

Bridging the Gap in Kansas: Telemedicine and Behavioral Health



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Objectives

- To describe the range of telemental health applications in Kansas across different urban and rural settings
- To address practical considerations in establishing and maintaining a telemental health clinic

KUCTT Telemedicine Background



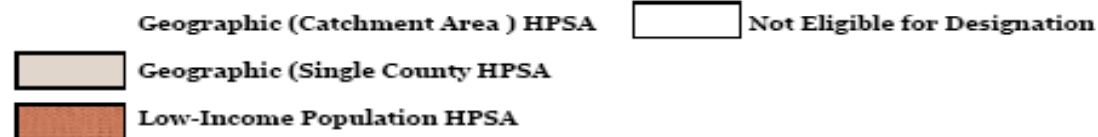
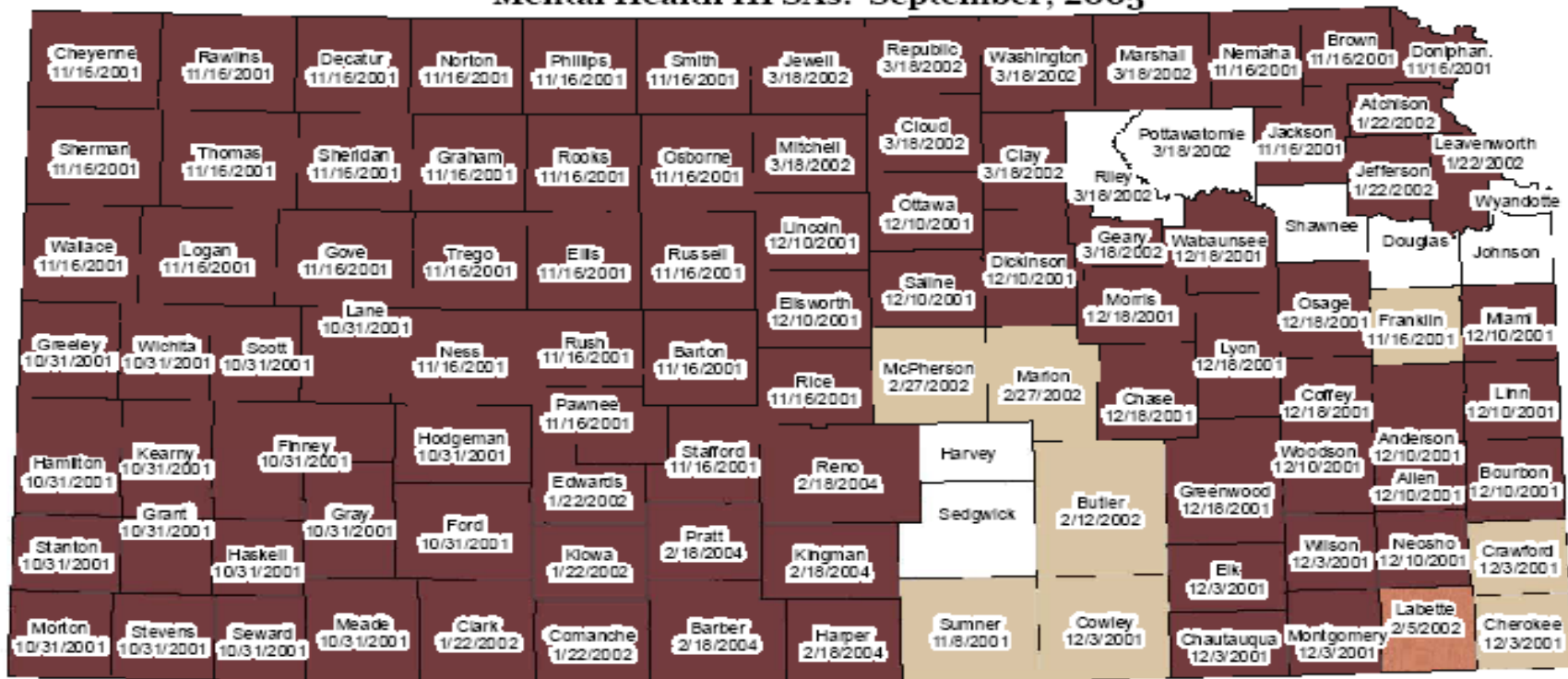
- Began in 1991 with a single connection to a community in western Kansas
- The Kansas telehealth network has grown to more than 50 sites across the state
- During that time, over 28,000 clinical consultations have been conducted across 50 specialties
- KUCTT is one of the most active outpatient telemedicine programs in the world

Why telemental health?

KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT

OFFICE OF LOCAL AND RURAL HEALTH

Mental Health HPSAs: September, 2005



Telemental health rationale

- Access concerns—20/20 rule
 - *“The burden of suffering experienced by children with mental health needs and their families has created a health crisis in this country. Growing numbers of children are suffering needlessly because their emotional, behavioral, and developmental needs are not being met by those very institutions which were explicitly created to take care of them.”* Surgeon General, 2000
 - Insurance barriers, Shortages with all mental health specialists, inequities to access
- Many treatment advances
 - New medications
 - Empirically supported psychotherapy
- Expensive peripherals not necessary

Individual Telemental Health Clinics

- Approximately 1,200 telemental health consults/year; 300-500 school-based consults/year
 - Evaluation, new and returning patients
 - Treatment, including medication and therapy management
- Psychiatry: child psychiatrists and fellows, both academic and community psychiatrists
 - Schools
 - Community Mental Health Center
 - Urban Daycare
 - Many other sites
- Psychology: psychologists, grad students, post docs
 - Schools
 - Area Health Education Centers
 - Rural health clinics
 - Many other sites
- Other—health psychology/prevention topics

Joint Clinics

- TeleHelp Youth Depression Clinic—child psychiatry and child psychology in schools
 - School-based telemedicine services
 - School training in youth depression
 - Connected Kansas Kids resources
- Autism/Autism Spectrum Disorder—child development center team
- GREAT but more dependent on grant funding

TeleKidcare[®] (TKC)



- **Why schools?**
 - The purpose of TeleKidcare is to “bring the provider to the school” using technology
 - Keeps kids in school and prevents parents from having to leave work
 - Provides many families a point of entry into health care system
- **Schools**
 - Began in 1998 with 4 urban Schools
 - Today 12 Urban / 4 rural Schools
 - Over 4,000 TKC consults since 1998, with 300-500 consults/year
- **Demographics**
 - Ethnicity: 55% Caucasian, 20% African American, 20% Hispanic, 5% other ethnicity
 - 40% female, 60% male
 - 76% of the student population participated in the federal Free and Reduced Lunch program. This is substantially higher than the state average of just below 39%.
 - Approximately 50% uninsured, 44% Medicaid/SCHIP, 6% other

www2.kumc.edu/telemedicine/programs/telekidcare.htm

Schools and Telemental Health

- School environment
 - Advantages
 - Decrease stigma
 - TEAM approach with child, family, and school on “same page”
 - Believe enhances evaluation and outcome through increased adherence to recommendations
 - Challenges
 - Managing volume of information
 - Mix of two very large systems, each with own cultures and focus
- Connected Kansas Kids adjunct services, school presentations and website for school needs of children with chronic illness (www.connectedkansaskids.com)

Presenting Concerns

- Similar to other studies (Myers et al., 2004) demographics, payer status, and diagnostic profiles suggest that community clinicians perceive telepsychiatry as a treatment venue that is equivalent to in-person psychiatric care (Myers et al., 2004).
- Most common diagnoses in child clinics:
 - ADHD
 - Mood disorders
 - Adjustment reactions



Early Lessons Magnified

- **Presenter/champion is key**
- Administrative buy-in across distant site (e.g., school) and provider departments
- Importance of program management, centralized scheduling, & technical support
- Ongoing needs assessment
- Ongoing training for new and returning presenters/coordinators
 - Technology
 - Protocols
 - Mental health specific information
 - Peer-support

Standard of care



- Private physical space to accommodate group
- Paperwork is #1 reported concern; overall still reach 99% overall parent satisfaction
 - Forms across language needs
 - History form, across clinics
 - Questionnaires (e.g., Behavioral Assessment System for Children (BASC), Conners, Vanderbilt, etc.)
 - Qualitative form
 - Consent(s)
 - HIPAA and internal patient registration
 - Record of Consult (ROC)
- Rapport and Interviewing skills



Session

- Shorter sessions than face-to-face?
- Input from multiple informants
 - Push and pull across interested parties
- Implementation of recommendations
 - Health literacy—thermometer to pill swallowing
 - Adherence
 - Daily note example
- Backup plans
 - Technology
 - Safety
 - Attendance
- Teaching benefit
 - About technology
 - About underserved populations
 - Unique advantages of the technology



Challenges

- Some challenges lessened but remain
 - Stigma associated with mental health
 - Poor insurance coverage for mental health benefits
 - Transportation even to telemedicine site
- Underserved patients have multiply stressed lives and often co-morbid health concerns and psychosocial issues
 - Example—parent referral resources extremely limited

