TeleFriend: A Telehealth Program to Monitor and Teach Self-Management of Medical and Psychiatric Illness

SAMHSA PBHCI National Grantee Meeting
June 4-7, 2017 • Austin, TX
Disclaimer

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About the Presenters

Sarah Pratt, PhD is an Assistant Professor of Psychiatry at the Geisel School of Medicine at Dartmouth. A clinical psychologist by training, Dr. Pratt has devoted her career to developing and evaluating interventions to enhance the health and functioning of people with serious mental illness, including models of integrated care, fitness promotion, including the InSHAPE program, and smoking cessation.

Meghan Santos, LICSW is a licensed clinical social worker and a Project Director in the Department of Psychiatry at Dartmouth who has worked as a researcher coordinating studies with Dr. Pratt for the past 14 years. She and Pratt wrote the telehealth content for the TeleFriend program.

Taylor D’Addario has spent her career since earning a BA in Psychology at URI working in research and as a mental health clinician. She is the Program Manager for The Providence Center’s PBHCI grant as well as for the Tele-Friend study. She is also a licensed substance abuse therapist and will be attending Salve Regina University to obtain her master’s degree in holistic mental health counseling.
The Telefriend:

TeleFriend: A Telehealth Program to Monitor and Teach Self-Management of Medical and Psychiatric Illness

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Assistant Professor in Psychiatry
Meghan Santos, LICSW
Project Director
Geisel School of Medicine at Dartmouth
Taylor D’Addario
Program Manager, The Providence Center

Outline

• Rationale for Using Remote Monitoring in Behavioral Health Care Settings
• Data from Feasibility Pilot of Telehealth Program in NH
• Development of Dartmouth Telehealth Content
• Randomized Controlled Trial of TeleFriend
• Demonstration of TeleFriend Program
• Participant Stories and Experiences from The Providence Center
Why Use Remote Monitoring for Medical and Psychiatric Instability?

- Mental illness and substance abuse account for 29% of all hospital days and 22% of hospital costs in the US.
- Direct cost of care for mental illness estimated at $100 billion per year, indirect costs estimated at an additional $193 billion.
- Hospitalization and emergency service costs (>25%) account for much of the excess in health care costs for people with SMI.

Telehealth Industry

- Video Diagnostic Consultation
- Remote Doctor/Specialist Services
- Distance Learning/Simulation
- Retail Telehealth
- Teleimaging

- Electronic Health Records (EHR)
- Health Information Exchange (HIE)
- Patient Portals
- Hosted Cloud Infrastructure

- Home Healthcare and Disease Management Monitoring
- Activity Monitoring
- Diabetes Management
- Wellness Programs
- Remote Cardiac Services
- PERS
- Medication Management

- Professional Apps
- Wellness Apps
- Fitness Apps
- Texting
- Informational Services

Source: Frost & Sullivan analysis
TeleFriend

- Tablet-based in-home program
- Users complete daily sessions (5-10 minutes) for 360 days
- Sessions include medication adherence monitoring, symptom monitoring, education about illness, training on illness self-management and healthy lifestyle behaviors, trivia or inspirational quote
- Content matched to user diagnoses
- Responses sent to secure server and reviewed daily on desktop application by Telehealth Specialist

Two Pilot Studies in NH to Evaluate Feasibility and Acceptability

Pilot 1: Remote Monitoring of Medical and Psychiatric Illness

- 70 participants age 18+ with SMI (MDD, Schiz/Schizoaff, Bipolar, PTSD) plus CHF, COPD, Diabetes, or chronic pain
- Cross-over design: 2 groups (one got Telehealth for 6 months then off for 6 months, one on wait list for 6 months then Telehealth for 6 months)
- Assessments at baseline, 6 mo and 12 mo

Diabetes Outcomes

Baseline:
- Glucose >140: 70%
- Glucose <140: 30%

6 Months:
- Glucose >140: 34%
- Glucose <140: 66%

Service Use Outcomes

Pre vs. Post:
- Routine Visits
- Urgent Visits

Pre: 2.5 Routine Visits, 0.5 Urgent Visits
Post: 2 Routine Visits, 0.1 Urgent Visits
Two Pilot Studies in NH to Evaluate Feasibility and Acceptability

Pilot 2: Remote Monitoring of Psychiatric Illness

- N=38, assessed at baseline, 3, & 6 months
- Inclusion criteria: SMI (schizophrenia, schizoaffective, MDD, BPD, PTSD) and psych instability (2 admissions or ER visits in past year or >10 crisis calls over 3 mo).
- Participants used daily telehealth for 6 months.
- Evaluation of psychiatric symptoms, service use, illness self management, health self-efficacy, quality of life.


