Transforming the Patient Experience: The Role of Health Coaching in Chronic Disease State Management

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Pharmacist Learning Objectives

- Define health coaching
- Distinguish between health coaching and motivational interviewing
- Discuss the role of health coaching in chronic disease state management
- Utilize key skills, including open-ended questions, affirmations, reflective listening, and summarizing in health coaching activities

Pharmacy Technician Learning Objectives

- Define health coaching
- Distinguish between health coaching and motivational interviewing
- Utilize key skills, including open-ended questions, affirmations, reflective listening, and summarizing in health coaching activities

Chronic Diseases: Death, Disability, and Costs

- 117 million (1 in 4 adults) had one or more chronic health conditions in 2012
- 7 out of 10 causes of death were chronic diseases in 2010
- 86% of all health care spending in 2010 was for people with one or more chronic medical conditions
- Total estimated cost of diagnosed diabetes in 2012 was $245 billion
- Medical costs associated with obesity estimated to be $147 billion in 2008
- Estimated $289 billion/year due to smoking in 2009 to 2012

http://www.cdc.gov/chronicdisease/overview/. Accessed October 20, 2016.

Health Risk Behaviors That Cause Chronic Diseases

- 52% adults did not meet exercise recommendations in 2011
- 47% have at least one major modifiable risk factor for heart disease or stroke
- 90% consume excessive sodium
- More than 42 million adults smoked cigarettes in 2012
- At least 480,000 deaths each year related to cigarette smoking

http://www.cdc.gov/chronicdisease/overview/. Accessed October 20, 2016.

Barriers to Chronic Disease State Management

- Chronic health conditions originate from lifestyle choices independent of professional care
- Patient adherence to provider suggested health-related lifestyle changes < 50%[1]
- Provider-centric vs. patient-centric interventions[2]
- Interventions targeting treatment adherence and self-management improve patient health and reduce healthcare costs[3]

1. *Harwood Academic* 1998. 2. *Australian Journal of Primary Health 2003;177-185.* 3. *Journal of Asthma* 2000; 37: 641-651.

HEALTH COACHING AND MOTIVATIONAL INTERVIEWING

What is Health Coaching?

- Bridges gap between medical recommendations and patient abilities to implement recommendations
- Facilitates behavior change in a structure, supportive partnership between the patient and coach
- Identifies obstacles to change and create strategies for forward movement
- Empowers patients by providing additional resources for health behavior changes

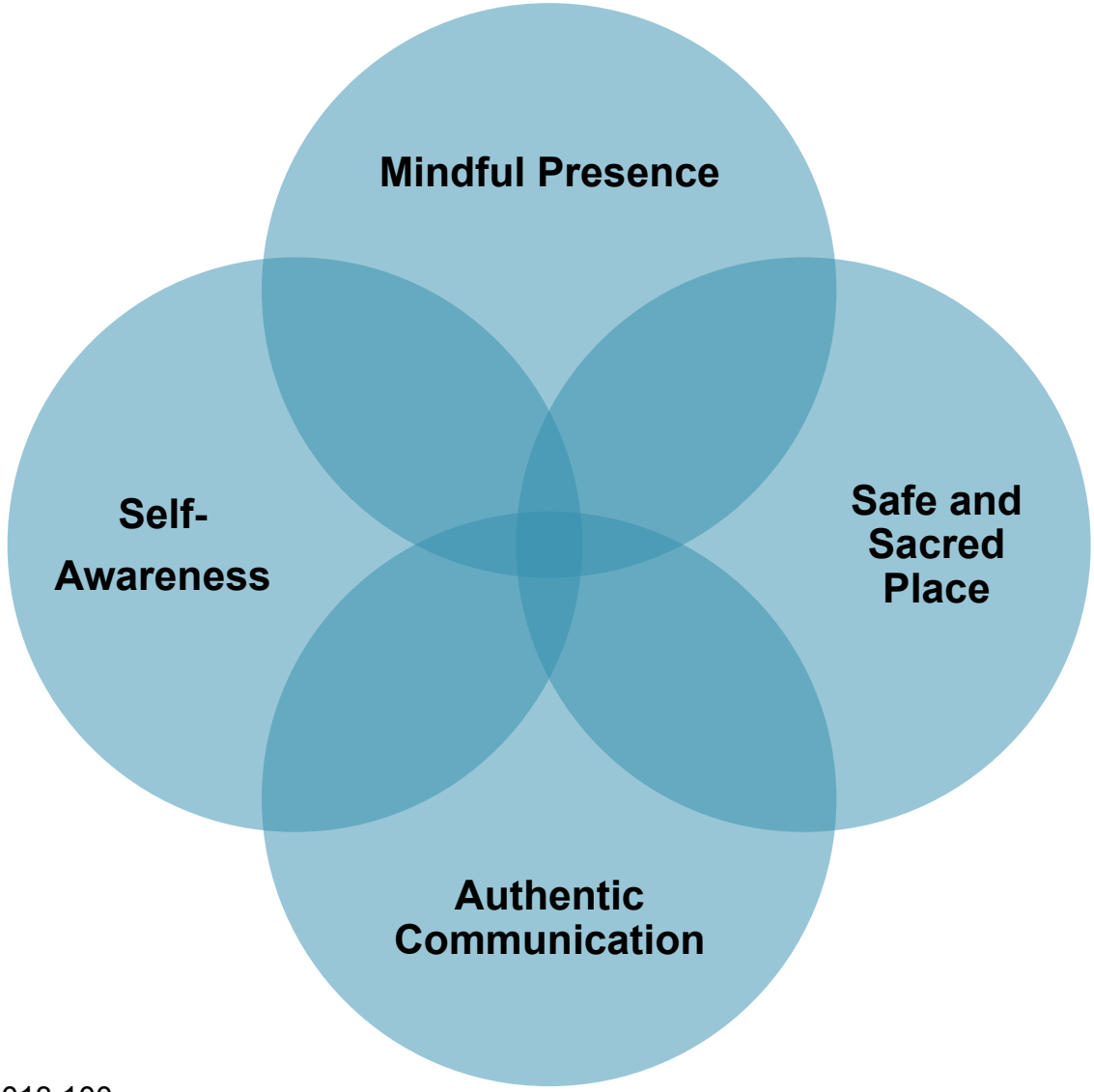
https://www.dukeintegrativemedicine.org/patient-care/individual-services/integrative-health-coaching/. Accessed October 1, 2016.

