Telemedicine to Address Access Disparities for Cancer Care in Kansas

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Overview

Our mission

Present a general overview of telemedicine/ teleoncology in Kansas

Describe different applications of telemedicine technology that may enhance cancer care Describe a model for clinical trials access via telemedicine

Discuss the challenges facing tele-oncology practices



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NCI Designated Cancer Center: Our Mission

Enhance cancer care for patients across Kansas and western Missouri...close to home.

Provide strong support to cancer patients, community oncologists, and cancer care professionals

Advance access to:

- Expert cancer care
- Innovative clinical trials
- Newly developed diagnostics, therapies, and prevention strategies

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- Continuing education opportunities
- Support services
 - Cancer Support Groups
 - Patient navigation
 - Psycho-oncology care





Population Demographics

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Population Density Classifications in Kansas, by County, 2017

S data from the U.S. Census Bureau, Population Estimates, Vintage 2017.

(persons per square mile) Frontier (less than 6.0 ppsm) Rural (6.0 - 19.9 ppsm)

- Densely-settled Rural (20.0 39.9 ppsm)
- Semi-Urban (40.0 149.9 ppsm)
- Urban (150.0 ppsm or more)

* Kansas Department of Health and Environment classifications.



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The Potential of Tele-oncology

Direct patient management:

- New patient evaluations/ follow up visits
- Oncologist of record, chemotherapy oversight
 Second opinion clinical consultations
 Multidisciplinary Tumor Board participation
 Education series
 - Continuing Professional Education
 - Community Education and Outreach in the form of patient cancer education programs





Tele-oncology in Kansas

In 1995, tele-oncology began in Kansas connecting the University of Kansas Medical Center (KUMC) in Kansas City, KS, with Hays Medical Center (Hays, KS, 285 miles west of KUMC)

Combination Practice:

- Tele-oncology clinic
- In-person/outreach clinics

Personnel:

- KUMC oncologist
- Remote site nurses
- Administrative and technical support staff: medical center and rural site



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Direct Patient Management: Diagnosis, Treatment, and Survivorship

MALIGNANCIES:

ONCOLOGIC

breast cancer lung cancer melanoma ovarian cancer sweat gland cancer prostate cancer colon cancer **HEMATOLOGIC**

acute myelogenous leukemia chronic lymphocytic leukemia chronic myelogenous leukemia prolymphocytic leukemia multiple myeloma non-hodgkin's lymphoma

HEMATOLOGIC DISORDERS:

amyloidosis coagulopathy cold agglutinin disease erythrocytosis essential thrombocytosis hemochromatosis hyperbilirubinemia hypercoaguable state hypercoagulation syndrome Langerhan's histiocytosis leukocytosis leukopenia lymphadenopathy macrocytosis monoclonal gammopathy

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myelodysplasia pancytopenia p. vera porphyria splenomegaly thrombocytopenia thrombocytosis

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Second Opinion & Consultations

- Access to cancer subspecialists via ITV eliminates the need for travel
- Second opinion services via ITV
- Participation in multidisciplinary conference via ITV
- Support for patient, family, and local practitioner







Development of a Statewide Clinical Trials Network

Clinical Trials (CT) Network consists of:

- centralized Internal Review Board (IRB) and
- an online CT data management system, specific for cancer studies
- All sites approved to conduct KU trials which are NCTN initiated and/or endorsed
- Sites may participate in KU Investigator-Initiated trials





Statewide Clinical Trials Sites





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Clinical Trials

Clinical Trials:

- Research studies offered throughout our catchment area
- Standard-of-Care for patients with incurable malignancies

Importance:

- Clinical trials are key to cancer care and to advancing science
- Patients have access to clinical trials close to home

Role of ITV:

 Utilized to remotely consent and enroll patients in cancer clinical trials





Clinical Trials Via Telemedicine

Novartis and KUMC telemedicine provider (Gary Doolittle, MD) discussed the feasibility of a clinical trials via telemedicine project. Clinical practice:

- Each sub-site team includes an advanced practice provider (APP) who is present at every sub-site telemedicine visit, pharmacist, oncology nurse/data manager
- Treating oncologist on the medical center campus, MCA clinical monitors

Novartis agreed to ship study supplies and investigational product to each MCA participating sub-site.

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Clinical Trials Via Telemedicine

- Novartis visited each sub-site and approved each one to participate in the study early on in the process.
- KUMC telemedicine provider applied for--and fulfilled the staff privileges necessary to practice at each of the study sub-sites.
- Novartis studies identified for this clinical trials via telemedicine research study.





Clinical Trials Via Telemedicine

- Sub-sites use existing process for establishing a telemedicine visit;
- Study participant is informed the visit will be by interactive televideo with the patient located at his/her physician's office and the telemedicine provider located at KUMC in Kansas City.
- The patient goes through the informed consent process prior to the telemedicine visit; signed consent for treatment is faxed to the telemedicine provider at KUMC.
- At the initial visit, the KUMC telemedicine provider explains the background and use of the telemedicine technology and *the study*
- If patient agrees, all visits will be conducted via telemedicine
- Study is ongoing....





Cancer Support Groups

- Cancer 101
- Caring for the Caregiver
- Chemobrain
- Coping with Chronic Illness
- Depression
- Sleep
- Survivorship
- Fear of Recurrence
- Life after Treatment
- Tobacco Cessation





Psycho-oncology Visits

Counseling Individual Sessions Family Meetings





Tele-oncology Cost Studies: Expense is no longer an issue...

Fiscal Year	Cost per					
	Tele-oncology Visit					
FY95	\$812					
FY00	\$411					
FY03	\$401					
FY05	\$251					
Cost per visit has decreased almost 70% in 10 years Publication in <i>Journal of Telemedicine and e-Health</i>						





Telemedicine Acceptance

Patient satisfaction studies indicate high levels of satisfaction with telemedicine, often above the rates of expected satisfaction for traditional forms of healthcare delivery.

Provider satisfaction studies also generally point to positive opinions about telemedicine; however, data from providers point to higher concerns with delivery barriers and challenges.



*Whitten P, Love B. Patient and provider satisfaction with the use of telemedicine: Overview and rationale for cautious enthusiasm. J Postgrad Med 2005;51:294-300

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Connectivity widespread / Utilization is the norm







Challenges Facing Tele-Oncology Practices

Bringing together all necessary participants

- define the need
- outline specific goals
- analyze and test the technology
- develop a plan for the implementation

Lack of provider acceptance → underutilization Reimbursement

Online Internet use by patients





Final Thoughts...

While it is often difficult – physically, emotionally, and economically – for patients with cancer to travel, tele-oncology is a valuable tool that can provide patients with the care they need while alleviating the need for travel.

Successful tele-oncology programs rely on a team of healthcare professionals at both the hub site and the remote site.

Provider acceptance is the greatest challenge to the success of a tele-oncology program; patient acceptance, the technology, and costs generally do not pose as great a challenge as provider acceptance does.





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