

HIT and Web 2.0 as a vehicle for patient engagement - At the clinical encounter and beyond



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Partners HealthCare

About the Center for Connected Health



Division of Partners HealthCare IS organization

- Research and evaluation
- Program development and rollout
- Operational systems and support
- Commercialization

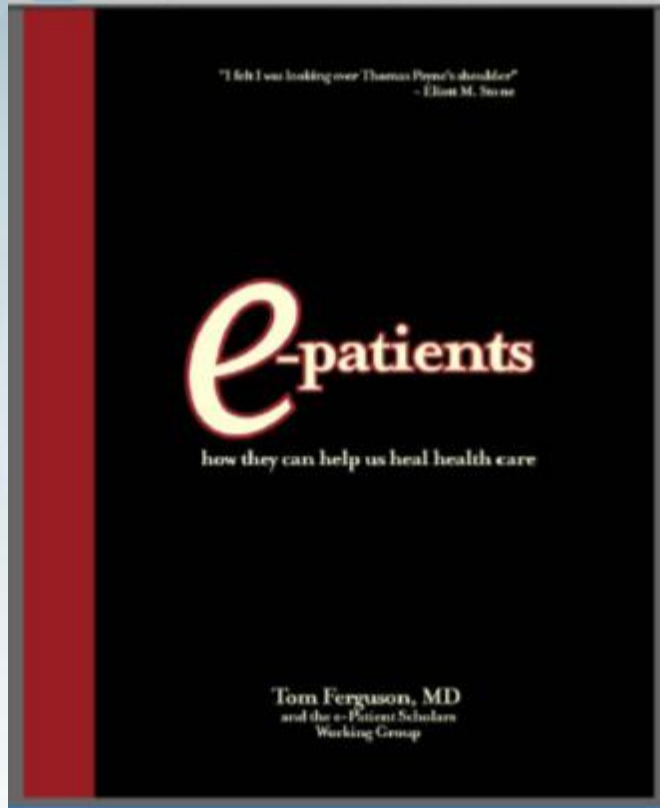
Our interest is in the use of technology to deliver care remotely:

- Heart failure monitoring
- Diabetic monitoring and coaching
- Blood pressure self-management for large employer

Benefits include:

- Increased patient engagement
- Improved health outcomes
- Improved patient-provider communications

Patients are Interacting with Technology



About 80% of adults use the Internet as a tool for healthcare

- 61% of the general pop and 83% of those online identify themselves as 'e-patients'
- Disproportionately young and well individuals
 - 27% over 65 identify as e-patients
 - 52% of those with 2 chronic conditions go online

Mobile phone use is greater in patients with chronic illness

- 70% of individuals with 2 chronic illnesses use a mobile phone
- 23% of them send and receive text messages

Older/chronically ill patients are not afraid of technology

- We get virtually 100% acceptance to our CHF telemonitoring program
- Good results from our diabetes program – for both Internet and non-Internet users

Web 2.0 in Healthcare

More than half of e-patients living with chronic disease consume user-generated health information.

(Pew Internet, Chronic Disease and the Internet, 3/24/10)

