





7-8 OCTOBER 2014 | ROME, ITALY

TELEPSYCHIATRY AT UPMC

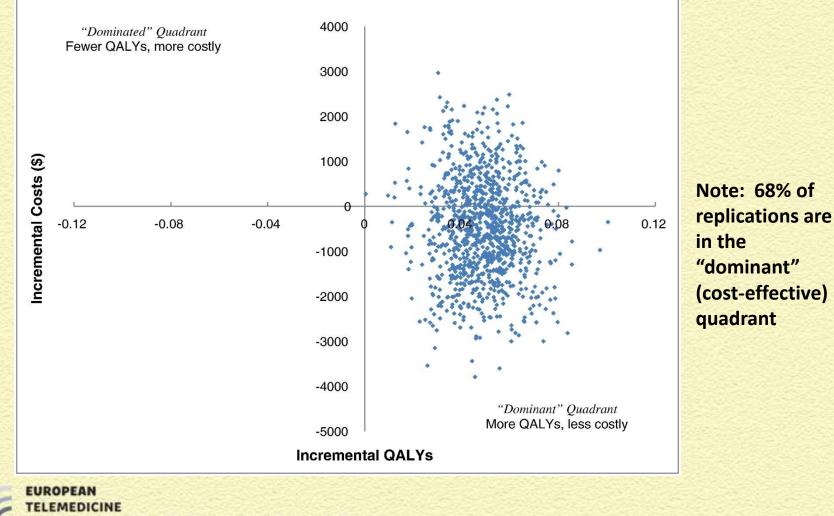
PAST, PRESENT AND FUTURE



BYPASSING THE BLUES: TELEPHONE-DELIVERED COLLABORATIVE CARE FOR TREATING DEPRESSION FOLLOWING CABG SURGERY

COST EFFECTIVENESS

### Estimated Cost-effectiveness of Bypassing the Blues: QALYs vs. Cost



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J.M. Donohue et al, General Hospital Psychiatry, 36: 453-459, 2014



ONLINE CBT FOR MOOD AND ANXIETY DISORDERS: EXAMINING THE BENEFITS OF ADDING AN ONLINE SUPPORT GROUP

Bruce Rollman et al.

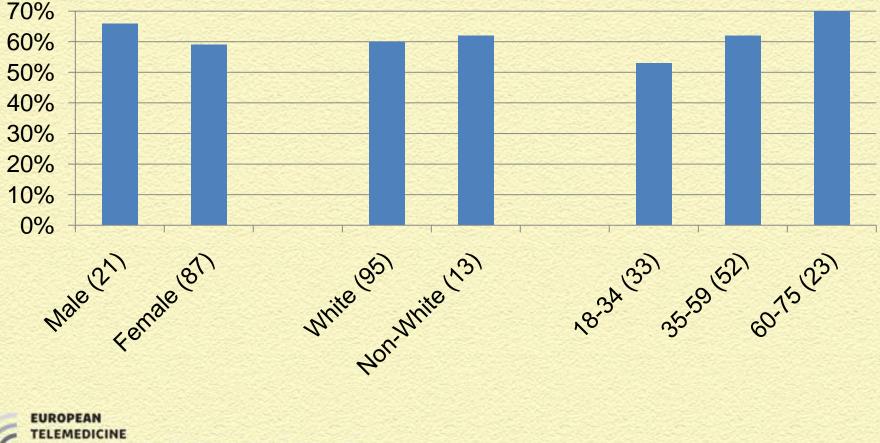
# Online Treatment for Mood and Anxiety Disorders

- 1) Computerized CBT program (*Beating the Blues*)
- 2) <u>+</u> Internet Support Group
- 3) Asynchronous communications (*HealthTrak*, secure e-mail)
- 4) Powered within age strata (18-34, 35-59, 60-75)



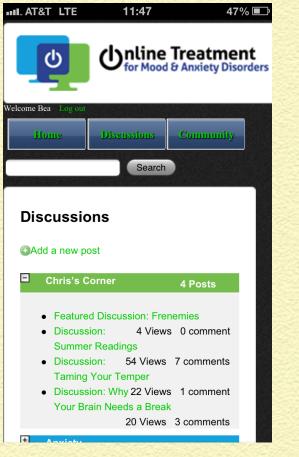


# Among Beating the Blues Completers to Date: ≥50% Decline in PHQ-9 Scores



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# Challenge: Engaging Patients in the Internet Support Groups



90% of postings from 1% of users

> 10% of postings from 9% of users

> > No postings from 90% of users

E-HEALTH MULTI-FAMILY PSYCHOEDUCATIONAL TREATMENT FOR SCHIZOPHRENIA

Armando Rotondi et al.

