Creative uses of new technologies to support consumer recovery and relapse prevention

Center for Health Enhancement Support Systems

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CHESS vision

NO ONE SHOULD SUFFER TWICE:

NEITHER PATIENTS NOR FAMILIES
CHESS topics

• PC based:
  – Breast cancer
  – Lung cancer
  – Prostate cancer
  – Transplant families
  – Asthma parents
  – Adult children of alcoholics (old)
  – Depression (old)
  – HIV (old)

• Smart phone based
  – Alcoholism
  – Colon cancer
  – Asthma (teens)

• Multi-platform (elderly)
  – Falls prevention
  – Service dependability
  – Loneliness/isolation
  – Driving
Our Center’s Partnerships

• Addiction
  – SAMHSA, NIDA, NIAAA
  – 39 State governments
  – 3000 treatment agencies

• Aging
  Wisc. Bureau of Aging
  Milwaukee Richland and Waukesha Counties Aging

• Cancer
  – U of Wisconsin
  – MD Anderson
  – Hartford Hospital
  – Kaiser Permanente CO/NW
  – Tufts University

Disciplines involved
• Systems Engineering
• Communication science
• Computer science
• Educational psychology
• Nutritional science
• Nursing
• Oncology
• Political Science
• Psychology
• Radiology
• Statistics
Premise: Technology Can Help
Addiction
ACHESS

- Monitoring and alerts
- Reminders
- Autonomous motivation
- Assertive outreach
- Care coordination
- Medication reminders
- Peer & family support
- Relaxation
- Locations tracking
- Contact with professionals
- Information
Average number of heavy drinking days

**RCT**
- ACHESS had 57% fewer heavy drinking days.
- ACHESS patients attended 25% more 12 step meetings

**VA field test**
- 60% drop in readmissions.
Quality of Life Effects, ACOA

![Bar chart showing percent change in measures, pre-test to post-test for different measures and interventions. Measures include Less Nervous, Less Isolated, Less Depressed, Self Esteem, Support, and Life Satisfaction. Interventions are Therapy, CHESS, and CHESS + Therapy.](chart.png)
Drug courts and ACHESS
Teenage Asthma – Inner city
New Messages!

Is it an emergency?

Are you having asthma trouble today?

YES!

Tech Help
Asthma CHESS effect size on Asthma Control (n=218)
Unanticipated Events:

• # of phones lost, stolen or broken
  – 219 on study, but gave out 330 phones
  – Replacing phones isn’t the real cost...

• Cameras on phones

• Using parental blocks cut off too much
  – Couldn’t access facebook, you-tube...
  – Let parent determine if block was on

• Texting
  – Can’t monitor what is shared outside of system
PC Based Results
Lung Cancer Survival: CHESS vs. Standard Care.

Days to death

Median days different: 3.5 months.

P = .026

Not an anticipated outcome
When CHESS shares patient status data with providers, patients improve.

If patient reports a health status level over threshold, & CHESS notifies the clinical team, Lung Cancer patients got better.
CHESS Cost effectiveness: HIV infected patients.


RCT: All tests significant at or below .025
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Insert Gwen video on this slide. Make sure it is on the device that this PowerPoint is displaying from or it will not work!
Now: Seamless Integration

- Skills Training & Counseling (TES)
- Medication Adherence (GlowCapss)
- Relapse Prevention (CHESS)
- Clinic Evaluation (Population Manager)

SEVA
Two interlocking systems

Older adult

Sunny and cool, high 65, low 43
May 25, 2012

Connect with others
Fun! Games! Music! Photos!
Manage my health
Update my status
Customize my ECHESS

Looking forward to it!
See & update my schedule

“Family”

Check in with Dad
Help make plans
Connect with others
Learn about helping elders
Report how Dad’s been doing
But to sustain, technology needs support systems

• Financing
• Incentives
• Processes
• Regulations
• Interagency agreements
• Community development

We will be addressing all of these but need your guidance.
Developmental Issues

Meet people where they are:

– Make it easy to use
– No typing, reading
– Audio & powerpoint
– Monitoring & feedback
– GPS tracking
– Distance counseling
– Accelerometer

David H. Gustafson U of Wisconsin 2011
Incomplete List of eHealth Articles Published by the Center for Health Enhancement Systems Studied at the University of Wisconsin  9 21 2012.


