



Internet and IT Use in Treatment of Diabetes

ATTD 2009 Yearbook

ATTD Conference
February 13, 2010
Basel Switzerland

Neal Kaufman, M.D., M.P.H.

Potential Value of Online Treatment of Diabetes

- Improve Patient Performance/Outcomes
- Expand Services to More Patients
- Decrease Clinical Service Costs
- Decrease Reporting/Oversight Costs
- Decrease Long-term Medical Care Costs

-- Confidential --

Slide 2



Challenges with Internet and Health Information Technology for Diabetes

- Complex set of services & supports
- Limited staff and financial resources
- Variety of information technologies
- Rapid technology enhancements
- Limited research available
- Integration across variety of platforms

-- Confidential --

Slide 3



Diabetes Management Assisted by Telemedicine: Patient Perspectives*

- Patients want telemedicine interventions to be linked to their healthcare team
- Patients want providers to have improved interpersonal and communication skills
- Patients want to monitor their glucose levels and disease progress

*Trief PM, et al Telemedicine and e-Health 2008:14: 647-55

-- Confidential --

Slide 4



Practice-Linked Online Personal Health Records for Type 2 Diabetes Mellitus*

- Randomized 11 primary care practices;
- 244 Type 2 patients; acceptance high
- Patients review record prior to visit, edit inaccuracies, answer questions re adherence & barriers to healthy behaviors, view glucose data, sends questions or concerns to clinician

RESULTS

- Increased clinician generated changes in treatment
- No changes in outcomes
- Demonstrates challenge with this type of research

*Grant, RW et al Arch Intern Med. 2008;168(16):1776-1782.



-- Confidential --

Slide 5

Web-Based Collaborative Care for Type 1* Web-Based Collaborative Care for Type 2**

2 randomized trials in adults of web-based case management compared to usual care
Type 1: 77 patients; Type 2: 83 patients;

RESULTS

Type 1: no change in A1C; improved self-efficacy
Type 2: decreased A1C; no change in healthcare utilization

Promising approaches with old technology

*Kelly P. McCarrier, KP et al, Diabetes Technology & Therapeutics. April 2009, 11(4): 211-217.

**Ralston, JD, Diabetes Care 32:234–239, 2009



-- Confidential --

Slide 6

Effects of Self Management Support on Structure, Process, and Outcomes *

- Three limb randomized controlled trial, 339 patients
- Usual care, weekly automated telephone SMS with nurse follow-up; monthly visits physician/health educator
- Low income, low education; ½ limited English speakers

RESULTS

- Positive effects on patient assessment of process of care, interpersonal communications and behaviors
- No difference in A1C
- Information technology, when appropriately designed for a target population, can have positive outcomes

*Schillinger D et al, Diabetes Care 32:559–566, 2009



-- Confidential --

Slide 7

Veterans Affairs Research on HIT for Diabetes Self-Management Support*

- Summarizes the potential role of large health systems to enhance HIT for diabetes treatment
- Addressed need for patient assessment, patient-clinician communications, peer-to-peer support, feedback to informal caregivers, information support for healthcare providers, pedometers
- Studies needed at many levels: developmental, observational, efficacy trials, implementation

*Piette, JD, et al **Journal of Diabetes Science and Technology** Volume 2, Issue 1, January 2008 pg 15-23



-- Confidential --

Slide 8

Guiding Principles for Interventions

- Use behavior change theory and clinical expertise
- Evidence based and research proven
- Personalized on patient characteristics, performance and over time
- Continuous feedback to patient on performance
- Integrated with clinical relationship and workflow
- Linked to others for social support and coaching
- Flexible in design and implementation
- Choice of media and alternative learning pathways
- Evaluated and continuously improved

-- Confidential --

Slide 9



Thank You

Neal Kaufman, M.D., M.P.H.
Founder and CEO, DPS Health

nkaufman@dpshealth.com

310-444-0636

www.dpshealth.com

Enhancing the capacity of healthcare providers to improve the health of their patients through research-proven, online, self-management support interventions.

-- Confidential --

Slide 39

