Effectiveness of Health Coaching on Health Outcomes and Health Services Utilization and Costs

BHAC Conference
April 22, 2013

Mary Jo Kreitzer PhD, RN, FAAN

University of Minnesota
Driven to Discover℠


UNIVERSITY OF MINNESOTA
Driven to Discover℠
Mary Jo Kreitzer, PhD
Yvonne Jonk, PhD
Karen Lawson, MD
Heidi O'Connor, MS
Kirsten Riise, PhD
David Eisenberg, MD
Bryan Dowd, PhD
CENTER FOR SPIRITUALITY & HEALING

Health Coaching

Background

Objective

Data Sources/Study Setting

Study Design

Data Collection

Principal Findings

Implications for Practice and Policy

Why Health Coaching?

- US has experienced dramatic increases in health care costs.
- Conventional approaches have not led to significant or sustainable changes in health-related behaviors.
- HRA approach does not foster self-management strategies or lead to behaviors that impact both current and future risk.
- ROI

Health Coaching

- Relatively new field.
- Distinctly different from health education.
- Lack of clarity in role, educational preparation and use of the title “coach”.
- Academic programs and continuing education programs.

Health Coaching

- Change Theory
- Self-Efficacy
- Positive Psychology
- Motivational Interviewing
- Patient Activation

Disease Management

- Coordinated and comprehensive care
- Clinical guidelines, pathways and algorithms
- Financial incentives
- Dominant focus – the disease itself.

Health Coaching

- Client identified priorities and goals
- Supporting health behavior change specific to the patient/client and their goals.

Health Coaching

- Relationship-Based
- Process of empowerment
- Client directed lifestyle and behavioral change
- Augmented with health education and promotion.

Health Coaching

- Focuses on increasing the client's self-motivation
- Self-efficacy
- Self-management skills

Health Coaching

Objective

To evaluate the effectiveness of health coaching in improving

- health outcomes
- reducing health services utilization
- reducing costs

Collaboration with a Health Plan

- U of MN Center for Spirituality & Healing developed a custom program to prepare health coaches in 2008.
- 200 hour program
- Minimum of BA degree – many fields – nursing, medicine, psychology, social work, nutrition, exercise physiology.
- Initial training as well as professional development.

Health Coaching

Data Sources/Study Setting

- Primary health questionnaire data were collected from January 2009 to December 2010
- Secondary administrative claims data were collected from June 2008 to June 2011
- Study participants were members of a health insurance plan who were offered a telephonic health coaching program to assist in managing their health and healthcare needs

Health Coaching

Study Design

High risk health plan enrollees were invited to participate in a health coaching intervention designed to

- improve participants' health and wellbeing
- motivate behavior change
- increase motivation and self-efficacy
- manage health conditions

Health Coaching

Study Design

Health coaching participants were either identified via claims data, physician referral, or self-enrolled.

Health coaches had degrees in:

- Nursing
- Psychology
- Social Work
- Exercise Physiology
- Nutrition Education
- Health Education

Health Coaching

Study Design

Health coaching participants chose to participate in either an *active or self-directed* track.

Active participants voluntarily filled out a health inventory @baseline & program completion assessing:

- lifestyle, health
- stress levels, quality of life
- readiness to make lifestyle & behavior changes
- patient activation levels

Health Coaching

Study Design

Experimental group: Health coaching participants

Control group: Non-participating health plan members who were otherwise eligible to participate in health coaching

