# Literature search results

For the International compendium of health behavior

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# PART I: LITERATURE SEARCH PROCEDURE

#### A. INTRODUCTION

This document describes the process I followed to find the research literature cited in the initial version of the *International Compendium of Health Behavior* (the "Compendium"). This literature reflects the current knowledge about the health behavior of health system agents.

## **B. SEARCH GOALS**

The primary goal of this literature search is to find and organize research resources that describe thirty health behaviors underlying three agent-based simulation models that I developed to accompany the report titled "Simulating health behavior – a guide to solving complex health system problems with agent-based simulation modeling". These health behaviors are described in the *Compendium*.

A secondary goal is to illustrate a search procedure that is:

- **Reproducible.** The search procedure should be easily reproducible, in order for others to further develop the Compendium.
- **Efficient.** It should efficiently produce relevant search results.
- **Comprehensive.** It should identify all significant research literature that relates to a health behavior.

#### C. SEARCH PROCEDURE

The search process consists of the following steps:

1. Develop search terms. The first step is to develop "search terms" for the health behavior of interest. (see the sidebar). Developing search terms is largely trial and error: one tries a variety of potential terms to find those that yield the most useful and manageable results. In developing search terms, it is helpful to look at keywords of known relevant research literature (found in the literature's bibliographic reference), and at relevant "medical subject headings" (MeSH—found at "www.nlm.nih.gov/mesh"). In Part II (Search results), each behavior's search terms are found in quotes after the label "search term".

## Search terminology

Following is the literature search terminology used in this report.

- "Search terms" are words or phrases related to a topic that are used to find resources on that topic within a database. For example, I used the search term "physician referral" to find resources related to the health behavior "recommend a specialist".
- "Hits" are the resources found in a database from using search terms. There are often thousands, or even millions, of hits.
- "Primary resources" are those resources found directly from searching a database.
- "Referenced resources" are those resources that are mentioned within a primary resource.
- "Citing resources" are those resources that cite a primary resource.
- "Related resources" are those resources that have similar keywords to those of the primary resource.

This report was prepared for the Health Section of the Society of Actuaries, and is available at "www.soa.org/Research/Research-Projects/Health/Simulating-Health-Behavior-A-Guide-to-Solving.aspx".

#### C. SEARCH PROCEDURE continued

- 2. Identify relevant databases. The next step is to identify databases that would provide useful resources, and that can be easily accessed. For the initial *Compendium* literature search, I found the Google Scholar database (scholar.google.com) to be excellent. It produces comprehensive journal literature, as well as book references, and is easy to use. In the future, as the *Compendium* expands, it may become necessary to employ additional databases.
- 3. Find primary resources. Using the search terms and databases developed in the first two steps, the next step is to search the databases for potentially useful resources. All the resources returned by a database are called "hits" (see the sidebar on the previous page) By manually reviewing each of the top 100 hits from Google Scholar, I determined the potential usefulness of each resource. Potentially useful hits are called "primary resources". (see the sidebar on the previous page) In Part II (Search results), primary resources are the leftmost references listed under each search term. (see the figure below)
- 4. Find citing resources. Using Google Scholar's "cited by" facility shown under each primary reference, the next step is to search for potentially useful "citing resources". (see the sidebar on the previous page) By manually reviewing each of the citing resources, I determined the potential usefulness of each resource. In Part II (Search results), a citing resource is indented under the primary resources which it cites, and is preceded by the symbol "(<)". (see the figure below)

## Search term Primary resource Search term: "physician selection" Butler ES; Consumer's ranking of criteria for selection of a primary care physician; Issues in Information Systems; 2002 [\*] Referenced resource (>) Butler ES; Factors consumers consider in the selection of primary care physicians; AAMA Executive; 1996 (>) Moore S; How consumers evaluate health care quality. Part III; Health Marketing Quarterly; 1999 $(\gt) \ Yucelt \ U; \ An investigation \ of \ causes \ of \ patient \ satisfaction/dissatisfaction \ with \ physician \ services; \ Health$ Marketing Quarterly: 1994 Gerbert B; Video study of physician selection: preferences in the face of diversity; Journal of Family Practitioners; Related resource Hanna N; Physician choice criteria; Health Marketing Quarterly; 1994 (=) Hickson GB; First step in obtaining child health care: selecting a physician; Pediatrics; 1988 [\*] (=) Hill CJ; Factors influencing physician choice; Hospital Health Services Administration; 1991 (<) Mercado F; Patient preferences in choosing a primary care physician; Journal of Primary Care & Community Health; 2012 [\*] Citing resource (=) Stewart DW; Information search and decision making in the selection of family health care; Journal of Health Care Marketing; 1989 [\*]

#### C. SEARCH PROCEDURE continued

- 5. Find referenced resources. The next step is to manually review the bibliography of each primary resource, to search for potentially useful referenced resources. (see the sidebar on the previous page) In Part II (Search results), a referenced resource is indented under the primary resources in which it is cited, and is preceded by the symbol "(>)". (see the figure on the previous page)
- 6. Find related resources. Using Google Scholar's "related articles" facility shown under each primary reference, the next step is to search for potentially useful "related resources". (see the sidebar on the previous page) By manually reviewing each of the related resources, I determined the potential usefulness of each resource. In Part II (Search results), a related resource is indented under the primary resources to which it relates, and is preceded by the symbol "(=)". (see the figure on the previous page)
- **7. Select the most useful resources.** The next step is to read each primary resource, citing resource, referenced resource, and related resource, to find the resources that provide the most useful information about the health behavior. These references are then cited in the *Compendium*.

## D. FUTURE DIRECTIONS

The medical, social, and biological literature is a rich source of information about health system agents and their behaviors, but too vast for manual review. To help researchers deepen and expand the *Compendium*, and keep it up to date, it is critical to develop an automated literature search procedure that updates existing Compendium entries.

Using the semantics of the Health Systems Otology described in the *Compendium*, such an automated search engine would:

- Search databases. It would continually search the world's research databases for facts about health behaviors.
- **Extract relevant information**. It would extract information about each health behavior, in a form suitable for rapid human review.
- Integrate information. It would integrate approved information into the *Compendium*, updating citations, bibliographic references, indexes, etc.

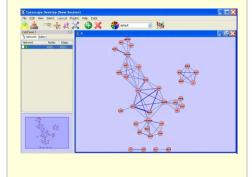
Such computer-aided extraction of research information is becoming more common. (for an example, see the sidebar)

### Agilent literature search

An example of software that aids in the extraction of research information is the Agilent Literature Search Software.