Evolving Work with Providers

- Challenges recruiting providers to fit need
- TIME and WORKFLOW
- Brings process elements to the foreground
 - Licensure
 - Liability/malpractice insurance
 - Credentialing
- Changing providers as part teaching hospital
- Competency
 - With technology
 - Within a particular community urban/rural; language (e.g., Spanish); other (e.g., Native American)

Costs and Funding

- Equipment Costs
 - Have transitioned from room videoconferencing unit with PC/cart at \$8000 to smaller desktop units (from \$180+) when possible
 - Transition from ISDN to IP, utilize state network (KAN-ED; costs range from \$60 to \$800/month with IP)
- Provider time—grant, contractual, billing
- Management costs—KUCTT & distant sites
- State funding
 - General office support
 - Project-specific support
- Federal funding—e.g., Office for the Advancement of Telehealth (OAT)
- Foundation funding
 - National (e.g., Robert Wood Johnson Foundation, RWJF)
 - Local (e.g., Health Care Foundation of Kansas City)
- Internal funding for research





Evolving toward reimbursement

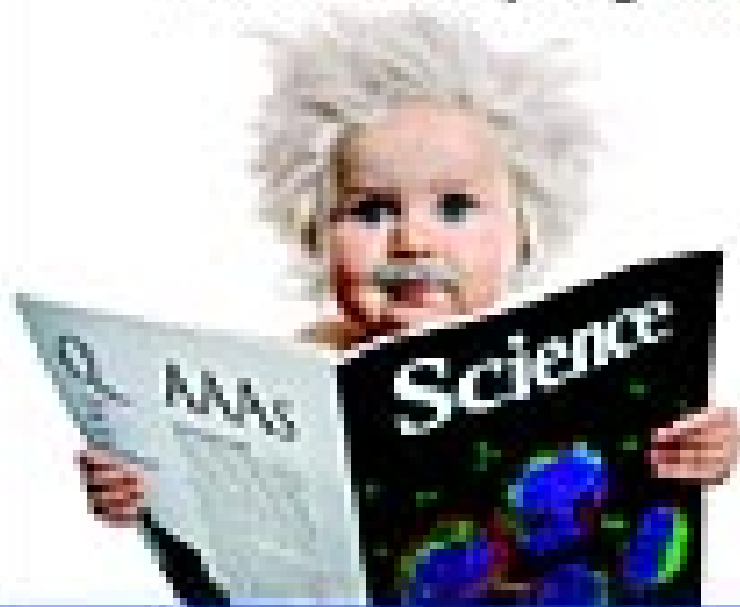
- Research related to cost-benefit
 - The more you do over time, the more cost effective
 - Balance cost with benefit, high satisfaction
- Reimbursement
 - Long process, Kansas Medicaid
 - About 27 states have Medicaid policies
 - 5 states in the U.S. that have mandatory insurance coverage laws
 - Other insurers developing policies
 - Same Current Procedural Terminology (CPT) codes with “GT” modifier; gaps state dependent
 - Legislative impact study
- School challenges with site fees
- Reimbursement does not necessarily mean sustainability without other sources of support
- Reimbursement does not necessarily increase utilization (Spaulding & Timmerberg, 2008)

Behavioral Peds example

- Began services 1995; fight perception of “free” service
- Billing process 2004-present with Medicaid and other insurers
- Billing challenges reflect general difficulties across all mental health billing, telemedicine and nontelemedicine
- Additional challenges—workflow at distant sites related to paperwork, copays, and arriving patients
- In 2007-2008, when both billing and grant/contract support are considered, this reflects an approximate rate of \$111/consult, comparable to face-to-face outreach visits; billing account for about 1/3 of reimbursement
- Reimburse across common behavioral codes (90801, 90804, 90806, and 90808)

Science

You can't start young enough



FREE FOR
EVERYONE

AAAS Family Science Day
Family Science Day is a free event for
everyone. For information, please visit www.aaas.org

For more information visit
www.aaas.org

- Telemedicine research in general in youth and progressing
 - Whitten et al (2007)
 - Hersch et al (2006)
- KUCTT specific—Feasibility suggestive but not definitive
 - Satisfaction
 - Communication
 - Diagnostic efficacy
 - Guideline adherence

Satisfaction

- Most studies have measured satisfaction (Dossetor et al., 1999; Elford et al., 2000; 2001; Kopel et al., 2001; Myers et al., 2004; 2006; Pesamaa et al., 2004) and have found that patients, families, and providers demonstrate very high satisfaction