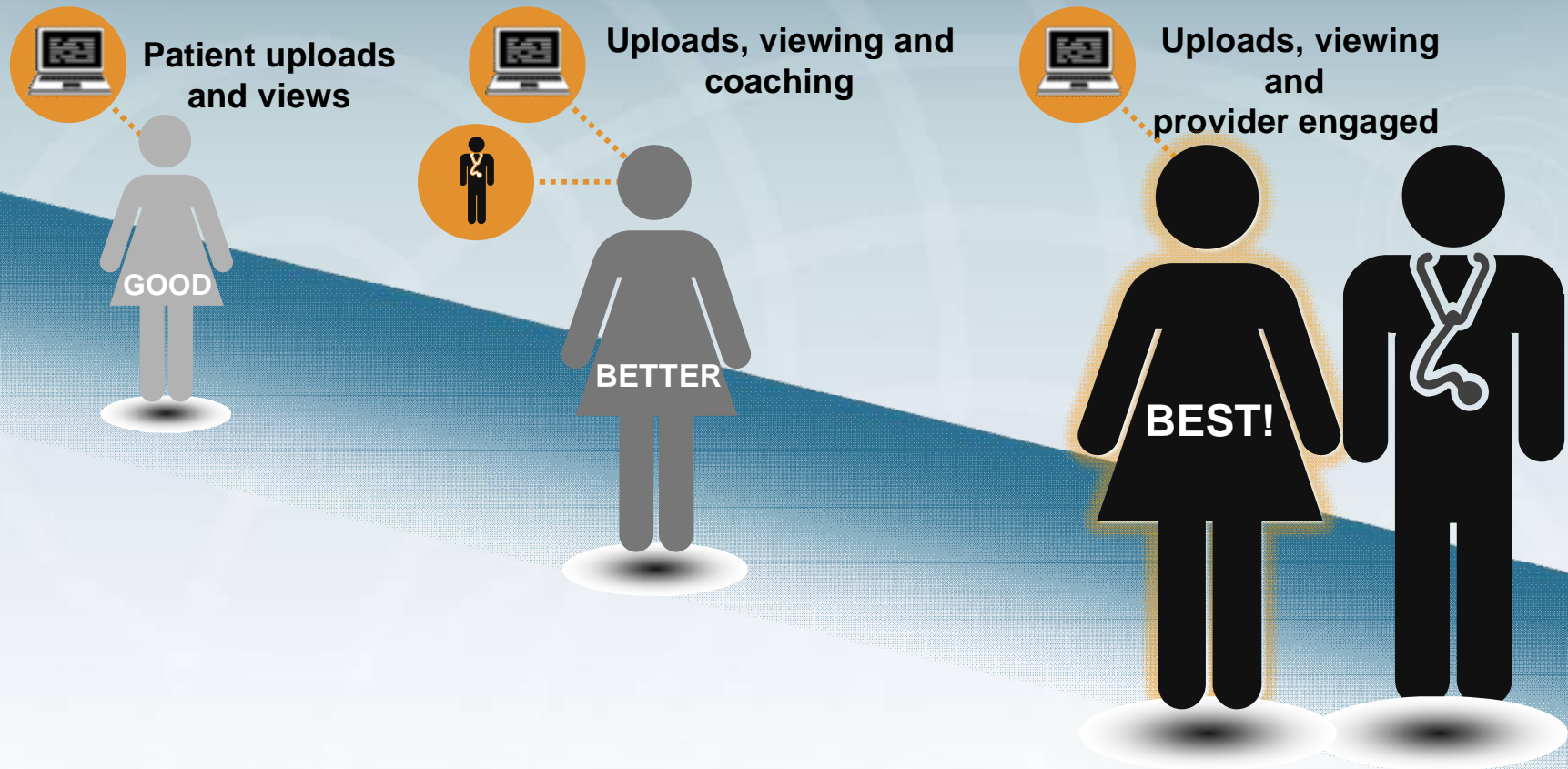
- Blogs, Wikis, Social Networks
- Patient Networking Sites
 - PatientsLikeMe, Health Central, Inspire
- Bridging the Patient-Provider Gap: new channels joining patients and providers
 - Patients asking physicians questions online, ex: MedHelp
 - Virtual visits, ex: American Well
- The missing link in Bridging the Patient-Provider Gap:
Connected Health



How Connected Health Adds Value



Engagement = Better Outcomes



Connected Health Platform Overview



Patient



Patient sends blood pressure, blood glucose, step counts or weight readings to a secure website

Patients provide contextual information.

Providers



Providers access data and information to manage patient's care

Automated rules and alerts also help patients understand their health.



DiabetesConnect



- **Population:** A1c>8, requiring relatively frequent glucose testing
- **Technology:** glucometer, gateway, web interface
- **Coaching:** diabetes educator or nurse in the practice
- **Goal:** improved control
- **Business justification:**
 - Meet P4P targets
 - Decreased downstream complications

DiabetesConnect – Engagement in Two Dimensions

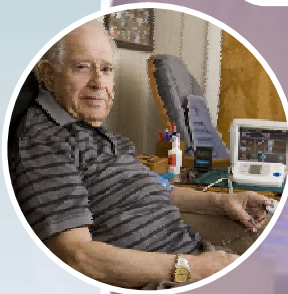
Updated 12.09: 65 patients

	PRACTICE 1	PRACTICE 2
Avg. change A1c - total	- 0.64	- 2.0
Avg. change A1c – active patients only		- 2.1
Avg. change A1c - Non-active patients only	-0.45	
Provider logins/month	8	60

Change in A1c based on data before (up to 2 months before) enrollment and 3-6 months after enrollment start date. Not all enrolled patients had recent A1c data in their records.