This tool helps biologists search the vast life sciences literature and extract associations among genes and proteins. When a biologist enters a search term, the tool submits it to multiple user-selected text-based search engines, retrieves relevant documents, and analyzes the documents to extract gene and protein associations of interest. To perform the extraction, the software uses an ontology to define gene and protein names, aliases, and associations.

The software also generates a network graph with nodes (genes and proteins) and edges (associations among them), as in the figure below. Research hyperlinks are stored as attributes of the graph's edges.



# PART II: SEARCH RESULTS

## INTRODUCTION

This Part records the literature search results produced by the search procedure described in Part I (Literature search procedure). It is in three chapters, corresponding to the three simulation models developed for the report "Simulating health behavior":

Chapter one: Physician Network Model behaviors

Chapter two: Workplace Wellness Model behaviors

Chapter three: Adverse Selection Model behaviors

Each chapter begins with a listing of the agent behaviors that each model employs. For each of these behaviors, it then describes the behavior and lists the literature search results about it.

## CHAPTER ONE: PHYSICIAN NETWORK MODEL BEHAVIORS

## A. AGENT BEHAVIORS

Following are the primary agent behaviors in the Physician Network Model:

Agent role	Behavior
Individual person	Select a primary care physician (US)
	2. Switch primary care physicians (US)
	3. Request treatment from a primary care physician (US)
	4. Comply with treatment recommendations (US)
	5. Assess the quality of physician performance (US)
Primary care physician	6. Recommend treatment (US)
	7. Recommend a specialist (US)
Specialist physician	8. Recommend treatment (US)
Health insurance company	9. Assess the quality of physician performance (US)
	10. Determine physician network participation (US)

## **B. SEARCH RESULTS**

## Behavior 1: Select a primary care physician

An individual in the US health system selects a primary care physician.

Search term: "physician selection"

Butler ES; Consumer's ranking of criteria for selection of a primary care physician; Issues in Information Systems; 2002 [\*]

- (>) Butler ES; Factors consumers consider in the selection of primary care physicians; AAMA Executive; 1996
- (>) Moore S; How consumers evaluate health care quality. Part III; Health Marketing Quarterly; 1999
- (>) Yucelt U; An investigation of causes of patient satisfaction/dissatisfaction with physician services; Health Marketing Quarterly; 1994

Gerbert B; Video study of physician selection: preferences in the face of diversity; Journal of Family Practitioners; 2003 [\*]

Hanna N; Physician choice criteria; Health Marketing Quarterly; 1994

- (=) Hickson GB; First step in obtaining child health care: selecting a physician; Pediatrics; 1988 [\*]
- (=) Hill CJ; Factors influencing physician choice; Hospital Health Services Administration; 1991
- (<) Mercado F; Patient preferences in choosing a primary care physician; Journal of Primary Care & Community Health; 2012 [\*]
- (=) Stewart DW; Information search and decision making in the selection of family health care; Journal of Health Care Marketing; 1989 [\*]

Kelley SW; A marketing-oriented perspective on physician selection; Surgical Innovation; 2005 [\*]

(>) King KW; An investigation of the external physician search process; Journal of Health Care Marketing; 1988

McGlone TA; Factors influencing consumers' selection of a primary care physician; Health Marketing Quarterly; 2002

(<) Victoor A; Determinants of patient choice of healthcare providers: a scoping review; BMC Health Services Research; 2012 [\*]

Razzouk N; What's important in choosing a primary care physician: an analysis of consumer response; International Journal of Health Care Quality Assurance; 2004

Tu HT; Word of mouth and physician referrals still drive health care provider choice; Health System Change Research Brief No. 9; 2008 [\*]

## Behavior 1: Select a primary care physician continued

Search term: "choice behavior physician"

Hoerger TJ; Search behavior and choice of physician in the market for prenatal care; Medical Care; 1995 [\*]

- (<) Bornstein BH; Choosing a doctor: an exploratory study of factors influencing patients' choice of a primary care doctor; Faculty Publication of the University of Nebraska; 2001 [\*]
- (<) George BP; Inter-relationship among the extent of past consultations, recommendation, satisfaction, and loyalty in patient-doctor relationship: an empirical study; Journal of the Global Academy of Marketing Science; 2006
- (<) Harris KM; How do patients choose physicians? Evidence from a national survey of enrollees in employment-related health plans; Health Services Research; 2003 [\*]
  - (>) Kaiser Family Foundation/AHRQ; National survey on Americans as health care consumers: an update on the role of quality information; 2000
  - (>) Lupton DC; Caveat emptor or blissful ignorance? Patients and the consumerist ethos; Social Science and Medicine; 1991 [\*]
  - (=) Sinaiko AD; How do quality information and cost affect patient choice of provider in a tiered network setting? Results from a survey; Health Services Research; 2010 [\*]

## Behavior 2: Switch primary care physicians (US)

An individual in the US health system voluntarily switches from one primary care physician to another.

Search term: "switching physician"

Harris KM; How do patients choose physicians? Evidence from a national survey of enrollees in employment-related health plans; Health Services Research; 2003 [\*]

- (<) Kennedy HP; A study of midlife women's reasons for changing healthcare providers; Journal of the American Academy of Nurse Practitioners; 2005 [\*]
- (>) Olsen DM; Medical care as a commodity: an exploration of the shopping behavior of patients; Journal of Community Health; 1976 [a]
- (<) Sinaiko AD; How do quality information and cost affect patient choice of provider in a tiered network setting? Results from a survey; Health Services Research; 2011 [\*]
- (>) Weiss LJ; Faithful patients: the effect of long-term physician-patient relationships on the costs and use of health care by older Americans; American Journal of Public Health; 1996 [\*]

Safran, DG et al; Switching doctors: predictors of voluntary disenrollment from a primary physician's practice. Journal of Family Practice; 2001 [\*]

- (>) KastelerJ; Issues underlying prevalence of doctor shopping behavior; Journal of Health and Social Behavior; 1975
- (>) Marquis MS; Patient satisfaction and change in medical care provider: a longitudinal study; Medical Care; 1983 [\*]
- (<) Mold JW; When do older patients change primary care physicians? The Journal of the American Board of Family Medicine; 2004
- (<) Pereira AG; Patient attitudes toward continuity of care; Archives of Internal Medicine; 2003 [\*]
- (<) Sorbero MES; The effect of capitation on switching primary care physicians; Health Services Research; 2003 [\*]
  - (>) Hall JA; Patient sociodemographic characteristics as predictors of satisfaction with medical care: a meta-analysis; Social Science and Medicine; 1990
  - (>) Slomski AJ; Will patients leave you for cheaper care? Medical Economics; 1995
- (>) Thom DH; Further validation and reliability testing of the trust in physician scale; Medical Care; 1999