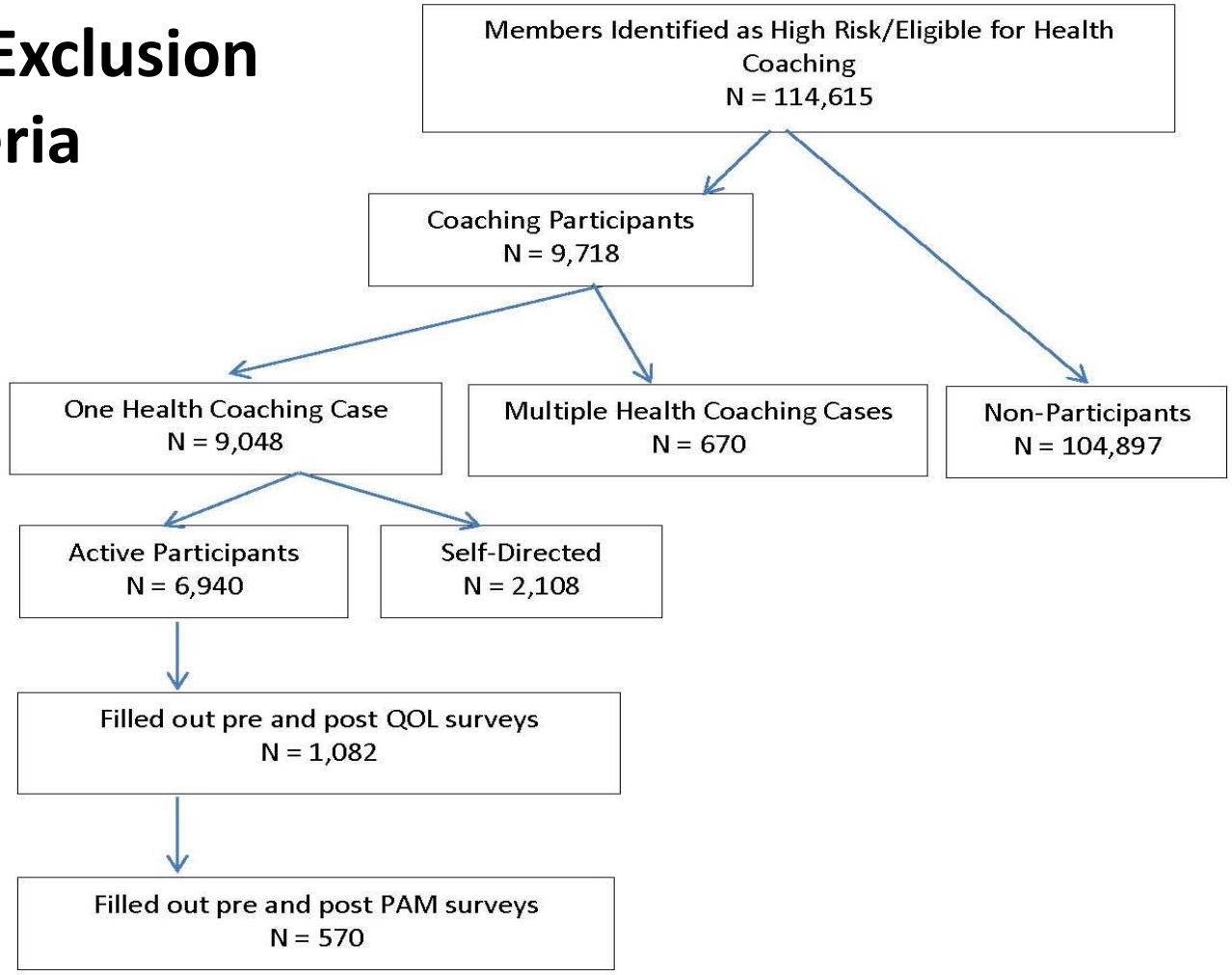
Health Coaching

Inclusion Criteria

- Age - 18 and 80
- Completed surveys measuring QOL, motivation, confidence and readiness for change.
- Participated in coaching for a minimum of 28 days.

Health Coaching

Inclusion/Exclusion Criteria



Health Coaching

Data Collection

Health coaching participants completed health inventories at

- baseline and
- program completion

Administrative claims data were examined for the experimental and control groups

- six months prior to and
- six months post participation

Health Coaching

Study Design

Administrative claims data

- Analyze differences in health services utilization and costs between the experimental and control groups
  - six months prior, and
  - six months post participation in health coaching
- Matched controls
  - assigned pseudo-enrollment dates mimicking the experimental group's distribution of the pre and post periods

Health Coaching

Participation & Survey Response Rates

- Active Participation: Less than 6% (6,940/114K) of potential candidates actively participated in health coaching
- QOL survey: Approximately 16% (1,082/6,940) of active participants filled out both pre and post QOL surveys
- PAM survey: Approximately 8% (570/6,940) of active participants filled out both pre and post PAM surveys

Health Coaching

Intervention

- Dedicated health coach
- Client identified health goals
- Process of health coaching – self-discovery and empowerment
- Scheduled coaching sessions
- Number of sessions varied but included at a minimum 8 phone sessions. (initial assessment, 6 coaching sessions and one evaluation session)
- Personalized educational mailings
- Workbook that addressed health behavior change, stress management and healthful living tips.