5 Roles of a Health Coach

- Self-management support
- Bridge between clinician and patient
- Navigation of healthcare system
- Emotional support
- Continuity figure

Fam Pract Manag 2010;7(5):24-29.

Four Pillars of Health Coaching



BMC Fam Pract. 2013;100.

Motivational Interviewing

- “a client-centered, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence”
- Cognitive dissonance (Leon Festinger) and self-perception (Daryl Bem)
- Brief method of communication (1-2 sessions)

Global Adv Health Med. 2013;2(4):25-35.

Motivational Interviewing

Phase I

increasing motivation to change

Phase II

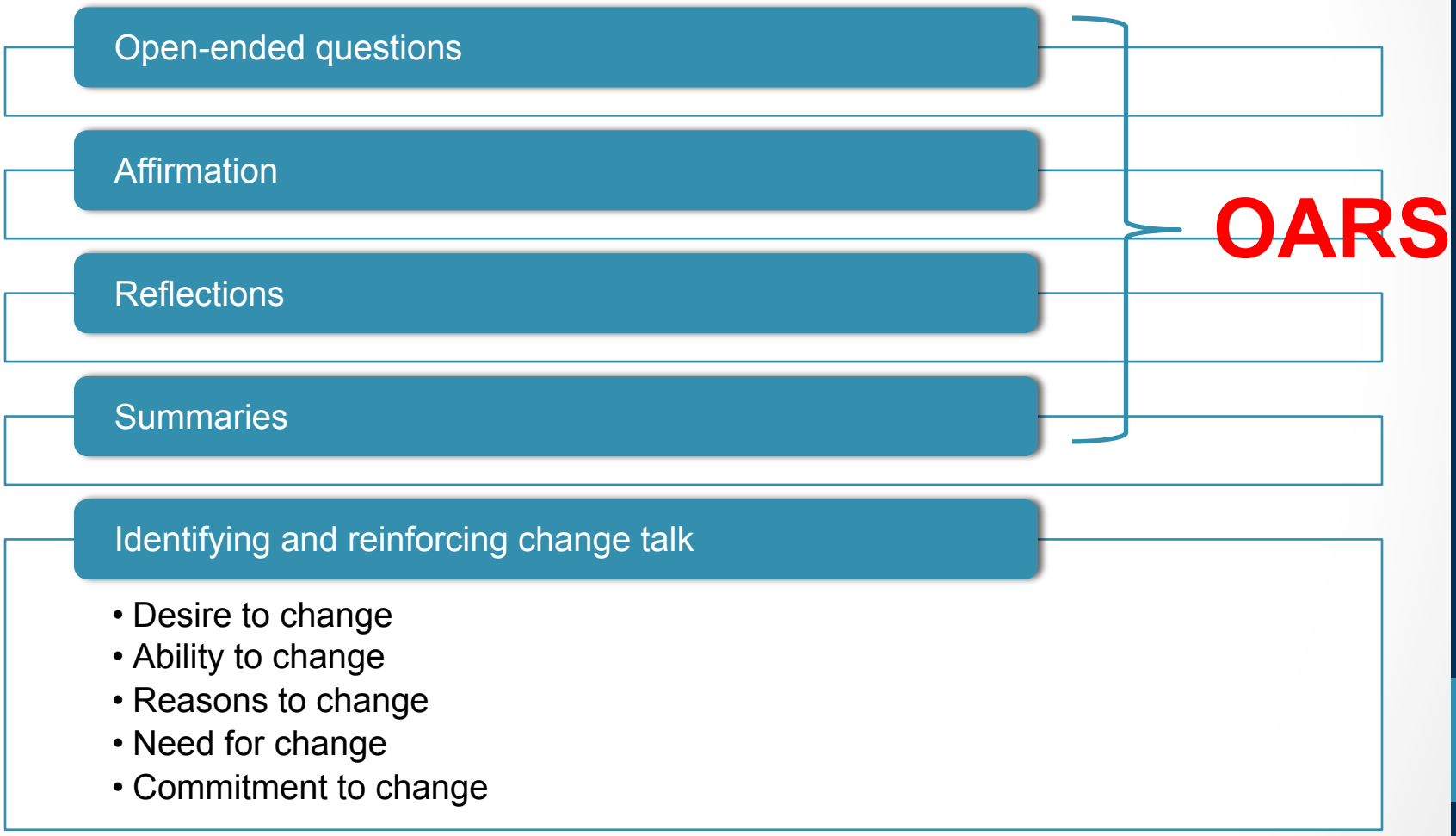
consolidating commitment to change

Guiding Principles

- Express empathy
- Developing discrepancies
- Rolling with resistance
- Supporting self-efficacy

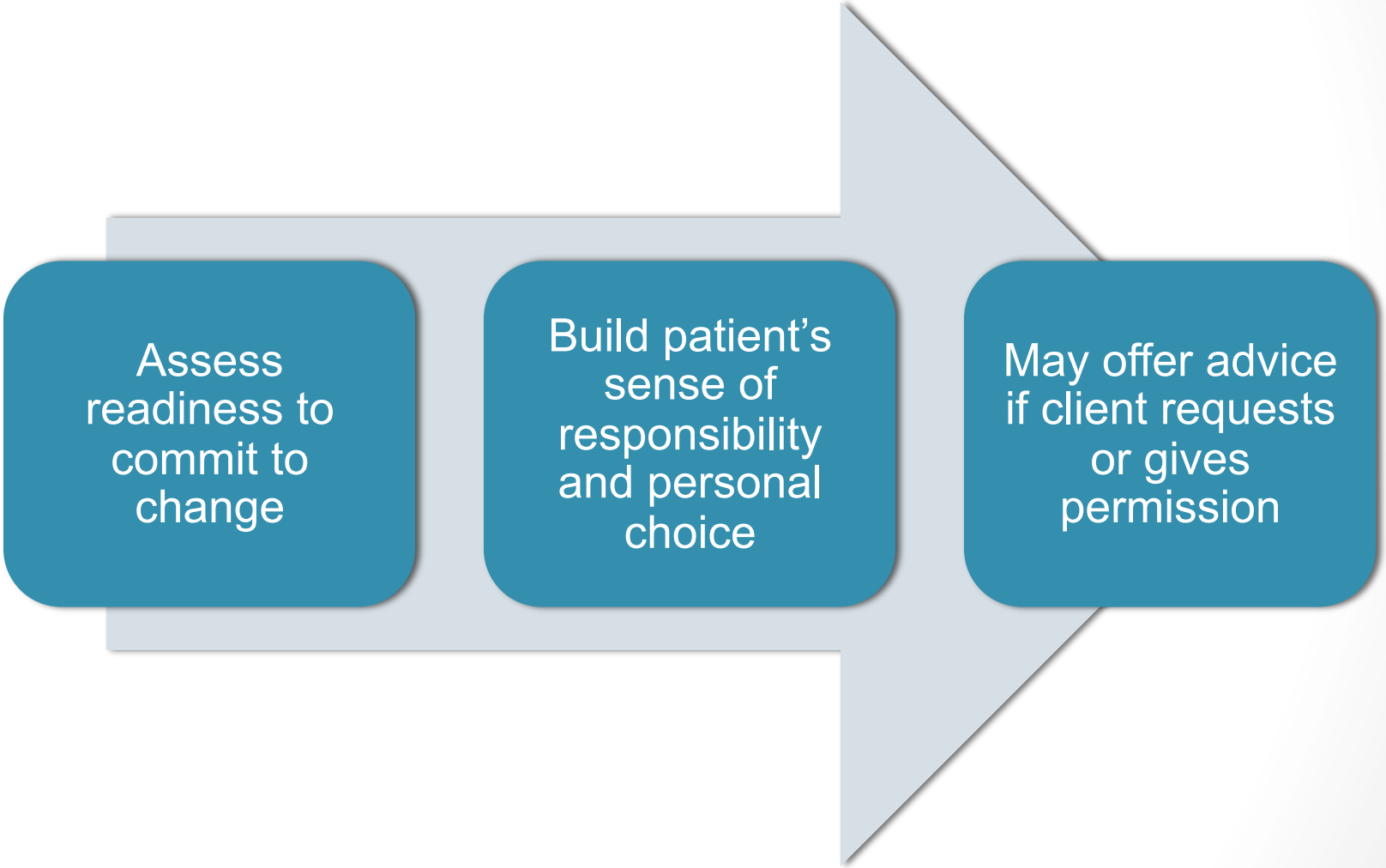
Global Adv Health Med. 2013;2(4):25-35.