Search term: "physician-switching"

Lee D; Physician switching after drug request refusal; Health Marketing Quarterly; 2011 [\*]

Platonova EA; Understanding patient satisfaction, trust, and loyalty to primary care physicians; Medical Care Research and Review; 2008 [\*]

## Behavior 2: Switch primary care physicians (US) continued

Tai-Seale M; Voting with their feet: patient exit and intergroup differences in propensity for switching usual source of care; Journal of Health Politics, Policy and Law; 2004 [\*]

Search term: "patient movement"

Gjelsvik R; Factors influencing patient movements in primary care: a multilevel analysis; 2010 [\*]

Search term: "change physician"

Billinghurst B; Why do patients change their general practitioner? A postal questionnaire study of patients in Avon; British Journal of General Practice; 1993 [\*]

### Behavior 3: Request treatment from a primary care physician.

An individual in the US health system requests medical treatment from a primary care physician.

Search term: "patients visit physicians"

Barsky AJ; Hidden reasons some patients visit doctors; Annals of Internal Medicine 1981 [\*]

- (<) Barsky AJ; Medical and psychiatric determinants of outpatient medical utilization; Medical Care; 1986 [\*]
  - (>) Alpert J; A month of illness and health care among low-income families; Public Health Reports; 1969 [\*]
  - (>) Apple D; How laymen define illness; Journal of Health and Human Behavior; 1960 [\*]
  - (<) Barsky AJ; Somatization increases medical utilization and costs independent of psychiatric and medical comorbidity; American Medical Association; 2005 [\*]
  - (<) Cameron L; Seeking medical care in response to symptoms and life stress; American Psychosomatic Society; 1995 [w]
  - (>) Fabrega H; Concepts of disease: logical features and social implications; Perspectives in Biological Medicine; 1972 [?]
  - (>) Garfield SR; Evaluation of an ambulatory medical-care delivery system; New England Journal of Medicine; 1976 [w]
  - (>) Kleinman AM; Toward a comparative study of medical systems: an integrated approach to the study of the relationship of medicine and culture; Scientific Medical Management; 1973 [?]
  - (>) Kleinman AM; Explanatory models in health care relationships: a conceptual framework for research on family –based health care activities in relation to fold and professional forms of clinical care; in Health of the Family; 1975 [?]
  - (>) Kosa J; On the reliability of family health information; Social Science and Medicine; 1967 [\*]
  - (>) Stoeckle JD; On going to see the doctor; the contributions of the patient to the decision to seek medical aid; Journal of Chronic Disease; 1963 [\*]
  - (>) Van der Gagg J; The demand for primary health care; Medical Care; 1978 [\*]
  - (>) Waitzkin H; The communication of information about illness; Advances in Psychosomatic Medicine; 1972 [?]
  - (>) Williamson J; Old people at home their unreported needs; Lancet; 1964 [?]
  - (>) Zborowski M; Cultural components in responses to pain; Journal of Social Issues; 1952 [w]
  - (>) Zola IK; Illness behavior of the working class: implications and recommendations. In: Shostak AB; Blue Collar World (Book); 1964 [?]
  - (>) Zola IK; Studying the decision to see a doctor; Advances in Psychosomatic Medicine; 1972 [?]

### Behavior 3: Request treatment from a primary care physician continued

(<) Connelly JE; Health perceptions of primary care patients and the influence on health care utilization; Medical Care; 1989 [\*]

Search term: "patients request treatment"

Brett AS; When patients request specific interventions; New England Journal of Medicine; 1986 [a]

**Search term**: "patient self-referral"

Sharma R; Patient attitudes, insurance, and other determinants of self-referral to medical and chiropractic physicians; Journal Information; 2003 [\*]

Search term: "visit a doctor"

Ingham JG; Self-referral to primary care: symptoms and social factors; Journal of Psychosomatic Research; 1986 UK [\*]

- (<) Campbell SM; Why do people consult the doctor? Family Practice; 1996 [\*] UK
  - (<) Book: Rogers A; Demanding patients? analysing the use of primary care; Open University Press; 1999 [r] UK
  - (<) Farmer J; Rural/urban differences in accounts of patients' initial decisions to consult primary care; Health & Place; 2006 [\*] UK
  - (<) Kapur N; Psychosocial and illness related predictors of consultation rates in primary care a cohort study; Psychological Medicine; 2004 [\*] UK
  - (<) Koloski N; Predictors of health care seeking for irritable bowel syndrome and nonulcer dyspepsia [\*] UK Australia
  - (<) Morrison B; How can action research apply to health services; Qualitative Health Research; 201 [\*] UK
  - (<) Neal RD; I always seem to be there a qualitative study of frequent attenders; The British Journal of General Practice; 2000 [\*] UK

Search term: "patient compliance"

Pescosolido BA; Beyond rational choice: the social dynamics of how people seek help; American Journal of Sociology; 1992 [\*]

**Search term**: "choice behavior physician"

Anderson JG; Choice of medical care: a behavioral model of health and illness behavior; Journal of Health and Social Behavior; 1973 [\*]

## Behavior 3: Request treatment from a primary care physician continued

- (>) Andersen R; A behavioral model of families use of health services; 1968 [a]
  - (<) Andersen R; Revisiting the behavioral model and access to medical care: does it matter?; Journal of Health and Social Behavior; 1995 [\*]
    - (>) Hulka BS: Patterns of utilization: the patient perspective; Medical Care; 1985 [\*]
- (>) Suchman EA; Social patterns of illness and medical care; Journal of Health and Human Behavior; 1965 [\*]
- (>) Wirick GC; A multiple equation model of demand for health care; Health Services Research; 1966 [\*]

One: Physician Network Model behaviors - 13

### Behavior 4: Comply with treatment recommendations (US)

An individual in the US health system complies with a physician's treatment recommendations.