Adherence with Sessions

- Average Adherence across all participants for 6 months: 71%
- Average adherence for participants over 70% (n=24)=84%
Clinical Outcomes

- **Significant improvements in:**
  - Overall symptom severity (BPRS)
  - Depressive symptoms (CES-D)
  - Illness Management Skills (IMR Scale)
  - Quality of Life (Heinrichs)
  - Health Self-Efficacy (Self-rated Abilities for Health Practices)
  - Subjective Health (SF-12 MCS)

Service Use - Hospitalizations

- Comparison between Baseline and 6 Months
Service Use – ER Visits

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Philips and Dartmouth Telehealth Content

PHILIPS CONTENT LIBRARIES (30 day protocols)
- COPD
- Diabetes
- Coronary Artery Disease
- Congestive Heart Failure

DARTMOUTH CONTENT LIBRARIES (360 day protocols)
- Schizophrenia
- Schizoaffective Disorder
- Bipolar Disorder
- Major Depression
- PTSD
- Chronic Pain
- Obesity
- Smoking
Medical Content

Examples of Heart Disease Questions
1. Have you noticed an increase in the following symptoms at rest: chest pain, shortness of breath, sweating, nausea, vomiting, heart burn, or arm pain?
2. Have you been less able to do activities at home?

Examples of Chronic Pain Content
1. When experiencing pain, it can be helpful to remind yourself that you have coped with it before. It may reduce your pain to think positively about the present moment and the future.

Example of Diabetes Questions
1. Hyperglycemia, or High blood sugar is when your blood sugar is above 130.
2. Symptoms of high blood sugar can include: urinating more often, blurred vision, fatigue, headaches and a feeling of being thirsty all the time.
3. Do you have questions about hyperglycemia?
4. Would you like your healthcare provider to explain more about hyperglycemia?
Dartmouth Content Development

- Feedback from pilot participants
  - *Desire for Self-management Training*
  - *Suggestions for Healthy Lifestyle Behaviors*
  - *More Education About Illness and Treatments*
- Feedback from telehealth nurse
  - *Endorsing symptom resulted in different feedback*
- Symptom monitoring based on DSM-V criteria
  - *Determined most important symptoms to monitor and frequency*
- Write content, edit, type into platform, proof, test, “publish”

Other Evaluations of Dartmouth Telehealth Content for SMI

1. HCIA 1C1CMS330983 (Bird, PI) CMMI
   Community Behavioral Health Homes for Adults with Serious Mental Illness (2012-2014)

2. R01 MH104555-01 (Bartels, PI) NIMH

3. R01 MH107625 (Pratt, PI) NIMH
TeleFriend: Automated Telehealth to Improve Psychiatric Self-Management and Community Tenure

- 4 Years of Funding (9/3/15-4/30/19)
- 2 Performance Sites (The Providence Center, Greater Nashua Community Mental Health)
- Random assignment to TeleFriend or usual care
- N=300 people with SMI and psychiatric instability (≥2 ER visits or hospitalizations)
- Baseline, 3,6,12-month assessment of symptoms and use of acute services (ER and hospital)

Psychiatric Library Assignment
Enrolled Participants (as of 5/17/17)

- Bipolar 32%
- Depression 25%
- Schizophrenia 28%
- PTSD 15%
Why Was The Providence Center Interested in TeleFriend?

- Pilot Study Findings
- Decreasing Unnecessary Hospitalizations
- Increasing Symptom Self Management
- Cost Savings/ Health Home Model
- Future of Healthcare

How Tele-Friend Works at TPC

- Tele Health Specialist
  - Communicator, tablet installs, trouble shooting, daily monitoring
- CSP, BHOP, IOP, Partial Programs
- Communicates/collaborates with ALL teams in the agency
- Why is the Tele-Health specialist role essential?
Tablet Experience

How Tele-Friend Works at TPC

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- CSP, BHOP, IOP, Partial Programs
- Communicates/collaborates with ALL teams in the agency
- Why is the Tele-Health specialist role essential?
### Tele-Health Specialist Dashboard

**Patient Name:** Brady, Tom  
**Birth Date:** 10/10/1985  
**Gender:** Male  
**DOB:** 10/10/1985  
**Preferred Phone:** Site Providence  
**M/F/W:** Male  
**Primary Problem:**  
**Status and Reason:** Active  
**TAC Program and Tier of Service:** TAC (Standard)

### Trends Tab

**Patient Name:** Brady, Tom  
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**Primary Problem:**  
**Status and Reason:** Active  
**TAC Program and Tier of Service:** TAC (Standard)

#### Measurements

There are no measurements matching the criteria above.

#### Surveys

- **May 24, 2017**  
  - **Trivia and Farewell**  
  - **Safeflt_Day_225_Tips&Education_365**  
  - **Safeflt_Day_225_Monitoring_360**  
  - **A.Greet_Medication_365**

- **May 23, 2017**  
  - **Trivia and Farewell**  
  - **Safeflt_Day_224_Tips&Education_365**  
  - **Safeflt_Day_224_Monitoring_360**  
  - **A.Greet_Medication_365**
Viewing High Risk Response

Viewing All Responses
Acknowledging a Flag

Indicating Action Taken
Contact Information:
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