Telemedicine in Physical Health and Behavioral Health

Collaborative Care Summit
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Disclosures

Shabana Khan, MD

I have no relevant relationships with proprietary entities producing health care goods or services.
Outline

- What is Telemedicine and why do we need it?
- History of Telepsychiatry
- Applications
- Overview of UPMC Telemedicine Services and the WPIC Telepsychiatry Program
Outline

- Obstacles impeding broader application
- Legal Considerations
- Telemedicine in Physical Health and Behavioral Health
- Future Directions
What is Telepsychiatry?
“Telemedicine uses communication networks for delivery of healthcare services and medical education from one geographical location to another. It is deployed to overcome issues like uneven distribution and shortage of infrastructural and human resources.”
What is Telemedicine?

- **Use of medical information exchanged from one site to another via electronic communications to improve a patient’s clinical health status**
- **Includes a growing variety of applications and services using two-way video, email, smart phones, wireless tools, and other forms of telecommunications technology**
Why do we need Telepsychiatry?
Why do we need Telepsychiatry?

- National shortage of psychiatrists
- Difficulty recruiting to rural areas
- Limited services in underserved areas
- Lost time and money when traveling for care
- Opportunities for case consultation
- Enhance existing services and collaboration
History of Telemental Health
History

- If we use a broad definition . . .
- Tele = “at a distance”
“It’s a great invention, but who would ever want to use one?”
Modern Era of Telemental Health
1960s
1970s and 1980s
2000s

Net Annual Savings From Telemedicine

- Teleconsultation: $3.6 Billion
- NP to MD Office Visits: $219M
- NP to ED Visits: $527M
- CF to ED Visits: $60M
- ED to ED Transfers: $377M

The Advantages of Telemedicine

- Higher quality of life
- Improved compliance
- Changing of lifestyle
- Acceptance of the disease
- Disease management (RSA)
- Reduced periods of hospitalization
- Transparency of costs and services (Quality Assurance)
- Lower medication costs
- Higher cost efficiency

Telemedicine

- Higher quality of care
- Security QOL
- Therapy guidance and control
- Budget relief and optimized time management
- Direct guidance and training of patients

Cost bearer

Physician

American Telemedicine Association
Connected to Care

Telemedicine Concept
Applications
Settings

- Hospitals/Emergency Rooms
- Community Mental Health Centers
- Physician Offices
- Nursing Homes
- Prisons
- Schools
- Patient Homes
Scope of Services

- Diagnostic evaluations
- Therapeutic modalities
- Forensic modalities
- Pre-hospitalization assessment
- Post-hospital follow-up care
- Case management
- Psychotherapy
- Scheduled and urgent outpatient visits
- Medication management
- Consultation
- Research
- Staff Training
- CME
- Disaster Planning
### UPMC PSD Telemedicine Services

<table>
<thead>
<tr>
<th>Telemedicine/Telehealth Programs:</th>
<th>Clinical Specialty Services:</th>
<th>Billable</th>
<th>Contracted</th>
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<tbody>
<tr>
<td>Acute-ED Services</td>
<td>Tele-Stroke</td>
<td>X</td>
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<td>Tele-Burn</td>
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<tr>
<td>In-Patient Telemedicine Services</td>
<td>Tele-Dermatology</td>
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<td>Tele-Infectious Disease</td>
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<td>Tele-Neurology</td>
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<td>Tele-PM&amp;R</td>
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<td>Tele-MFM</td>
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<td>Outpatient-Teleconsult Centers (Multi-Specialty Virtual clinics)</td>
<td>&gt; 40 Specialist Services</td>
<td>In Rural (rHPSA) Locations</td>
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<td>Tele-Psych Services</td>
<td>Psychiatric Consults</td>
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<td>X</td>
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<td>Tele-Remote Monitoring</td>
<td>Congestive Heart Failure</td>
<td>HP</td>
<td>_</td>
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<td>Employer- On-site Clinics</td>
<td>Virtual Primary Care visits</td>
<td>Employee Benefit</td>
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<td>UPMC AnywhereCare</td>
<td>On-Demand, virtual visits</td>
<td>Retail Payment Model-Available to anyone in PA</td>
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WPIC Telepsychiatry Services

- WPIC is the largest provider of psychiatric services in Western PA

- Telepsychiatry is an initiative in partnership with Community Care Behavioral Health Organization

- Community Care is a non-profit Behavioral Health MCO and a UPMC Subsidiary with >750,000 members in 39 counties
WPIC Telepsychiatrists

- 8 Attending Psychiatrists and 4 Residents and Fellows
- Licensed community mental health centers in rural areas
- Two-way live interactive videoconferencing (Vidyo)
- 5 Pennsylvania counties
- 4,000 telepsychiatry patient visits per year
WPIC Telepsychiatry Services
WPIC Telepsychiatry Services
The Telepsychiatry Setup
The Telepsychiatrist’s View
The Telepsychiatrist’s View
The Patient’s side
Operational Issues and Performance Standards

- Planning process 1-3 months
- Patient triaged at host agency and documentation sent to WPIC
- Selection of patients for participation
- Orientation sheet for patient and families
- Informed Consent obtained
Operational Issues and Performance Standards