Search term: "patient compliance"

Claxton AJ; A systematic review of the associations between dose regimens and medication compliance; Clinical Therapeutics; 2001 [\*]

DiMatteo MR; Variations in patients' adherence to medical recommendations: a quantitative review of 50 years of research; Medical Care; 2004 [\*]

Donovan JL; Patient non-compliance: deviance or reasoned decision-making?; Social science & medicine; 1992 [\*]

Elsen SA; The effect of prescribed daily dose frequency on patient medication compliance; Archives of Internal Medicine; 1990 [a]

Eraker SA; Understanding and improving patient compliance; Annals of Internal Medicine; 1984 [\*]

- (<) Becker MH; Patient adherence to prescribed therapies; 1985 [\*]
- (<) Kravitz RD; Recall of recommendations and adherence to advice among patients with chronic medical conditions; Archives of Internal Medicine; 1993 [a]
- (<) (Book) Meichenbaum D; Facilitating treatment adherence; a practitioner's guidebook; 1987 [Suzzallo W85 M499f 1987]
  - (=) (Book) O'Donohue WT; Promoting treatment adherence: a practical handbook for health care providers; 2006 [Health W85 P965 2006]
- (<) Miller NH; Compliance with treatment regimens in chronic asymptomatic diseases; The American Journal of Medicine; 1997[\*]
- (<) Morris LS; Patient compliance an overview; Journal of Clinical Pharmacy and Therapeutics; 1992[\*]
- (<) O'Brien MK; Adherence to medication regimens: updating a complex medical issue; Medical Care Research and Review; 1992 [a]
  - (<) (Book chapter) Bauman LJ; A patient-centered approach to adherence: risks for nonadherence; Chapter 4; 2000 in Drotar D; Promoting adherence to medical treatment in chronic childhood illness: concepts, methods and interventions; 2000

 $\frac{\text{http://books.google.com/books?hl=en\&lr=\&id=h4GAmMm4RawC\&oi=fnd\&pg=PA62\&ots=9qms}}{\text{onVp38\&sig=vNoRG-UuW07EddJFURu9hHP-2TI}\#v=\text{onepage\&q\&f=false}}$ 

- (<) Phatak HM; Relationships between beliefs about medications and nonadherence to prescribed chronic medications; 2006 [\*]
- (<) Trostle JA; Medical compliance as an ideology; Social Science & Medicine; 1988 [\*]

Greenberg RN; Overview of patient compliance with medication dosing: a literature review; Clinical Therapeutics; 1984 [a]

### Behavior 4: Comply with treatment recommendations (US) continued

Griffith S; A review of the factors associated with patient compliance and the taking of prescribed medicines; The British Journal of General Practice; 1990 [\*]

Murphy J; Issues in patient compliance; Drugs; 1997 [a]

Vermeire E: Patient adherence to treatment: three decades of research. A comprehensive review; Journal of Clinical Pharmacy and Therapeutics; 2001 [\*]

- (>) Donovan JL; Patient decision making. The missing ingredient in compliance research; International Journal of Technology Assessment in Health Care; 1995 [a]
- (=) Dunbar-Jacob J; Treatment adherence in chronic disease; Journal of Clinical Epidemiology; 2001 [\*]
- (>) Horne R; Representations of medication and treatment: advances in theory and measurements; in Petrie R; Perceptions of health and illness: current research and applications; 1997 [w]
- (<) Jin J; Factors affecting therapeutic compliance: a review from the patient's perspective; 2008 [\*]
  - (>) Farmer KC; Long-term patient compliance with prescribed regimens of calcium channel blockers. Clinical Theory; 1994 [?]
  - (>) Frazier PA; Correlates of noncompliance among renal transplant recipients; Clinical Transplants; 1994; [\*]
  - (>) Gascon JJ; Treatment compliance in hypertension study group.: results from a qualitative study; Family Practice; 2004 [\*]
- (=) Kripalani S; Interventions to enhance medication adherence in chronic medical conditions: a systematic review; 2007 [\*]
- (>) Melnikow J; Patient compliance and medical research: issues in methodology; Journal of General Internal Medicine; 1994 [\*]
- (>)Morris LS; Patient compliance: an overview; Journal of Clinical Pharmacy and Therapeutics; 1992 [\*]
- (=) Osterberg L; Adherence to medication; New England Journal of Medicine; 2005 [\*]
- (>) Urquhart J; Patient non-compliance with drug regimens: measurement, clinical correlates, economic impact; European Heart Jounal; 1996 [\*]
- (<) Vlasnik JJ; Medication adherence: factors influencing compliance with prescribed medication plans; 2005</p>
  [\*]
- (<) Zolnierek KB; Physician communication and patient adherence to treatment: a meta-analysis; 2009 [\*]

## Behavior 4: Comply with treatment recommendations (US) continued

**Search term**: "patient adherence"

van Dulmen; S; Patient adherence to medical treatment: a review of reviews; BMC Health Services Research; 2007 [\*]

One: Physician Network Model behaviors - 16

### Behavior 5: Assess the quality of physician performance

An individual in the US health system assesses the quality of a physician's performance.

Search term: "assessing physician quality"

Donabedian A; Evaluating the quality of medical care; Millbank Quarterly; 2005 [\*]

Landon BE; Physician clinical performance assessment; JAMA; 2003 [\*]

Thom DH; Measuring patients' trust in physicians when assessing quality of care; Health Affairs; 2004 [\*]

Search term: "patient satisfaction"

Abramowitz S; Analyzing patient satisfaction: a multianalytic approach; Quality Review Bulletin; 1987 [a]

Kalda R; Patient satisfaction with care is associated with personal choice of physician; Health policy; 2002 [\*] Estonia

Sitzia J; Patient satisfaction: a review of issues and concepts; Social Science & Medicine; 1997 [\*]

Sofaer S; Patient perceptions of the quality of health services; Annual Review of Public Health; 2005 [\*]

(>) Strasser S; The patient satisfaction process: moving toward a comprehensive model; Medical Care Research and Review; 1993 [w]

Williams B; Patient satisfaction: a valid concept?; Social Science & Medicine; 1994 [\*]

#### **Search term**: "physician quality"

Lee Y; Assessment of medical care by elderly people: general satisfaction and physician quality; Health Services Research; 1998 [\*]

- (<) Borders TF; Older persons' evaluations of health care: the effects of medical skepticism and worry about health; Health Services Research; 2004 [\*]
  - (=) Landon BE; Health plan characteristics and consumers' assessments of quality; Health Affairs (Millwood); 2001 [\*]
  - (>) Zaslavsky AM; Does the effect of respondent characteristics on consumer assessments vary across health plans? Medical Care Research Review; 2000 [\*]
  - (>) Zaslavsky AM; Adjusting performance measures to ensure equitable plan comparisons; Health Care Financing Review; 2001 [\*]
- (>) Hall JA; Meta analysis of satisfaction with medical care: description of research domain and analysis of overall satisfaction levels; Social Science and Medicine; 1988 [\*]
- (>) Hall JA; A causal model of health status and satisfaction with medical care; Medical Care; 1993 [\*]

## Behavior 5: Assess the quality of physician performance continued

- <) Kong MC; Correlates of patient satisfaction with physician visit: differences between elderly and nonelderly survey respondents; Health and Quality of Life Outcomes; 2007 [\*]
- (<) Shadmi E; Morbidity and older persons' perceptions of the quality of their primary care; Journal of the American Geriatric Society; 2006 [\*]