Heart Failure Monitoring at Scale

3000 discharges / year
1000 high-risk patients needing intense intervention
= 1000 enrollments



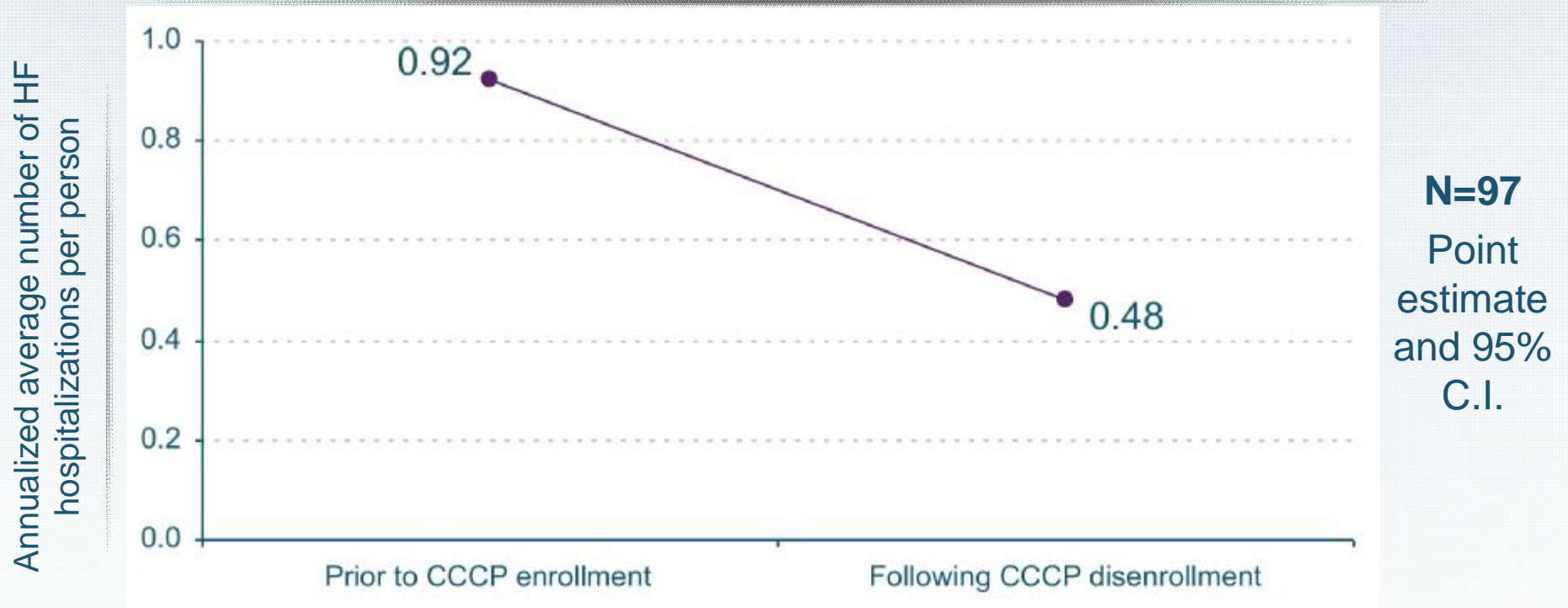
250 patient census
in HF Monitoring



3 Tele-monitoring
Nurses



Impact of CCCP On Average Number of HF Hospitalizations Per Patient



Patients enrolled in the CCCP program had significantly fewer HF Hospitalizations after the program than before

Changing Role of the Provider

“ This program has tremendous promise for improving the care for patients and potentially for improving access to office visits for new or other existing patients.

“ The traditional model of caring for patients with chronic illness puts the doctor at the center of the patient's care. That's an old model. The new model of caring for chronic illness, whether it's diabetes, hypertension or



More patient-centered care, more continuous care

Better access to office visits for those that need it

MD collaborates with patient on how their information impacts their outcomes and quality of life

for other patients who need to get in to see me.”