Motivational Interviewing
Phase I Strategies



Global Adv Health Med. 2013;2(4):25-35.

Motivational Interviewing
Phase II Strategies



Global Adv Health Med. 2013;2(4):25-35.

Health Coaching vs. Motivational Interviewing

- Theoretical foundation in behavior change and motivation
- Client autonomy to choose goals and act
- Empathy, acceptance, human relationship
- Resolve ambivalence
- OARS, change talk, scaling questions
- Explore attitudes/beliefs around behaviors
- Develop plan for behavior change

HC

- Comprehensive, time-sensitive
- Whole person model of health
- Vision and values anchored to behavior change
- Support clients across behavior change continuum

MI

- 1-2 sessions approach that is integrated or followed with other methods
- Method of communication to increase motivation and commitment to change
- Focused on a primary behavioral issue
- Process ends after client's verbal commitment to change

Global Adv Health Med. 2013;2(4):25-35. MI = motivational interviewing; HC = health coaching

Meet Mary

- Mary is a 67-year old female who presents for a primary care visit. She is obese, has hypertension, and type 2 diabetes (on insulin). Her most recent A1C is 11.3% up from 9.6% 3 months earlier. She consumes regular soda on daily basis and rarely exercises. Patient is non-adherent to her medication regimen.

Meet Mary

Health Coach

- Session 1
  - Self-assessment survey
  - Envisioning exercise
- Session 2
  - Patient current status, values, and vision via open-ended questions
- Session 3-4
  - Focus areas
  - 3- or 6-month goal setting
- Session 5
  - Develop action steps to achieve goals
- Session 6-8
  - Continue to work on action steps

MI

- 1-2 sessions
- Focus on diabetes control alone
- Identify and resolve ambivalences via OARS and change talk
- Goal-setting
- Outline plan and solicit verbal commitment from patient to that plan
- Sessions terminated after plan articulated

HC vs. MI vs. Traditional Medication Counseling

	Key Components	Theoretical Basis	Process	Pharmacy Practice Outcomes
Health Coaching	Behavior change can be sustained when linked to personal values and sense of purpose	Developmental and humanistic psychology; self-efficacy and self-concordance	Intensive interventions (e.g., 6-8 sessions of 30-40 min duration)	Personalized health plan Partnership with patients Health is broader than absence of disease Support
Motivational interviewing	Change talk to promote capacity for change Identify necessary conditions for change	Cognitive dissonance; self perception theory; Carl Rogers' person-centered theory	Brief method (1-2 sessions) 2 phases	Develop discrepancy-cognitive dissonance between current behavior and what client would like things to look like in future
Traditional medication counseling	Follow, and do not question the directions of expert; practitioner assumes patient lacks knowledge, tells patients what to do; practitioner expects to "save" the patient	Biomedical Model	Provides information to patient; practitioner dictates patient's behavior; practitioner persuades patient to change behavior	Patient has accurate information about their medication regimen

Res Social Adm Pharm. 2016; pii: S1551-7411(16)30211-X.

