

The Technology Exchange for Cancer Health Network (TECH-Net)

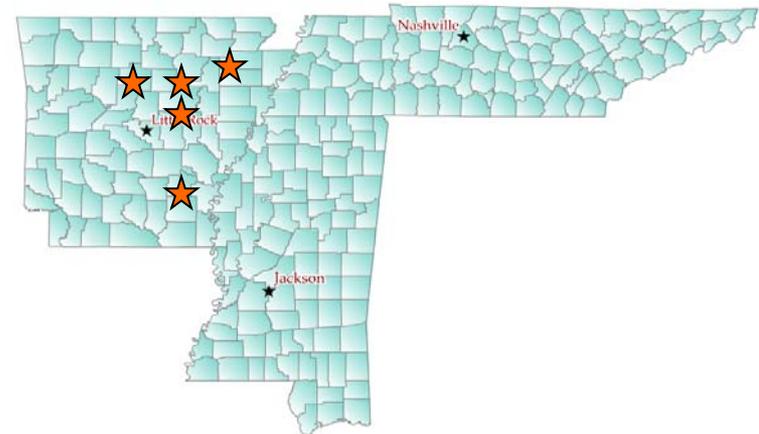
*AHRQ Annual Patient Safety
and Health IT Conference
June 6, 2006*

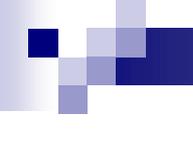
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What is TECH-Net?

A collaborative, multi-state effort to implement a systematic care program to improve cancer management in rural communities in the MidSouth region:

- Tennessee
- North Mississippi
- East Arkansas





Why is TECH-Net needed?

Rapid and significant advances in cancer care do not reach poor and rural populations

Cancer care is complex and involves multiple specialists and treatment protocols
Health care systems in rural areas are poorly designed and fragmented

The Midsouth population has significant unmet need in the area of cancer care

High cancer prevalence

Large minority population

Socio-economically disadvantaged



Primary Goal of Project

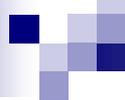
To determine the extent to which a multi-state HIT collaborative network can contribute to measurable and sustainable improvements in the cost, safety, and overall quality of cancer care for rural patients.

The Process

Providing access in rural areas to oncology, hematology, and other specialists through the dedicated telehealth network of the University of Tennessee's Health Science Center (UTHSC).

A distributed electronic health record (EHR) integrated with:

- decision support systems online management of cancer protocols
- electronic orders
- medication management systems



Specific Aim #1:

To *implement* a collaborative, multi-state Health Information Technology System that meets the needs of patients, families and providers in a rural cancer care setting

Specific Aim #2:

To *improve access* to appropriate care, increase the *quality* and *safety* of care and achieve better health *outcomes* at equal or lower *cost* for cancer patients in rural communities through an integrated Health Information Technology System.



Specific Aim #3:

To *produce and distribute* a generalizable, replicable *model* for implementing an integrated Health Information Technology System for cancer care



Progress and Results

Five study sites actively recruiting patients (4 rural, 1 urban) with 2 additional sites coming on-line in next 90 days (urban)

Patient recruitment on track to meet study goals (125 rural, 125 urban): 112 rural patients recruited + 25 urban

Good study retention: 78 6-month follow-up assessments completed (71 rural; 7 urban)

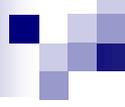
Aim 1: Progress and Results

To implement a collaborative, multi-state Health Information Technology System that meets the needs of patients, families and providers in a rural cancer care setting

Oncology services are now provided via Telehealth at five sites; services augment in-person specialty consults allowing cancer patients to have local access to specialists for

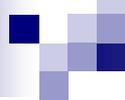
- follow-up care
- second-opinion consults
- supportive care
- genetic counseling

Separate EHR systems have been implemented for UTCI and UTMG; current efforts focusing on developing interface



Aim 1: Meeting the Needs of Patients

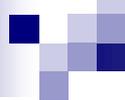
Patients are very enthusiastic about telehealth. It is not just “as good as” traditional office visits, most like it better.



Aim 1: Meeting the Needs of Patients (cont)

Patients are especially excited about the convenience of telehealth

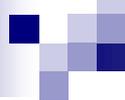
- Short travel times
- Short waiting times



Aim 1: Meeting the Needs of Patients (cont)

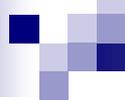
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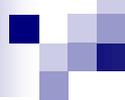
Aim 1: Meeting the Needs of Patients (continued)

It isn't just the convenience of telehealth that attracts patients. They also perceive that they are getting high quality care.



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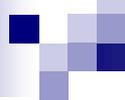
Aim 1: Meeting the Needs of Patients (continued)

Telehealth is especially well-suited to cancer patients.

Emotionally and physically devastating disease

Need for social support

Travel to receive care disrupts many lives



Aim 2: Progress and Results

*To improve access to appropriate care, increase the **quality** and **safety** of care and achieve better health **outcomes** at equal or lower **cost** for cancer patients in rural communities through an integrated Health Information Technology System.*

Study has been set up to assess quality, safety, health outcomes and cost of rural telehealth program



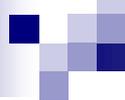
Aim 2: Study Design

Telehealth and EHR infrastructure implemented in rural and urban sites

Patients recruited at rural sites serve as 'intervention group'

Patients recruited at urban sites serve as 'control group'

Quality, safety, outcomes and cost compared across treatment and control groups



Aim 2: Progress and Results

Quality and Safety -Chart reviews of treatment and controls will be conducted in Year 3 comparing quality measures and rates of medical errors

Health Outcomes - Health status and health related quality of life measures taken a baseline and 2 follow-ups; Treatment success will be abstracted from medical records in Year 3

Costs of Care - Patients complete health care utilization and travel diaries; information verified with providers

Health Outcomes: SF-12*

Subscale	Rural Patients (n=112)	Urban Patients (n=25)	p-value**
Physical Functioning (PF)	40.54	49.00	0.30
Role Physical (RP)	44.21	58.00	0.06
Bodily Pain (BP)	61.71	77.00	0.04
General Health (GH)	47.68	62.00	0.03
Vitality (VT)	40.09	49.00	0.20
Social Functioning (SF)	62.39	75.00	0.09
Role Emotional (RE)	64.87	80.50	0.02
Mental Health (MH)	68.58	74.00	0.32

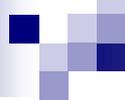
*Maximum score on each subscale = 100

**Difference of means t-testing

Health Outcomes: FACT-G

Subscale	Maximum Score	Rural Patients (n=112)	Urban Patients (n=25)	p-value*
Physical Well-Being	28	18.50	20.50	0.19
Social Well-Being	28	22.95	24.35	0.20
Emotional Well-Being	24	18.60	19.05	0.68
Functional Well-Being	28	17.58	19.19	0.30
Overall Score	108	77.62	83.09	0.17

*Difference of means t-testing



Aim 3: Progress and Results

*To produce and distribute a generalizable, replicable **model** for implementing an integrated Health Information Technology System for cancer care*

Multiple presentations and reports documenting implementation and progress

...a work in progress



OUTREACH

Center for Innovations in Healthcare, Research and Community Service