Elizabeth Mort, MD
Massachusetts General Hospital

choices can affect their clinical outcomes and quality of life.”

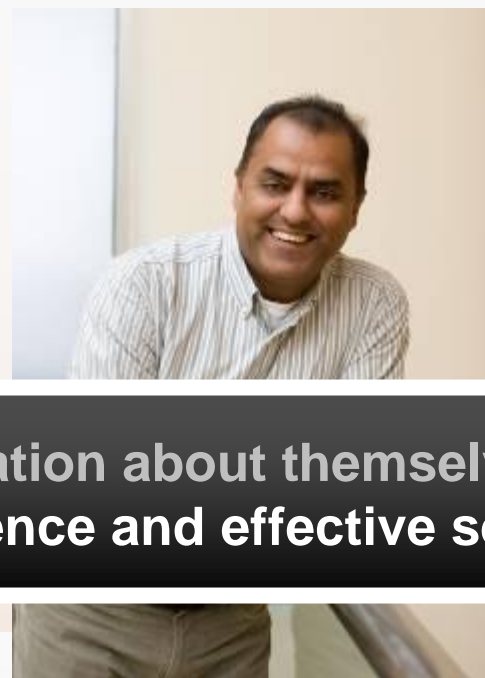
Michael T. Myers, Jr., MD, MBA
Medical Director, Hawthorn Medical Associates

Changing Role of the Patient

DiabetesConnect



SmartBeat



Connected Cardiac Care



More information about themselves
= More confidence and effective self-management

“Controlling my diabetes is easier ... It makes me feel successful when I see my glucose readings in the normal range.”

» Conrad Richard

“In addition to monitoring my blood pressure, I changed my diet and exercise program, to see if that would have an effect..”

» Amir Sharif

“...with monitoring, I know if I'm heading towards a problem and will hopefully avoid an emergency”

