SENSOR GENERATED HEALTH DATA FOR BEHAVIOR CHANGE IN NURSE COACHING: A CASE STUDY

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Changing the Conversation

Provider reinforcement of positive behavior change

Patient develops goals for healthy behaviors, collects data through wearable sensor

Coach assists to create meaning from data and correlate to health behaviors

Opportunity to initiate a wellness conversation

mHealth Dashboard of patient progress integrated into clinical record
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Healthy U Clinical Trial

• Randomized clinical trial conducted from 2014-2015
• 105 UC Davis employees
• 3 Arms

UC Living Fit (UCLF) Exercise Program

UCLF + Activity Tracker

UCLF + Tracker + Nurse Coaching
Nurse Coaching: Motivational Interviewing (MI)

• Goal oriented, client-centered counseling style eliciting behavior change
• Focuses on facilitating and engaging intrinsic motivation
• Evidence suggests improved self-efficacy, supports behavior change, enhanced goal setting & problem solving capacity
• Registered Health Coach Training

(healthsciencesinstitute.org)
Health Tracking

• Device or application for monitoring & tracking fitness related metrics
  • Distance walked
  • Active minutes
  • Continuous heart rate
  • Sleep duration
  • Calories consumed

(www.fitbit.com)
Nurse Coaching: Healthy U Intervention

• Orientation: participant received activity tracker (Fitbit One) and introduced to nurse health coach

• Fitness test & survey

• Initial planning call with nurse coach and 5 bi-weekly support calls (3 months total)
Case Study

• Middle aged female
• Motivation for enrolling in the study
• Current exercise routine
• Goal focus
  • Activity: Steps & Distance
  • Nutrition portions
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Participant GOALS

• Will do a combination of walking/running on home treadmill for 30 minutes, 4 times per week.

• Later Sessions:
  • Achieve at least 8,000 steps per day 5 days a week
  • Limit caloric intake to 1400 calories per day 5 days per week.

• Goal focus
  • Activity: Steps & Distance
  • Nutrition portions
Case Study

• Greatest challenges
  • Initial resistance to embrace tracker metrics

• Greatest achievements
  • Tangible benefits from routine change
  • Motivated family

• Outcomes achieved
  • Success in reaching self-identified goals
  • Improvements in anthropometric measurements, cardiovascular fitness & exercise habits
  • Higher self-reported health status & quality of life ratings
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Outcomes Achieved

• Weight:
  • 64.8 kg → 60.0 kg

• Quality of Life:
  • 80 → 95 → 98

• VO2 Max:
  • 27.8 → 31.7 ml/kg/min
Conclusions

Enhancing Factors

- Engagement with technology
- Readiness to change

Limiting Factors

- Personal & Environmental Circumstances
  - Own health
  - Family priorities
Conclusions

• Impact of mHealth technologies + health coaching

• Contributing factors for success

• Aggregate trial level analyses are in progress
Implications for Future

- Foundational work for PCORI P^2E^2T^2 Improving Health in Diabetes research study
- Adds value to coaching practice and research
- Application to various populations
Thank you!
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