HEALTH COACHING LITERATURE

Willard-Grace, *et al.*

Objective

- To test effectiveness of clinic-based medical assistant health coaching vs. usual care to improve clinical indicators among low-income patients with uncontrolled type 2 diabetes, hypertension, and hyperlipidemia

Methods

- 12-month randomized controlled trial at two safety net primary care clinics in San Francisco, California
- Primary outcome: composite measure of being at or below goal at 12 months for at least 1 of 3 uncontrolled conditions at baseline defined by A1c, systolic blood pressure, and LDL
- Secondary outcomes: meeting 3 goals, meeting individual goals
- Pre-visit, during exam, post-visit health coaching at least 1 contact/ month and in-person visit at least once every 3 months

Ann Fam Med 2015;13:130-138

Willard-Grace, *et al.*, cont.

Results

- 224 HC group vs. 217 to usual care group
- Study population
  - Mean age 53 years
  - More than one-half were women
  - Mostly first-generation immigrants and spoke Spanish as primary language
  - 34% annual household income < $5000
- HC arm achieved both primary composite measure (46.4% vs. 34.3%, P = 0.02) and secondary outcomes (34.0% vs. 24.7%, P = 0.05)
- Twice as many coached patients achieved hemoglobin A1c goal (48.6% vs. 27.6%, P = 0.01)
- Coached patients achieved LDL cholesterol goal (41.8% vs. 25.4%; P = 0.04)
- No difference in systolic blood pressure goal

Conclusions

- Medical assistants serving as in-clinic health coaches improved control of hemoglobin A1c and LDL levels

Ann Fam Med 2015;13:130-138; HC = health coaching

Wagner, *et al.*
Cost analysis of Willard-Grace, *et al*

Objectives /Methods

- Determine added costs associated with implementing HC program in 2 primary care clinics
- Estimated cost of health coaches based on labor, training, supplies, and space

Results

- ~9 hours/participant over 12 months
- $483/participant/year (national median estimation ~ $356/participant/year)
- 70% costs attributable to direct labor costs, 6% related to training, 24% related to staff benefits, space, and supplies
- No differences in average 1-year healthcare costs for patient in intervention vs. control ($3207 vs. $3276; P = 0.90)

Discussion/ Conclusion

- Short time frame
- CMS reimbursement
- Lacking cost-effectiveness analysis

Am J Manag Care. 2016;22(4):e141-146. HC = health coaching; CMS = Centers of Medicare and Medicaid Services

Jonk, *et al*.

Objectives

- Evaluate effect of health coaching on inpatient, emergency room, outpatient, and prescription drug expenditures

Methods

- Quasi-experimental pre-post design over 2-year time period
- Matched cohort
- High-risk health plan enrollees invited to participate in telephonic health coaching
- 5-6 health coaching sessions, at least two visits in minimum 4-week time period
- Administrative claims data to analyze pre- and post-health coaching expenditures

Med Care. 2015;53(2):133-140.

Jonk, *et al*., cont.

Results

- 1161 HC participants and 1161 non-participants had minimum of 6 months of claims data pre- and post-intervention
- Average number health coaching sessions 5.35 (range 4-20.8)
- No difference in emergency room expenditures but significant increase of $83-$151 from pre- and post-periods in control group (p=0.0004)
- Emergency room visits decreased from 24.5% to 17.1% in intervention group
- Average cost of outpatient visits per member month decreased $476 to $356 (P = 0.006) in intervention group vs. control group increased $426 to $580 (P=0.02)
- Estimated outpatient and total cost savings were $286 and $412 per person per month in intervention group

Conclusions

- HC led to significant reductions in outpatient and total expenditures for high-risk enrollees
- Initial stages of health coaching program development

Med Care. 2015;53(2):133-140.

Considerations

- Low-income/high-risk study population
- Role of pharmacy technicians and pharmacists
- Training
- Affordability and investment of time
- Clinic or pharmacy workflow
- Differentiation between health care professional and health coach[1]

1. Educ Prim Care. 2013;24(6):418-26.

Wertz, *et al*.

Objective

- Evaluate effect of Cincinnati Pharmacy Coaching Program (CPCP) on clinical and economic outcomes

Methods

- Quasi-experimental pre/post longitudinal study in patients identified and enrolled in CPCP between January 2008 and December 2009
- 4 cohorts
  - Intervention: diabetes coaching program (DCP), hypertension health coaching program (HHCP)
  - Control: diabetes control group, hypertension control group
- Value-based insurance design (VBID) implemented by Anthem Blue Cross & Blue Shield; partnered with Kroger Pharmacy and employer groups (Kroger and city of Cincinnati)
- Administrative claims to analyze costs
- Regular visits with community-based pharmacists and financial incentives

Manag Care. 2012;21(3):44-54.

Wertz, *et al*.