Item	Responses		
1. Dr. listened to my questions and concerns	Agree 94%	Somewhat agree 5%	Disagree <1%
2. I was adequately informed about important issues	Agree 94%	Somewhat agree 5%	Disagree <1%
3. The Dr. explained treatment	Agree 94%	Somewhat agree 4%	Disagree 1%
4. The Dr. encouraged me to talk during the visit	Agree 91%	Somewhat agree 7%	Disagree 1%
5. I was satisfied with the Dr.'s manner	Agree 94%	Somewhat agree 4%	Disagree 1%
6. The Dr. did not allow me to talk about my child	Agree 21%	Somewhat agree 2%	Disagree 75%
7. The Dr. was competent	Agree 91%	Somewhat agree 6%	Disagree 2%
8. How do you rate your satisfaction with the visit?	Very satisfied 77%	Satisfied 22%	Dissatisfied <1%
9. How does TeleKidcare compare to other health care?	Better 61%	Just as good 38%	Not as good 1%



Communication

- Interaction analysis study across telemedicine clinics
- Across 11,472 utterances, most RIAS coding categories with adequate number of utterances (e.g., more than 15 utterances) reached at least Fair reliability across raters
- Overwhelmingly similar to F2F patterns
- Less than 2% of utterances specific to the technology

Diagnostic Efficacy

In one randomized investigation of 23 youth evaluated through both telepsychiatry and face-to-face, 96% of the diagnoses and treatment recommendations were comparable across the two modalities (Elford et al., 2000)

Child psychiatry feasibility study

- Population:
 - Mean age: 8.8 year (SD=2.3 years)
 - 13 male, 3 female
 - 6 Caucasian, 4 Hispanic, 4 African American, 2 Other
- With exact diagnoses (such as both psychiatrists said exactly "ADHD and Mood Disorder NOS"), most often had partial agreement.
- With diagnostic categories (such as both said a diagnosis within Disruptive Behavior Disorders and within Mood Disorders category), most often had exact agreement.

Outcome

- One child study per AACAP practice parameters
- Nelson et al. (2003), FEASIBILITY TRIAL WITH 28 participants
- **82% remission from depression based on DSM-IV criteria and no significant difference between groups**

Downward extension adult telemental health literature

- In a study of 130 adults with various diagnoses, individuals treated through telepsychiatry and those treated face-to-face showed comparable improvements over 6 months (De Las Cuevas et al., 2006).
- In another 6 month treatment trial of depressed veterans, the two groups also improved comparably and showed similar compliance with their care (Ruskin, et al., 2004).
- A meta analysis of fourteen studies with 500 patients found no significant differences between telepsychiatry and in-person care (Hyler et al., 2005).



Guideline Adherence

Abbreviated AAP Guideline	Telemedicine Facilitators to Guideline Adherence	Telemedicine Challenges to Guideline Adherence
1) evaluate when child presents with any of core ADHD symptoms	ADHD Telemedicine Clinic's joint evaluation allows one thorough interview and coordinated treatment planning	Evaluation often included referral to primary care and these underserved rarely had a medical home
2) use DSM-IV criteria	Telemedicine clinic included time/resources for documentation of DSM-IV criteria	Difficult to tease apart psychopathology, psychosocial, and learning contributors to meeting DSM-IV criteria. Despite 96% presented with one or more core ADHD symptom; only 67% met full criteria for ADHD
3) use interview and empirically-supported scales	Conners, BASC, and Vanderbilt rating scales used. High adherence receiving forms back due to school and family joint participation. Vanderbilt returned at lowest rate (70%). Also received additional school measures including IEP plans, school-based cognitive testing, and other information	Forms difficult due to language and health literacy barriers. Received but often with incomplete information that had to be re-completed. Some challenges with faxing information in timely fashion and school nurse using correct age/version of forms.