Saha S;Patient-physician racial concordance and the perceived quality and use of health care; Archives of Internal Medicine; 1999 <a href="http://archinte.jamanetwork.com/article.aspx?articleid=485025">http://archinte.jamanetwork.com/article.aspx?articleid=485025</a> [\*]

Search term: "patient satisfaction determinants"

Aharony L; Patient satisfaction: what we know about and what we still need to explore; Medical Care Review; 1993 [\*]

Like R; Patient satisfaction with the clinical encounter: social psychological determinants; Social Science & Medicine; 1987 [\*]

Lin CT; Is patients' perception of time spent with the physician a determinant of ambulatory patient satisfaction? Archives of Internal Medicine; 2001 [\*]

Linder-Pelz S; Toward a theory of patient satisfaction; Social Science & Medicine; 1982 [\*] U.K.

Linder-Pelz S; Social psychological determinants of patient satisfaction: a test of five hypotheses; Social Science & Medicine; 1982 [\*] U.K.

Thompson AGH; Expectations as determinants of patient satisfaction: concepts, theory and evidence; International Journal for Quality in Health Care; 1995 [\*]

One: Physician Network Model behaviors - 18

### Behavior 6: Recommend treatment (US)

A primary care physician in the US health system recommends a treatment for a patient.

Search term: "determinants physician treatment"

Landon BE; Personal, organizational, and market level influences on physicians' practice patterns: results of a national survey of primary care physicians; Medical Care; 2001 [\*]

- (<) Mort EA; Physician response to patient insurance status in ambulatory care clinical decision-making: implications for quality of care; Medical Care; 1996 [\*]
- (<) O'Neill L; Explaining variation in physician practice patterns ad their propensities to recommend services; Medical Care Research and Review; 2005 [\*]
  - (>) Boulis A; Variation in the treatment of children by primary care physician specialty; Archives of Pediatrics & Adolescent Medicine; 2002 [\*]
  - (>) Grytten J; Practice variation and physician-specific effects; Journal of Health Economics; 2003 [\*] Norway
- (<) Schulman KA; The effect of race and sex and physicians' recommendations for cardiac catheterization; New England Journal of Medicine; 1999 [\*]
- (<) Sirovich BE; Variation in the tendency of primary care physicians to intervene; Archives of internal medicine; 2005 [\*]

One: Physician Network Model behaviors - 19

### Behavior 7: Recommend a specialist

A primary care physician in the US health system recommends a specialist practitioner for a patient.

Search term: "specialty referrals"

Fisher LW; Comparison of specialty referral patterns of primary care providers; Journal of Healthcare Management; 2002 [\*]

Mehrotra A; Dropping the baton: specialty referrals in the United States; Milbank Quarterly; 2011 [\*]

- (>) Albertson GA; Recognition of patient referral desires in an academic managed care plan frequency, determinants, and outcomes. Journal of General Internal Medicine; 2000 [\*]
- (>) Bachman KH; HMO physicians' use of referrals; Social Science & Medicine; 1999 [\*]
- (>) Bertakis KD; Predictors of patient referrals by primary care residents to specialty care clinics; Family Medicine; 2001 [\*]
- (>) Boulis AK; Variation in the treatment of children by primary care physician specialty; Archives of Pediatrics and Adolescent Medicine; 2002 [\*]
- (>) Chen FM; Effects of comorbidity and clustering upon referrals in primary care. Journal of the American Board of Family Practitioners; 2005 [\*]
- (>) Ettinger ER; Referral patterns of primary care physicians for eye care; Journal of the American Optometric Association; 1993
- (>) Forrest CB; Primary care in the United States: primary care gatekeeping and referrals: effective filter or failed experiment? British Medical Journal; 2003 [\*]
- (>) Forrest CB; Referral of children to specialists in the United States and the United Kingdom; Archives of Pediatric and Adolescent Medicine; 2003 [\*]
- (>) Forrest CB; Family physicians' referral decisions: results from the ASPN referral study; Journal of Family Practice; 2002 [\*]
- (>) Forrest CB; Primary care physician specialty referral decision making: patient, physician, and health care system determinants; Medical Decision Making; 2006 [\*]
- (>) Forrest CB; (1997). Passing the baton: HMOs' influence on referrals to specialty care; Health Affairs (Millwood); 1997 [\*]
- (>) Forrest CB; Prevalence of health problems and primary care physicians' specialty referral decisions; Journal of Family Practice; 2001 [\*]
- (>) Franks P; Why do physicians vary so widely in their referral rates; Journal of General Internal Medicine; 2000 [\*]
- (>) Franks P; Variations in primary care physician referral rates; Health Services Research; 1999 [\*]

### Behavior 7: Recommend a specialist continued

- (>) Glenn JK; Physician referrals in a competitive environment. An estimate of the economic impact of a referral. JAMA; 1987 [\*]
- (>) Iverson G; What factors influence a family physician's decision to refer a patient to a specialist? The International Electronic Journal of Rural and Remote Health Research, Education, Practice and Policy; 2005 [\*]
- (>) Kinchen KS; Referral of patients to specialists: factors affecting choice of specialist by primary care physicians. Annals of Family Medicine; 2004 [\*]
- (>) Navaneethan SD; A systematic review of patient and health system characteristics associated with late referral in chronic kidney disease; BMC Nephrology; 2008 [\*]
- (>) Reeder BM; Referral patterns to a pediatric orthopedic clinic; Pediatrics; 2004 [\*]
- (>) Shea D; Medicare physician referral patterns; Health Services Research; 1999 [\*]
- (>) Starfield B; Variability in physician referral decisions; Journal of the American Board of Family Practitioners; 2002 [\*]

Mukamel DB; Referrals to high-quality cardiac surgeons: patients' race and characteristics of their physicians; Health Services Research; 2006 [\*]

Piterman L; Part I. General practitioner-specialist relationship; Internal Medicine Journal; 2005 [\*]

Piterman L; Part II. General practitioner-specialist referral process; Internal Medicine Journal; 2005 [\*]

#### **Search term**: "physician referral"

Anthony D; Changing the nature of physician referral relationships in the US: the impact of managed care; Social Science and Medicine; 2003 [\*]

Barnett ML; Reasons for choice of referral physician among primary care and specialist physicians; Journal of General Internal Medicine; 2011 [\*]

Barnett ML; Trends in physician referrals in the United States, 1999-2009. Archives of Internal Medicine; 2012 [\*]