### Multi-Family Psychoeducational Treatment for Schizophrenia: Intervention Components - I

- Home PC or mobile device and phone delivery
- Daily Support Website components
  - Therapist-facilitated bulletin board/ group psychoeducational forum
    - Persons with schizophrenia-only
    - Family members/supporters only
    - Persons with schizophrenia and family members/supporters
  - Educational materials: designed for cognitive impairment
  - Ask our Experts
    - Library of previously asked and answered questions

### Multi-Family Psychoeducational Treatment for Schizophrenia: Intervention Components - II

Early warning signs monitoring

 Via encrypted SMS/Text messaging
 Phone-based interactive voice response

 Reminders (e.g., appointments, medications)

 Via encrypted SMS/Text messaging
 Phone-based interactive voice response

# This model is currently being studied at 10 sites across the US.



SMARTPHONE TECHNOLOGY AND MANAGING BIPOLAR DISORDER: A "MARRIAGE MADE IN HEAVEN"

Mark Matthews, Tanzeem Choudhury & Ellen Frank

# What's key for patients and clinicians to know to manage bipolar disorder?

- Sleep/wake patterns
- Activity levels and patterns
- Social interaction levels
- Rate and amount of speech
- Other?



## What can the smartphone tell us?

- Sleep/wake patterns
- Activity levels and patterns
- Social interaction levels & location
- Rate and amount of speech
- ...and that's all passively.





And what can we learn if we involve patients actively with their phone?

- Specific activities and their timing
- Perceived mood
  - Perceived energy

MoodRhythm: an app to support individuals with bipolar disorder to establish stable daily routines







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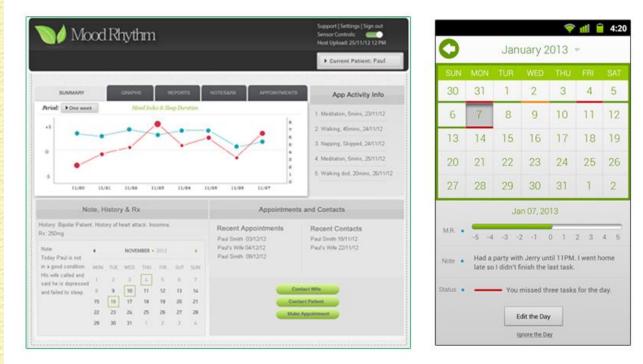


# Providing the patient with feedback at a glance

Weekly Feedback Sep 15 - Sep 21	Weekly Feedback Sep 15 - Sep 21	Weekly Feedback Sep 15 - Sep 21
Event Completion		
9/15 9/16 9/17 9/18 9/19 9/20 9/21	EVENT FEEDBACK	SENSOR FEEDBACK
	You are in rhythm	SRM Social Rhythm Overall You are almost in rhythm
<ul> <li>On Time</li> <li>Borderline</li> <li>Off Target</li> </ul>	First Contact >	Sleep You are sleeping less than normal
Weekly Mood Graph	Start Day You are in rhythm	Social Interactions Normal social interactivity
	Dinner         >           You are in rhythm         >	Physical Activity You are almost in rhythm
Weekly Energy Graph	You are in rhythm	Technology Use You are using your phone more
	SENSOR FEEDBACK	
Precord         Feedback         Precord         Rewards         Settings	Record Feedback	Image: Record         Feedback         Learn         Rewards         Settings
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### **Enriching the Doctor-Patient Interaction**

#### ACCELERATE LEARNING Enrich the Doctor–Patient Interaction





# **Challenges:**

- How best to get this kind of app into the hands of patients: who pays for this?
- How best to provide useful feedback to patients
- How best to incorporate the app into patients' ongoing care
- How to make it easy and efficient for clinicians to use the information the app can provide