Health Coaching

Participants (n=1,082)

- 81% were between 40 and 65 years old
- 70% were female
- 80% lived in urban areas
- 79% were privately insured
- 19% were on Medicare/Medicaid
- 95% had at least one chronic condition

Principal Findings – Participants

Differences between final survey sample and non-responders

Characteristic	Active	Non-responders	Pre/Post QOL	P value
Sample size (n)	**6,940**	**5,858**	**1,082**	
Demographics				
Age (average for those age < 65 yrs)	48.8	48.0	52.9	<.0001
18-25	5.1%	5.7%	1.6%	<.0001
26-29	4.6%	5.1%	1.9%	<.0001
30-39	13.7%	14.6%	9.1%	<.0001
40-49	22.3%	22.9%	18.6%	0.002
50-59	34.2%	33.2%	39.5%	<.0001
60-64	15.6%	14.3%	22.7%	<.0001
65 and older	4.6%	4.2%	6.8%	0.0003
Gender (% male)	29.6%	29.3%	31.0%	0.28
Rural/urban (% rural)	15.5%	14.7%	20.0%	<.0001
Commercial (private) Insurance	65.3%	62.7%	79.1%	<.0001
Government (public) Insurance	33.2%	35.9%	19.0%	<.0001

Our final survey sample tended to be older - over age of 50, living in rural areas, and carrying private (commercial) vs public insurance

Health Coaching

Principal Findings – Session Participation and Goals

Of the 1,082 active participants with pre/post QOL surveys:

- On average, participants attended eight telephonic coaching sessions over a period of six months.
- Approximately 89% of the 1,075 people who set goals met at least one of their identified goals.

Health Coaching

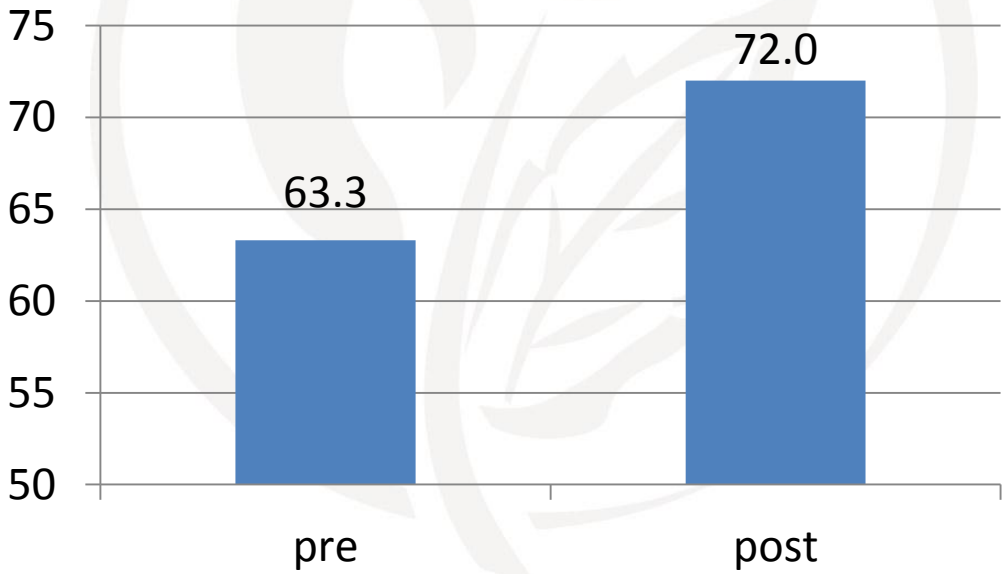
Principal Findings – Health Outcomes

- 12% reduction in stress levels
- 18% improvement in healthy eating
- 21% improvement in exercise levels
- 12-15% increase in the percent reporting good physical and emotional health