Brady DS; 2011 study of 401 primary care doctors and mid-levels; Physicians Marketing Institute; 2011 [\*]

Freburger JK; Physician referrals to physical therapy for the treatment of musculoskeletal conditions. Archives of Physical Medicine and Rehabilitation; 2003 [\*]

Gruen RL; The demand for surgery: an analysis of referrals from Australian general practitioners. ANZ Journal of Surgery; 2004 [\*]

Katz MH; How can we know so little about physician referrals? Archives of Internal Medicine; 2012 [\*]

Montgomery AJ; Factors influencing general practitioner referral of patients developing end-stage renal failure: a standardised case-analysis study; BMC Health Services Research; 2006 [\*]

## Behavior 7: Recommend a specialist continued

Shortell SM; The physician referral process: a theoretical perspective; Health Services Research; 1971 [\*]

(<) Shortell SM; Determinants of physician referral rates: an exchange theory approach; 1974

Sirovich BE; Variation in the tendency of primary care physicians to intervene; Archives of Internal Medicine; 2005 [\*]

Skinner J; Looking back, moving forward; New England Journal of Medicine; 2010

Search term: "referral behavior"

Brown JJ; Social ties and word-of-mouth referral behavior; Journal of Consumer Research; 1987 [\*]

Powers TL; Sources of referral information: a marketing analysis of physician behavior. Health Care Management Review; 1998 [\*]

## Behavior 8: Recommend treatment (US).

A specialist physician in the US health system recommends a treatment for a patient.

**Search term**: "physician treatment determinants"

Cabana MD; Why don't physicians follow clinical practice guidelines? JAMA; 1999 [\*]

Davis DA; Translating guidelines into practice: a systematic review of theoretic concepts, practical experience and research evidence in the adoption of clinical practice guidelines; Canadian Medical Association Journal; 1997 [\*]

Finkelstein BS; Insurance coverage, physician recommendations, and access to emerging treatments; JAMA; 1998 [\*]

Paredes P; Factors influencing physicians' prescribing behavior in the treatment of childhood diarrhoea: knowledge may not be the clue; Social Science & Medicine; 1996 [\*]

(Book) Timmemans S; The gold standard: the challenge of evidence-based medicine and standardization in health care; 2003

- (<) Francke AL; Factors influencing the implementation of clinical guidelines for health care professionals; BMC Medical Informatics and Decision Making; 2008 [\*]
  - (<) Baiardini I; Why do doctors and patients not follow guidelines? Current Opinion in Allergy and Clinical Immunology; 2009 [\*]
    - (>) Grol R; From best evidence to best practice: effective implementation of change; Lancet; 2003 [?]
    - (>) Francke A; Factors influencing the implementation of clinical guidelines for health care professionals: a systematic meta-review; BMC Medical Informatics and Decision Making; 2008 [\*]
  - (=) Ploeg J; Factors influencing best-practice guideline implementation: lessons learned from administrators, nursing staff, and project leaders; Worldviews on evidence-based nursing; 2007 [\*]
  - (<) Kottreisto T; Healthcare professionals' intentions to use clinical guidelines: a survey using the theory of planned behaviour; 2010 [\*]
- (<) Grol RPTM; Planning and studying improvement in patient care: the use of theoretical perspectives; Milbank Quarterly; 2007 [?]
- (<) Perkins M; Applying theory-driven approaches to understanding and modifying clinicians' behavior; What do we know? Psychiatric Services; 2007 [\*]
  - (>) Gaither CA; A reasoned approach to physicians' utilization of drug information sources; Pharmaceutical Research; 1996

## Behavior 8: Recommend treatment (US) continued

- (>) Limbert C; Doctors' use of clinical guidelines: two applications of the Theory of Planned Behavior; Psychology, Health and Medicine; 2002
- (>) Millstein SG; Utility of the theories of reasoned action and planned behavior for predicting physician behavior: a prospective analysis; Health Psychology; 1996
- (<) Zipkin DA; Interactions between pharmaceutical representatives and doctors in training; Journal of General Internal Medicine; 2005 [\*]

**Search term**: "physician treatment decisions"

Charles K; Decision-making in the physician-patient encounter: revisiting the shared treatment decision-making model; Social Science & Medicine; 1999 [\*]

McCombs JS; Physician treatment decisions in a multiple treatment model; Journal of Health Economics; 1984 [\*]

Say RE; The importance of patient preferences in treatment decisions: challenges for doctors; BMJ British Medical Journal; 2003 [\*]

Simnoff LA; Factors affecting treatment decisions for a life-threatening illness: the case of medical treatment of breast cancer; Social Science & Medicine; 1991

Search term: "HMO physician network"

Schectman JM; The effect of an education and feedback intervention on group-model and network model health maintenance organization physician prescribing behavior; Medical Care; 1995 [\*]

**Search term**: "Physician utilization"

Eisenberg JM; Physician utilization; the state of research about physicians' practice patterns; Medical Care; 2002 [\*]

## Behavior 9: Assess the quality of physician performance (US)

A health insurer organization in the US health system assesses the quality of physician performance.

Search term: "assessing physician quality"

Donabedian A; Evaluating the quality of medical care; Millbank Quarterly; 2005 [\*]

Landon BE; Physician clinical performance assessment; JAMA; 2003 [\*]

- (>) Donabedian A; The quality of care-How can it be assessed? JAMA; 1988 [\*]
  - (<) Blumenthal D; Quality of care-what is it? New England Journal of Medicine; 1996 [\*]
  - (<) Brook RH; Measuring quality of care; New England Journal of Medicine; 1996 [\*]
  - (=) Brook RH; Defining and measuring quality of care: a perspective from US researchers; International Journal of Quality in Health Care; 2000 [?]

**Search term**: "patient care satisfaction"

Scholle SH; Availability of data for measuring physician quality performance; The American Journal of Managed Care; 2009 [\*]

(>) Galvin R; Large employers' new strategies in health care; New England Journal of Medicine; 2002 [\*]

Search term: "physician quality"

Hong CS; Relationship between patient panel characteristics and primary care physician clinical performance rankings; JAMA; 2010 [\*]

Peabody JW; Measuring the quality of physician practice by using clinical vignettes: a prospective validation study; Annals of Internal Medicine; 2004 [\*]

Search term: "HEDIS quality"

Maninous AG; Assessing quality of care via HEDIS 3.0. Is there a better way? Archives of Family Medicine; 1998 [\*]

- (=) Elston DM; Developing ambulatory care physician performance measures; Journal of the American Academy of Dermatology; 2008 [\*]
- (=) McGlynnEA\_1997\_SixChallengesInMeasuringTheQualityOfHealthCare; Health Affairs; 1997 [\*]
- (<) Overeem K; Doctor performance assessment in daily practice: does it help doctors or not? A systematic review; Medical Education; 2007 [\*]
- (<) Parkerton PH; Physician performance assessment: nonequivalence of primary care measures; Medical Care; 2003 [\*]

## Behavior 10: Determine physician network participation (US).

A health insurer organization in the US health system determines who will participate in its physician network.