- Each provider’s role explained
- Location of psychiatrist discussed
- On-site clinician with patient at all times
- Patient informed of who is present at each end and of right to exclude anyone from either site
- Questions related to technology answered
Operational Issues and Performance Standards

- Clinical information shared via EMR (PsychConsult)
- Prescriptions completed electronically
- Secure Lines
- Contingency for transmission failure
- Emergencies: availability of on-site staff; clients in crisis seen by on-site staff
- Host agency schedules all appointments
Videoconferencing Etiquette

- Be Punctual
- Obtain medical records before the session
- Ensure equipment functioning
- Maintain good eye positioning
- Ensure privacy
Videoconferencing Etiquette

- Provide an agenda
- Summarize regularly
- Mute microphones of people listening
- Avoid heavily-patterned clothing
- Be lively, but not over-the-top – 110% of normal
Limitations
Rural Psychiatry Challenges

- Greater illness burden
- Fewer resources
- Limited access to care
- Different systems of care
- Cultural differences
- Firearms
- Suicide rates
Original Investigation

Widening Rural-Urban Disparities in Youth Suicides, United States, 1996-2010

Cynthia A. Fontanella, PhD; Danielle L. Hiance-Steelesmith, MSW; Gary S. Phillips, MA; Jeffrey A. Bridge, PhD; Natalie Lester, MD, MPH; Helen Anne Sweeney, MS; John V. Campo, MD

IMPORTANCE Little is known about recent trends in rural-urban disparities in youth suicide, particularly sex- and method-specific changes. Documenting the extent of these disparities is critical for the development of policies and programs aimed at eliminating geographic disparities.

OBJECTIVE To examine trends in US suicide mortality for adolescents and young adults across the rural-urban continuum.

DESIGN SETTING, AND PARTICIPANTS Longitudinal trends in suicide rates by rural and urban areas between January 1, 1996, and December 31, 2010, were analyzed using county-level national mortality data linked to a rural-urban continuum measure that classified all 3,141 counties in the United States into distinct groups based on population size and adjacency to metropolitan areas. The population included all suicide decedents aged 10 to 24 years.

MAIN OUTCOMES AND MEASURES Rates of suicide per 100,000 persons.

RESULTS Across the study period, 66,595 youths died by suicide, and rural suicide rates were nearly double those of urban areas for both males (19.93 and 10.31 per 100,000, respectively) and females (4.40 and 2.39 per 100,000, respectively). Even after controlling for a wide array of county-level variables, rural-urban suicide differentials increased over time for males, suggesting widening rural-urban disparities (1996-1998: adjusted incidence rate...
Telepsychiatry Limitations

- Lose senses
- Visual - three-dimensional vision, field of view
- Tactile – physical exam
- Olfactory – substance use
- Gustatory – hopefully not an issue!
Telepsychiatry Limitations

- Lack of in-person contact
- Provider or patient discomfort with technology
- Evaluations take longer and require more concentration than face-to-face
- Slight transmission delay
Potential Barriers
Potential Barriers

- Licensing and Credentialing
- Privacy and Confidentiality
- Reimbursement
Licensing

• Physician must be licensed in the state that where the patient is located

• If providing services to multiple states, must be licensed in each of these states

   -Federation of State Medical Boards (FSMB) Interstate Compact to facilitate this process
Reimbursement

Sources of Payment for Telemedicine

• Reimbursement from billing payers
  1. Private payers
  2. Medicare
  3. Medicaid

• Patient self-pay/health savings accounts (HSA)

• Contracts

• Grant/Philanthropic funding (Sustainable)
Who is going to pay for the services?

• **23 states and the District of Columbia** have **Telemedicine Parity** laws that require private payers to reimburse telemedicine services equal to in-person visits.

• **47 State Medicaid programs** have some type of coverage for telemedicine.
Additional Legal Considerations
Additional Legal Considerations

• Informed Consent
• Civil Commitments
• Malpractice
Telemedicine and Integration of Physical Health and Behavioral Health
Integrated Health Care

- Systematic coordination of physical and behavioral health care

- Physical and behavioral health problems are often comorbid

- Prevention and early intervention opportunity
Co-occurrence between mental illness and other chronic health conditions:

- **High Blood Pressure**
  - Mental Illness: 21.9%
  - No Mental Illness: 18.8%

- **Smoking**
  - Mental Illness: 36%
  - No Mental Illness: 21%

- **Heart Disease**
  - Mental Illness: 5.9%
  - No Mental Illness: 4.2%

- **Diabetes**
  - Mental Illness: 7.9%
  - No Mental Illness: 6.6%

- **Obesity**
  - Mental Illness: 42%
  - No Mental Illness: 35%

- **Asthma**
  - Mental Illness: 15.7%
  - No Mental Illness: 10.6%
Why integrate?