Results

- 607 patients in intervention vs. 557 in control group
- Average duration of program participation 14 months
- Active, working enrollees averaged 6 pharmacist encounters and retirees averaged 9.5 encounters
- Intervention groups had more anti-hypertensive medications, insulin and metformin use at baseline
- Increase in anti-hypertensive medications in intervention group vs. control (+7.9% vs. +1.4%; P = 0.019)
- Increase in statins in DCP vs. control (+12% vs. -1%; P= 0.021)
- Significant increase in anti-hypertensive medication and diabetic adherence in both intervention groups

Manag Care. 2012;21(3):44-54.; DCP = Diabetes Coaching Program

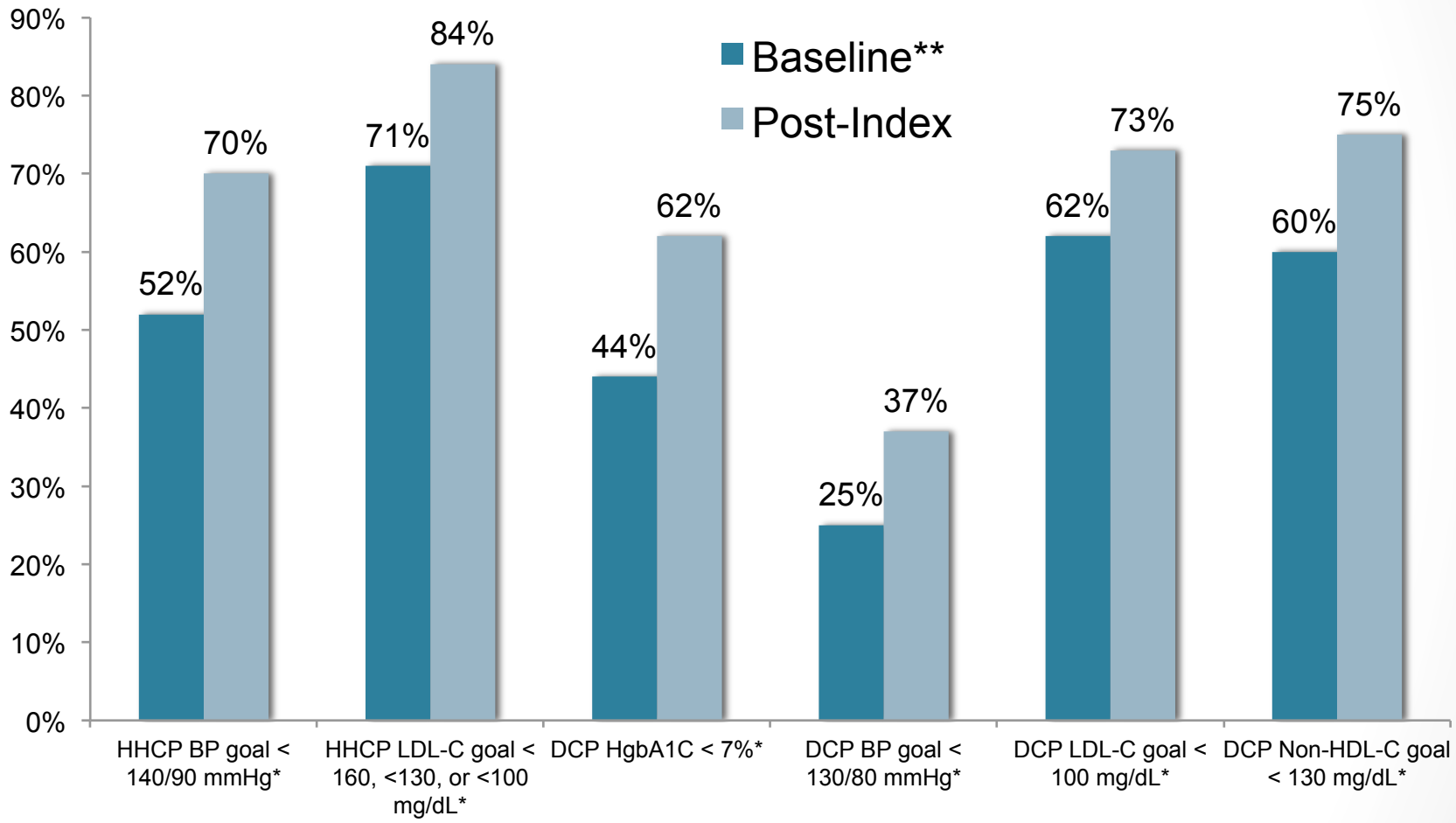
Clinical Measures
Baseline vs. Final Post-Index: within-subject comparison