**Search term**: "determine network participation"

Gold MR; A national survey of the arrangements managed-care plans make with physicians; The New England Journal of Medicine; 1995 [\*]

(>) Gold MR; Behind the curve: a critical assessment of how little is known about the managed care arrangements with physicians; Medical Care Research and Review; 1995 [?]

Search term: "HMO physician network"

Chernew ME; Overlap in HMO physician networks; Health Affairs; 2004 [\*]

(>) White J; Choice, trust, and two models of quality; Journal of Health Politics, Policy and Law; 1999 [?]

**Search term**: "physician network"

Swisher JR; Simulation of the Question physician network; Proceedings of the 1997 Winter Simulation Conference; 1997 [\*]

Search term: "physician network management"

Burns LR; Physician practice management companies; Health Care Management Review; 1997 [\*]

**Search term**: "health insurance closed panel"

Robinson JC; Payment mechanisms, nonprice incentives, and organizational innovation in health care; Inquiry; 1993

- (=) Haas-Wilson D; Physician networks and their implications for competition in health care markets; Health Economics; 1998 [\*]
- (<) McLaughlin CP; Maintaining the new practice networks; Health Care Management; 1997 [\*]

## CHAPTER TWO: WORKPLACE WELLNESS MODEL BEHAVIORS

## A. AGENT BEHAVIORS

Following are the primary agent behaviors in the Workplace Wellness Model:

Agent role	Behavior
Individual person	Enroll in a workplace wellness program (US)
	2. Complete an employer-provided health risk assessment (US)
	3. Obtain biometric measurements for a workplace wellness program (US)
	4. Read employer-provided educational material about improving exercise (US)
	5. Watch an employer-provided video about improving exercise (US)
	6. Play an employer-provided computer game about improving exercise (US)
	7. Participate in an employer-provided interactive computer intervention about improving exercise (US)
	8. Start an employer-provided exercise program (US)
	9. Maintain an employer-provided exercise program (US)
Other group	10. Offer employees workplace wellness program incentives (US)
healthcare role	
(employer)	

## **B. SEARCH RESULTS**

## Behavior 1: Enroll in a workplace wellness program (US)

An individual enrolls in a US workplace wellness program.

Search term: "join wellness program"

Alexy BB; Factors associated with participation or nonparticipation in a workplace wellness center; Research in Nursing & Health; 1991 [\*]

- (<) Lewis RJ; Characteristics of participants and nonparticipants in worksite health promotion; American Journal of Health Promotion; 1996 [?]
  - (>) Conrad P; Wellness in the work place: potentials and pitfalls of work-site health promotion; Milbank Quarterly; 1987
  - (>) Goetzel R; The health and cost benefits of work site health-promotion programs; Annual Review of Public Health; 2008
  - (>) Morris WR; Do blue-collar workers perceive the worksite health climate differently than white-collar workers? American Journal of Health Promotion; 1999
  - (>) Palank CL; Determinants of health-promotive behavior; Nursing Clinics of North America; 1991
  - (>) Springett J; Workplace health promotion programs: towards a framework for evaluation; Health Education; 1995 [?]
  - (>) Strange K; Psychosocial predictors of participation in a worksite health-promotion program; Journal of Occupational Medicine; 1991
  - (>) Zavela KJ; Do only the healthy intend to participate in worksite health promotion? Health Education Quarterly; 1988
  - (>) Yassi; Health promotion in the workplace: the merging of the paradigms; Methods of Information in Medicine; 2005
  - (<) Linnan LA; Using theory to understand the multiple determinants of low participation in worksite health promotion programs; Health Education & Behavior; 2001 [\*]
  - (<) Stein AD; Financial incentives, participation in employer-sponsored health promotion, and changes in employee health and productivity: HealthPlus Health Quotient Program; Journal of occupational and Environmental Medicine; 2000 [\*]

Search term: "wellness program enrollment"

Bost ML; A descriptive study of barriers to enrollment in a collegiate health assessment program; Journal of Community Health Nursing; 2005 [?]

Sloan RP; Participation in workplace health promotion programs: the contribution of health and organizational factors; Health Education and Behavior; 1988

## Behavior 1: Enroll in a workplace wellness program (US) continued

**Search term**: "wellness program participation"

Glasgow RE; Participation in worksite health promotion: a critique of the literature and recommendations for future practice; Health Education & Behavior; 1993 [\*]

Person AL; Barriers to participation in a worksite wellness program; Nutrition Research and Practice; 2010 [\*]

- (>) Adler NE; Socioeconomic disparities in health: Pathways and policies; Health Affairs (Millwood); 2002 [\*]
- (>) Blake SM; The shape up challenge: A community-based worksite exercise competition. American Journal of Health Promotion; 1996 [?]
- (>) Henritze J; LIFEHECK: a successful, low touch, low tech, in-plant, cardiovascular disease risk identification and modification program; American Journal of Health Promotion; 1992 [?]
- (>) Hooper JM; Distinguishing starters from non-starters in an employee physical-activity incentive program; Health Education Quarterly; 1995 [?]
- (>) Robroek SJW; Determinants of participation in worksite health promotion programmes: A systematic review; International Journal of Behavioral Nutrition and Physical Activity; 2009 [\*]
- (>) Sorensen G; Worker participation in an integrated health promotion/health protection program: Results from the WellWorks project; Health Education Quarterly; 1996 [?]
- (>) Stein AD; Financial incentives, participation in employer-sponsored health promotion, and changes in employee health and productivity: HealthPlus health quotient program; Journal of Occupational and Environmental Medicine; 2000 [\*]
- (<) Edwards J; Understanding the predictors of participation and the barriers to employee involvement in workplace health promotion programmes; Doctoral thesis; 2012 [\*]

**Search term**: other (most of these resources were discovered during other searches)

Abraham JM; What factors influence participation in an exercise-focused employer wellness program?; Inquiry; 2011 [\*]

## Behavior 2: Complete an employer-provided health risk assessment (US)

An individual in a US workplace wellness program completes a health risk assessment that the employer provides for the program.