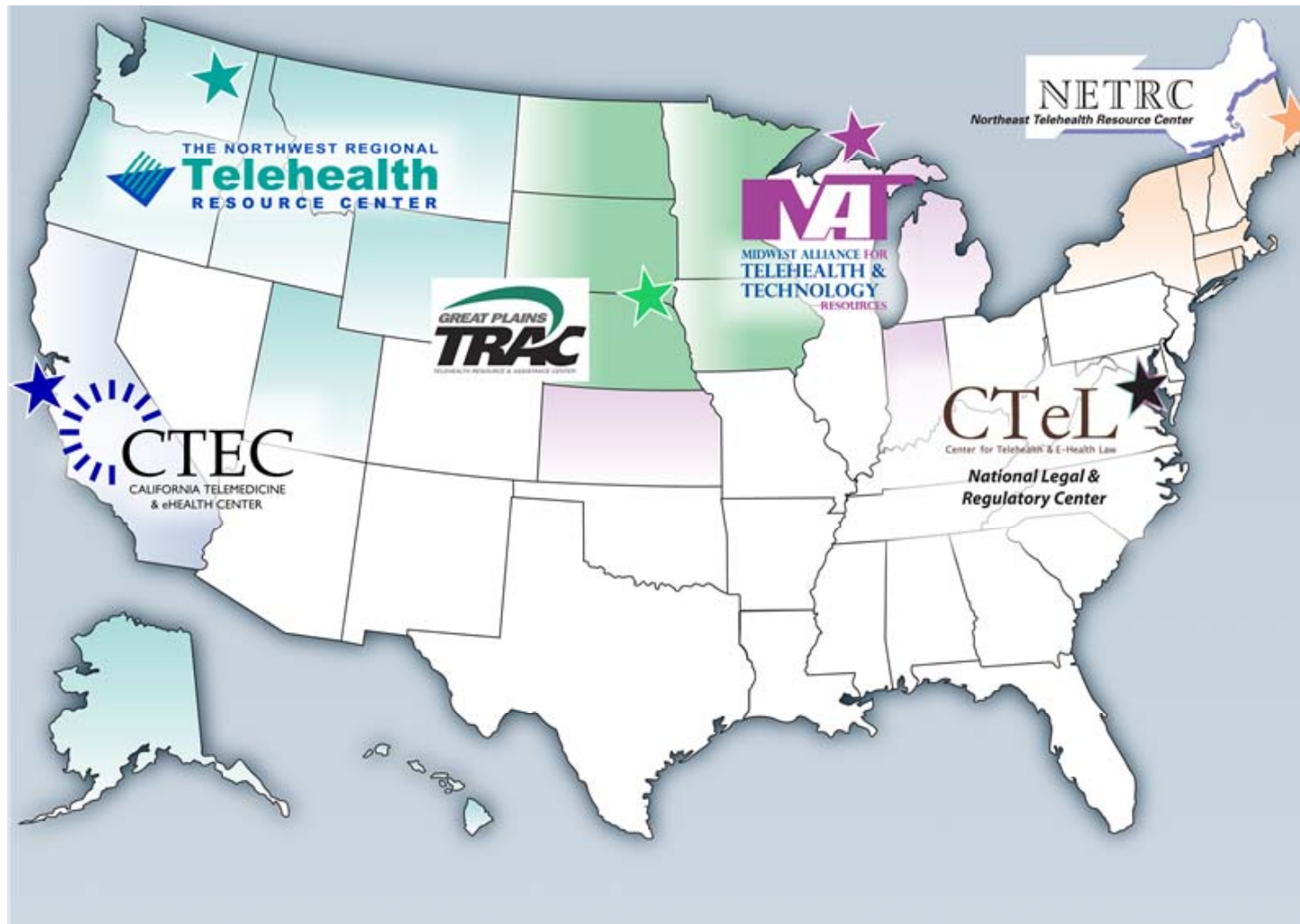
Abbreviated AAP Guideline	Telemedicine Facilitators to Guideline Adherence	Telemedicine Challenges to Guideline Adherence
4) information gathered from multiple informants	Averaged 2-3 school representatives at initial evaluation in addition to family. School officials in unique position to look at child over time and to compare behavior to same-age peers. School and family able to better hear other concerns and communicate together.	Different levels of school nurse involvement in presenting patients. Some school overinvolvement and “pre-diagnosing” child with ADHD before evaluation. Some school underinvolvement when the school presenter did not know family ahead of time, socialize re: telemedicine, or introduce the mental health evaluation process.
5) evaluation of co-morbidity	High comorbidity identified: 38% Adjustment Reaction 27% Mood disorder 92% Learning Concern	Due to high co-morbidity, high need for ongoing services and increased time commitment from school to utilize school telemedicine equipment and room
6) do not use unvalidated diagnostic tools	Telemedicine clinic did not use such tools	Had to depend on learning evaluations from the schools that were at times done with unvalidated diagnostic tool

FUTURE



- **GUIDELINES LIKELY IN THE NEXT YEAR FROM American Telemedicine Association (ATA) and American Academy of Child and Adolescent Psychiatry (AACAP)**
 - Administrative, clinical, technical recommendations based on best evidence to date
- **Increased need for communication and integration with primary care**
 - Survey
- **Integration of technologies—electronic health record (EHR), home telehealth, etc.**

Telehealth Resource Centers



•HRSA Telehealth Resource Centers, see <http://www.cteonline.org/TRC.html>