Serious mental illness

- 5% of Americans
- Increased rates of chronic medical conditions
- Die on average 25 years earlier
- Limited access to primary care
- Significant health expenditures
- Potential adverse effects of psychotropic medications

National Institute of Mental Health
Continuum of Physical and Behavioral Health Care Integration

Coordinated Care
- Screening
- Navigators

Co-located Care
- Co-location
- Health Homes

Integrated Care
- System-Level Integration

SAMHSA-HRSA Center for Integrated Health Solutions (CIHS)
Collaborative Care

• Integrates mental health and primary care to provide patient-centered, comprehensive, accountable care

• Developed initially for depression

• >40 research trials have demonstrated effectiveness of the collaborative care model in the past two decades

National Institute of Mental Health
Integrating Primary Care in Behavioral Health Settings

- Screen and Track Basic Health Indicators
  - lipids, fasting glucose, BMI, blood pressure, heart rate, weight
- Referral to and collaboration with PCP
- Health Navigators
- Wellness Coaching (nutrition, exercise, sleep hygiene)
- Peer Specialists
Information Technology In Integration

• Role in designing and facilitating integration efforts

• Bring specialty care to underserved areas (videoconferencing)

• Computer administered telephone versions of screening tools (interactive voice response technology)
Information Technology In Integration

- Technologies (EMR, interactive video, telephone, internet) facilitate communication between providers and between providers and patients

- Educational programs for behavioral health issues that patients can access on smartphones or iPads

- PCP obtains ongoing consultation by psychiatrist
Transforming Healthcare with Technology

- Improve Quality
- Reduce Costs
- Expand Access
WPIC Telepsychiatry Pilot Program

UPMC Psychiatric-Primary Care Physician Consultation Program

- Psychiatric consultation provided to primary care practices in Bedford, PA via Vidyo

- UPMC Health Plan
  - Adult component – Dr. Tim Denko
  - Pediatric component – Dr. Shabana Khan
WPIC TeleCABS program

- Child and Adolescent Bipolar Spectrum Services (CABS)
- Integrated clinical and research program at WPIC for youth and young adults with Bipolar Spectrum Disorders, those who are at risk for Bipolar Disorder, and those with mood dysregulation
- Comprehensive second opinion evaluations for those who live outside of Pennsylvania
- Evaluations include a comprehensive assessment, treatment recommendations and availability for limited follow-up consultation.
WPIC TeleCABS program

- Services include In-CABS - an inpatient unit for acute psychiatric care specializing in the assessment and treatment of adolescents with and at risk for Bipolar Spectrum Disorders

- CABS now offer nation’s first specialized telepsychiatry services for youth and young adults that need diagnostic clarification, treatment recommendations, and follow-up care

- Contact information: 412-246-5238 and http://www.pediatricbipolar.pitt.edu
Potential Barriers to Integration
A Randomized Trial of Telemedicine-based Collaborative Care for Depression

Fortney et al. (2007)

• Telemedicine collaborative care model adapted for small VA community based outpatient clinics with no on-site psychiatrists

• 395 primary care patients
  - PHQ-9 severity scores ≥ 12
  - Followed for 12 months
  - Excluded patients with serious mental illness and current substance dependence
A Randomized Trial of Telemedicine-based Collaborative Care for Depression

Fortney et al. (2007)

• Sites randomized to intervention or usual care

• Measures: medication adherence, treatment response, remission, health status, health-related quality of life, and treatment satisfaction

• At baseline, subjects had moderate depression, 3.7 prior depression episodes, and 67% had received prior depression treatment
## Comparison of Models

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<tr>
<th>Component</th>
<th>Practice-Based</th>
<th>Telemedicine-Based</th>
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<tbody>
<tr>
<td>Provider Education</td>
<td>Yes</td>
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<tr>
<td>Screening</td>
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<td>Patient Education</td>
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<td>Self-Management</td>
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<td>Medication Assistance</td>
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<td>Monitoring</td>
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<td>Psychotherapy</td>
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<tr>
<td>Psychiatric Consult</td>
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Fortney et al. 2007
A Randomized Trial of Telemedicine-based Collaborative Care for Depression

Fortney et al. (2007)

- Telemedicine collaborative care model adapted for small VA community based outpatient clinics with no on-site psychiatrists
- Intervention patients more likely to be adherent at 6 and 12 months and more likely to respond by 6 months and remit by 12 months
- Intervention patients larger gains in mental health status and health-related quality of life, and reported higher satisfaction
- Conclusion: Collaborative care can be successfully adapted for primary care clinics without on-site psychiatrists using telemedicine technologies
Future Directions

• Medical Student and Resident Education in Telemedicine
• Advocating for telemedicine parity
• Continue to expand our telepsychiatry services to rural community mental health centers
• Telemedicine Pilot Programs to integrate physical health and behavioral health
Summary

• Telemedicine has the ability to significantly improve patient access, provider collaboration, and the quality and cost of care

• Telemedicine holds the promise to become an integral and routine part of our day-to-day practice and psychiatric training

• Telemedicine can play an integral role in initiatives aimed at integrating physical health and behavioral health
Selected References

- Practice Parameters for Telepsychiatry with Children and Adolescents *AACAP* (2008)
- Telemental Health Guide [www.tmh.guide.org](http://www.tmh.guide.org)
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