	N	Baseline mean	Final mean	% change in mean	P-value
HHCP					
BP systolic	283	136.1	129.5	-4.85%	<0.05
BP diastolic	283	83.5	79.3	-5.03%	<0.05
Total cholesterol	98	183.0	172.0	-6.01%	<0.05
LDL	97	104.1	97.2	-6.63%	<0.05
DCP					
HbA1C	142	7.9	7.1	-10.1%	<0.05
Total cholesterol	141	166.9	156.7	-6.1%	<0.05
LDL	139	91.6	84.0	-8.3%	<0.05
BP systolic	265	136.1	130.4	-4.2%	<0.05
BP diastolic	265	81.0	76.3	-5.8%	<0.05

*No significant difference in triglycerides, HDL in both groups

Manag Care. 2012;21(3):44-54.

HHCP and DCP Clinical Goal Attainment



*P<0.05 for all comparisons shown

**Baseline was defined as clinical value obtained on index date or up to 183 days before index date. The latest value of the clinical measure within each time interval, if available, was capture for analysis.

Manag Care. 2012;21(3):44-54.

All-cause and disease-attributable health care costs

HHCP	Intervention			Control		
Hypertension-related costs	**Pre-index (n = 201)**	**Post-index (n= 210)**	**% change**	**Pre-index (n = 193)**	**Post-index (n = 193)**	**% change**
Total costs‡, mean ± SD	$2,114 ± 4,197	$1,792 ± 3,847	-15.2%	$2,021± 11,028	$1,968 ± 5,112	-2.63%
Office visits, mean ± SD	$91 ± 109	$111 ± 129	+21.5%	$84 ± 96	$97 ± 106	+14.8%*
ER visits, mean ± SD	$89 ± 342	$54 ± 229	-39.2%**	$99 ± 310	$83 ± 475	-16.0%**
All-cause						
Total costs‡, mean ± SD	$7,104 ± 9,182	$6,541 ± 7,202	-7.9%	$6,598 ± 13,186	$6,316 ± 8,630	-4.3%
Pharmacy claims	$2,240 ± 2,396	$2,637 ± 3,086	+17.8%*	$2,204 ± 2,275	$2,511 ± 3,288	+14.0%*
Coaching program costs	$2 ± 15	$493 ± 256	N/A	N/A	N/A	N/A

*Significant at $p<0.05$ for pre/post comparison
**Significant at $p<0.05$ for treatment vs. control group interaction with within-subject effect
‡ All visits, OV, ER, IP, OP, and RX, excluding cost of coaching program

Manag Care. 2012;21(3):44-54.

All-cause and disease-attributable health care costs

DCP	Intervention			Control		
Diabetes-related	**Pre-index (n = 214)**	**Post-index (n= 214)**	**% change**	**Pre-index (n = 180)**	**Post-index (n = 180)**	**% change**
Total costs[ŧ], mean ± SD	$2,966± 7,721	$3,950 ± 8,316	+33.2%	$3,428 ± 16,659	$1,968±5,112	+20.8%
Office visits, mean ± SD	$174± 167	$241± 396	+38.4%**	$150 ± 231	$145 ± 162	-3.6%**
Inpatient visits, mean ± SD	$1,052± 1,310	$1,243± 1,607	+18.2%*	$1,563 ± 16,010	$2,123 ± 11,322	+35.8%*
Pharmacy claims, mean ± SD	$1,137± 1,310	1,525± 1607	+34.1*	$860± 1,205	$1,000± 1,372	+16.2%*

*Significant at p<0.05 for pre/post comparison
**Significant at p<0.05 for treatment vs. control group interaction with within-subject effect
ŧ All visits, OV, ER, IP, OP, and RX, excluding cost of coaching program

Manag Care. 2012;21(3):44-54.

All-cause and disease-attributable health care costs

DCP	Intervention			Control		
Cardiovascular-related	**Pre-index (n = 214)**	**Post-index (n= 214)**	**% change**	**Pre-index (n = 180)**	**Post-index (n = 180)**	**% change**
Total medical costs°, ± SD	$965 ± 6,883	$1,071 ± 582	+11.0%*	$406 ± 1,941	1,619 ± 9,742	+299.1%*
Office visits, mean± SD	$20 ± 63	$48 ± 348	+144.8%*	$14 ± 44	$29 ± 104	+116.7%*
ER visits, mean ± SD	$18 ± 122	$2 ± 21	-89.3%***	$4 ± 30	$7 ± 77	+96.1%**
Inpatient visits, mean ± SD	$1,052 ± 6,631	$1,243 ± 7,232	+18.2%	$231 ± 1,486	$1,394 ± 9,225	+504.0%*
All-cause						
Total costsŧ, mean ± SD	$9,100 ± 10,862	$10,934 ± 14,318	+20.2%*	$11,816 ± 29,098	$14,283 ± 37,771	+20.9%*
Pharmacy claims	$4,145 ± 3,536	$5,011 ± 3,990	+20.9%**	$4,124 ± 5,010	$4,584 ± 6,240	+11.2%**
Coaching program costs	$1±6	$552±350	N/A	N/A	N/A	N/A