» Mariano

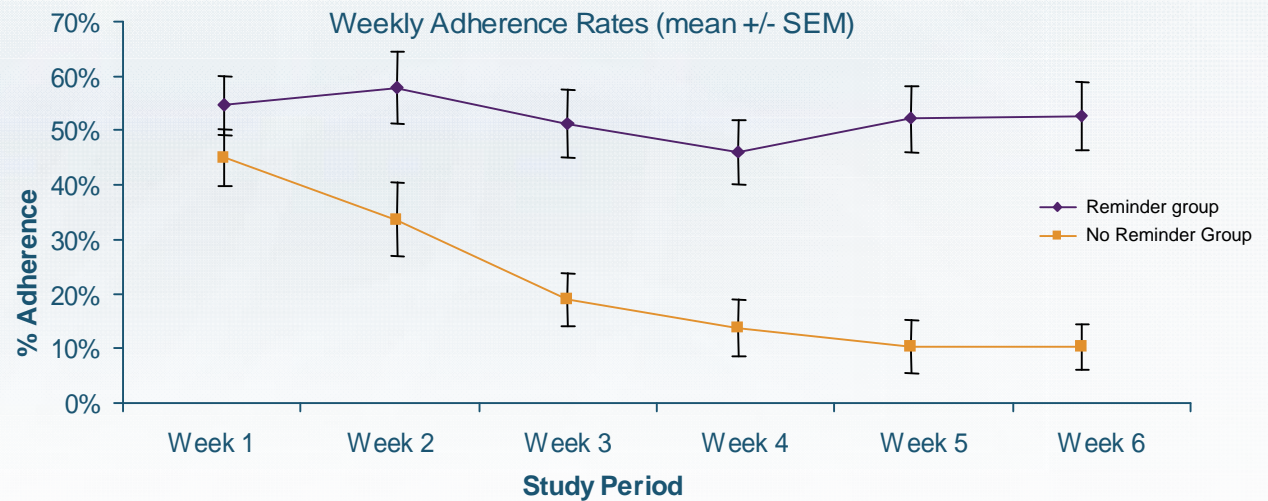
Cell phone as an adherence tool



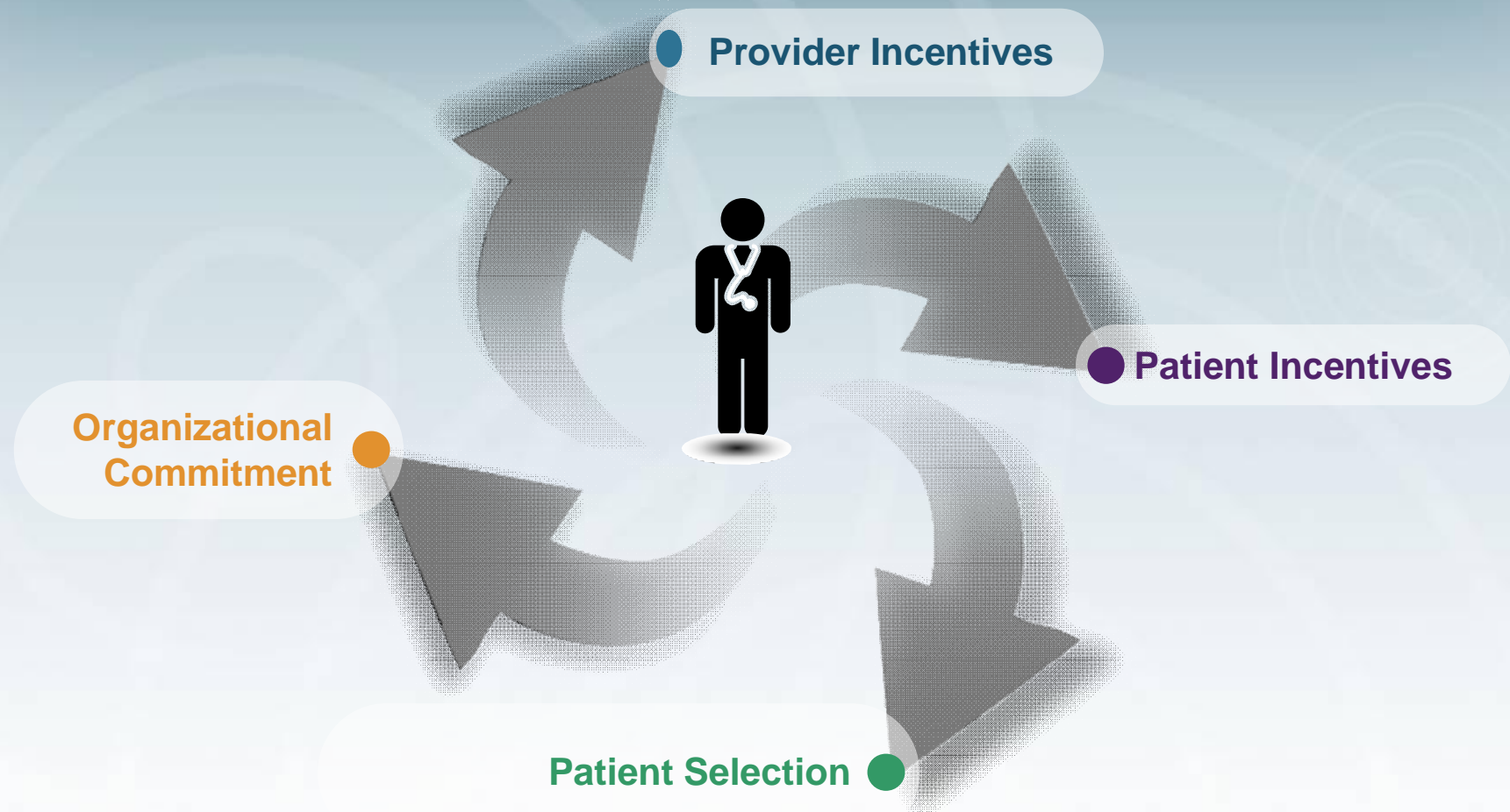
Medication Reminders

Encouraging Prenatal Care

Support While Battling Addiction



Connected Health Accelerators



Ways to 'Connect'



www.connected-health.org - 760 visits/day

Monthly Newsletter - 19,000 contacts

LinkedIn Group (Connected Health Community) - 2,900

Annual Symposium - 1,000 attendees