Health Coaching

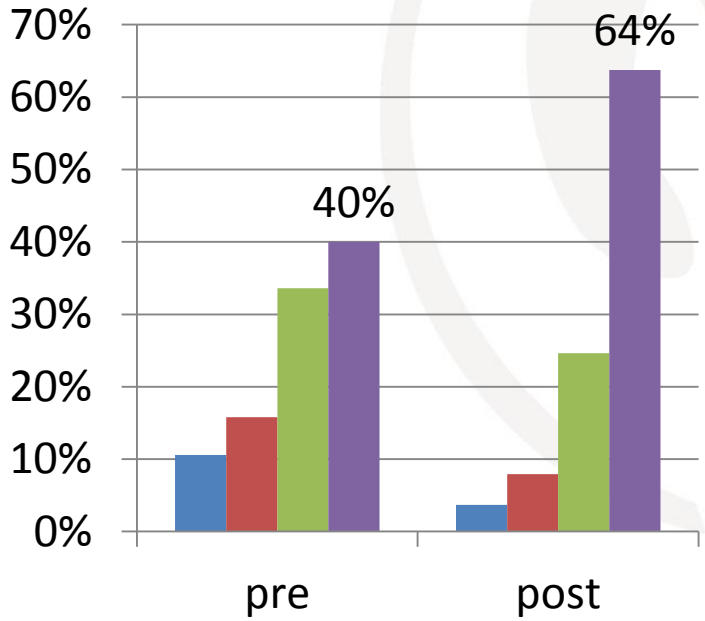
Principal Findings - Patient Activation Measure (PAM):

- Individuals realized an average 8-9 pt increase in PAM scores
- 60% reporting a clinically significant improvement >= 5 points



Principal Findings – PAM Scores & Stages

- 42% moved up one or more stages
- Significant increase in percent achieving stage 4



Stage 1	May not believe the patient role is important
Stage 2	Lacks knowledge, skills, or confidence to take action
Stage 3	Beginning to take action in own health and wellness
Stage 4	Maintaining healthy behaviors over time

Claims Analyses - Inclusion/Exclusion Criteria

Decision rules:

- Focus - commercially insured population with continuous coverage; exclude state public program enrollees (on/off coverage)
- Exclude top ~1% cost outliers

➢ sample reduced from 9,048 health coaching participants to 5,101

Health coaching inclusion/exclusion criteria:

- minimum length of health coaching participation = 4 weeks
- minimum amount of time in the pre and post periods = 6 months

➢ sample limited to 1, 161 active participants + matching controls

Principal Findings – Health Services Utilization

Compared to controls, the percent of health coaching participants with an inpatient, outpatient, or prescription claim was significantly lower in the post period.

	Experimental		95% CI		Matched Controls		95% CI	
Sample Size (n=1,161)	% with Claim	SE	Lower	Upper	% with Claim	SE	Lower	Upper
Inpatient								
Claim was Pre HC	20.3%	0.012	18.0%	22.6%	19.7%	0.012	17.4%	22.0%
Claim was Post HC	11.5%	0.009	9.6%	13.3%	17.6%	0.011	15.4%	19.8%
p-value	< 0.01				0.18			
Outpatient								
Claim was Pre HC	99.1%	0.003	98.5%	99.6%	97.0%	0.005	96.0%	98.0%
Claim was Post HC	96.1%	0.006	95.0%	97.2%	95.6%	0.006	94.4%	96.8%
p-value	< 0.01				0.08			
RX								
Claim was Pre HC	96.9%	0.005	95.9%	97.9%	95.9%	0.006	94.7%	97.0%
Claim was Post HC	93.8%	0.007	92.4%	95.2%	94.7%	0.007	93.5%	96.0%
p-value	< 0.01				0.20			

Principal Findings – Total Costs

Relative to controls, health coaching participants' combined inpatient, outpatient & prescription expenditures were significantly lower in the post period.

				95% CI	
Log Total Costs	Coef.	SE	P>|t|	Lower	Upper
Group	(omitted)				
Post	0.112	0.025	0.000	0.062	0.162
Group * Post	-0.172	0.035	0.000	-0.240	-0.104
Months in Health Coaching	0.066	0.005	0.000	0.056	0.075

Health Coaching

Conclusions

This study finds *evidence of improvements* in health and behavior outcomes and *reduced health care expenditures* following health coaching.

Particular *high risk subpopulations* such as patients with diabetes and cardiovascular disease may warrant further study.

While still in its initial stages of program development, this health coaching program has the *potential to expand* its outreach and enrollment efforts.

Health Coaching

Implications for Healthy Academic Communities

Health behavior of faculty, staff and students contribute significantly to the health care cost burden of universities.

Evidence that health coaching may be a cost effective approach for improving health outcomes and reducing costs.

Health coaching may be a relatively low-cost strategy.

Additional research is needed to evaluate the impact of health coaching within academic communities.

Wellbeing

Mary Jo Kreitzer, RN, PhD, FAAN
Director, Center for Spirituality & Healing

UNIVERSITY OF MINNESOTA
Center for Spirituality & Healing
CENTER FOR SPIRITUALITY & HEALING


QUESTIONS?
kreit003@umn.edu