*Significant at p<0.05 for pre/post comparison
**Significant at p<0.05 for treatment vs. control group interaction with within-subject effect
° Office, ER, OP, IP
ŧ All visits, OV, ER, IP, OP, and RX, excluding cost of coaching program

Manag Care. 2012;21(3):44-54.

Conclusion

- Statistically significant decreases in HgbA1C, lipid levels, and blood pressure readings
- Greater goal attainment of clinical measures
- Improved adherence
- Cardiovascular-related cost trends were favorable
- Consider longer timeframe for full economic outcomes

MOTIVATIONAL INTERVIEWING LITERATURE

Previous Studies

Rubak, *et al*.

- Systematic review and meta-analysis of randomized controlled trials using MI as the intervention
- 72 randomized controlled trials
- Significant effect for combined effect estimates for BMI, total blood cholesterol, systolic blood pressure, blood alcohol concentration
- No differences on A1c and cigarettes per day

Lundahl, *et al*.

- Systematic review and meta-analysis to investigate MI's efficacy in medical care settings
- Database searches of randomized clinical trials comparing patients who received MI and who did not receive MI
- 48 studies (9618 participants)
- Statistically significant, modest advantage for MI (OR 1.55; CI 1.40-1.71) in HIV viral load, dental outcomes, death rate, body weight, alcohol and tobacco use, sedentary behavior, self-monitoring, confidence in change, and approach to treatment
- Not particularly effective with eating disorder or self-care behaviors

Br J Gen Pract. 2005;55(513):305-312. *Patient Education and Counseling*. 2013; 93:157-168.

PILOT STUDY: BAYLOR SCOTT & WHITE COMMUNITY CARE CLINICS

BSW Pilot Study

- Enrolled high-risk patients with uncontrolled diabetes and/or hypertension starting in January 2016
- Interdisciplinary program (2 PharmD, 1 pharmacy technician, 1 RN health coach, provider)
- Motivational interviewing/health coaching
- Program components
  - Orientation
  - Pre- and post-patient activation measure (PAM) survey[1]
  - Patient encounters (weekly or biweekly)
    - Medication management
    - Lifestyle modifications
    - Resources

[1] *Health Serv Res*. 2004;39(4 Pt 1):1005-1026.

Baylor Scott & White HEALTH

BSW Pilot Study

A1C Outcomes	Initial Visit (n = 10)	Last Visit (n = 10)
A1C (%), mean ± SD	12.1 ± 1.66	9.2 ± 1.2*
BP Outcomes	**Initial Visit (n = 7)**	**Last Visit (n = 7)**
Mean baseline BP ± SD , mm Hg Systolic Diastolic	 145 ± 14.1 81 ± 5.1	 126 ± 15.4 81.7 ± 6.5

*3 patients reached goal A1C

- Average ~4 in-person and ~5 telephonic PharmD visits/patient
- Average ~4 in-person and ~2 telephonic RN Health Coach visits/patient
- 18 pre-intervention hospitalizations vs. 5 post-intervention hospitalizations
- Challenges/Future directions
  - Lost to follow-up
  - Time-intensive
  - Technology
  - Group classes

Baylor Scott & White HEALTH

Training Pharmacist and Pharmacy Technician Health Coaches

- National Society of Health Coaches (NSHC)
- National Consortium for Credentialing Health & Wellness (NCCHWC)
- Duke Integrative Health Coaching

Future Directions

- Development of pharmacy health coaching curriculum
- Likelihood of pharmacy engagement in health coaching
- Pharmacy perceived self-efficacy
- Practicality of pharmacy health coaching
- Public perception of pharmacy as health coaches
- Comparing efficacy of health coaching vs. other communicative interventions

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Final Thoughts

- Important to recognize health is broader than the absence of disease
- Supporting patients to achieve optimal health takes into account their mental, physical, and social well-being
- Pharmacy-based health coaching programs has potential to improve patient outcomes

Res Social Adm Pharm. 2016; pii: S1551-7411(16)30211-X. *Adult Learn*. 2012;129-137. *Dis Manage Health Outcomes*. 2007;299-307. J Prim Care Community Health. 2015;250-255.