Search term: "HRA participation"

Musich S; A case study of 10-year health risk appraisal participation patterns in a comprehensive health promotion program; American Journal of Health Promotion; 2001 [\*]

Seaverson ELD; The role of incentive design, incentive value, communications strategy, and worksite culture on health risk assessment participation; American Journal of Health Promotion; 2009 [\*]

Taitel MS; Incentives and other factors associated with employee participation in health risk assessments; Journal of Occupational and Environmental Medicine; 2008 [\*]

- (>) Glasgow RE; Participation in worksite health promotion: a critique of the literature and recommendations for future practice; Health Education Quarterly; 1993 [\*]
- (>) Lynch WD; Characteristics of self-selected responders to a health risk appraisal: generalizability of corporate health assessments; American Journal of Public Health; 1989 [\*]
- (<) Haisley E; The impact of alternative incentive schemes on completion of health risk assessments; American Journal of Health Promotion; 2012 [\*]

**Search term**: "employee HRA determinants"

Lewis RJ; Characteristics of participants and nonparticipants in worksite health promotion; American Journal of Health Promotion; 1996 [\*]

Search term: "participate health risk assessment" and "participate health risk appraisal"

Nice DS; Self-selection in responding to a health risk appraisal: are we preaching to the choir?; American Journal of Health Promotion; 1990 [\*]

Rhodes F; Using behavioral theory in computer-based health promotion and appraisal; Health Education & Behavior; 1997 [\*]

**Search term**: "complete health risk assessment" and "complete health risk appraisal"

None

**Search term**: other (most of these resources were discovered during other searches)

McLellan RK; Impact of workplace sociocultural attributes on participation in health assessments; Journal of Occupational and Environmental Medicine; 2009 [\*]

## Behavior 3: Obtain biometric measurements for a workplace wellness program (US)

An individual in a US workplace wellness program obtains biometric measurements for the program.

Search term: "wellness biometric screening participation"

McLellan RK; Impact of workplace sociocultural attributes on participation in health assessments; Journal of Occupational and Environmental Medicine; 2009 [\*]

Montalto P; The role of incentives in biometric screening program participation; Quest Diagnostics company report; Unknown [\*]

**Search term**: "biometric screening participation

Chapman L; Biometric screening in health promotion: is it really as important as we think; American Journal of Health Promotion; 2003 [\*]

**Search term**: "wellness screening participation"

None

**Search term**: other (most of these resources were discovered during other searches)

None

### Behavior 4: Read employer-provided educational material about improving exercise (US)

An individual in a US workplace wellness program reads employer-provided educational material about improving exercise habits.

Search term: "read obesity prevention educational material workplace"

Baicker K; Workplace wellness programs can generate savings; Health Affairs; 2010 [\*]

Bull FC; Understanding the effects of printed health education materials: which features lead to which outcomes?; Journal of Health Communication; 2001 [\*]

(<) Kroeze W; A systematic review of randomized trials on the effectiveness of computer-tailored education on physical activity and dietary behavior; Annals of Behavioral Medicine; 2006 [\*]

Cook RF; A field test of a web-based workplace health promotion program to improve dietary practices, reduce stress, and increase physical activity: randomized; Journal of Medical Internet Research; 2007 [\*]

Doak CM; The prevention of overweight and obesity in children and adolescents: a review of interventions and programmes; Obesity; 2006 [\*]

Glanz K, ed; Health Behavior and Health Education: Theory, Research, and Practice; book; 2008 [\*]

Goldgruber J; Effectiveness of workplace health promotion and primary prevention interventions: a review; Journal of Public Health; 2010 [\*]

Hutchinson AD; Improving nutrition and physical activity in the workplace: a meta-analysis of intervention studies; Health Promotion International; 2012 [\*]

Kreuter MW; Are tailored health education materials always more effective than non-tailored materials?; Health Education Research; 2000 [\*]

- (>) Skinner CS; Physician recommendations for mammography: do tailored messages make a difference?; American Journal of Public Health; 1994
- (>) Brug J; The impact of a computer-tailored nutrition intervention; Preventive Medicine; 1996
- (>) Cacioppo JT; To think or not to think: exploring two routes to persuasion; in Shavitt S; Persuasion: Psychological insights and perspectives; 1994
- (>) Kreuter MW; Understanding how people process health information: a comparison of tailored and nontailored weight-loss materials; Health Psychology; 1999
- (>) Petty RT; Attitudes and persuasion: classic and contemporary approaches; book; 1981
- (>) Campbell MK; Improving dietary behavior: the effectiveness of tailored messages in primary care settings; American Journal of Public Health; 1994
- (>) Skinner CS; How effective is tailored print communication?; Annals of Behavioral Medicine; 1999

## Behavior 4: Read employer-provided educational material about improving exercise (US) continued

- (<) Hawkins RP; Understanding tailoring in communicating about health; Health Education Research; 2008
- (<) Kreuter MW; Achieving cultural appropriateness in health promotion programs: targeted and tailored approaches; Health Education & Behavior; 2003
- (<) Kreuter MW; How do people process health information?; Current Directions in Psychological Science; 2001 [\*]
- (<) Kreuter MW; Tailored and targeted health communication: strategies for enhancing information relevance; American Journal of Health Behavior; 2003 [\*]

Lemmens V; A systematic review of the evidence regarding efficacy of obesity prevention interventions among adults; Obesity; 2008 [\*]

Verweij LM; Meta-analyses of workplace physical activity and dietary behaviour interventions on weight outcomes; Obesity; 2010 [\*]

**Search term**: "improve exercise read educational material" None

**Search term**: other (most of these resources were discovered during other searches)

None

# Behavior 5: Watch an employer-provided video about improving exercise (US)

An individual in a US workplace wellness program watches an employer-provided video about improving exercise habits.

Search term:	"wellness exercise video"
None	
Search term:	"wellness video"
None	
Search term:	"health promotion video"
None	

Search term: other (most of these resources were discovered during other searches)

None

# Behavior 6: Play an employer-provided computer game about improving exercise (US)

An individual in a US workplace wellness program plays an employer-provided computer game about improving exercise habits.

Search term: "wellness computer game"

Ahtinen A; Let's all get up and walk to the North Pole: design and evaluation of a mobile wellness application; Conference of Human-Computer; 2010 [\*]

Lin J; Fish'n'Steps: Encouraging physical activity with an interactive computer game; 2006 [\*]

- (>) Bjork S; Designing ubiquitous computing games a report from a workshop exploring ubiquitous computing entertainment; Person and Ubiquitous Computing; 2002 []
- (>) Lieberman D; Dance dance revolution: the most researched serious game ever. Why, and what have we learned? Serious Games Summit; 2005 []
- (>) Mokka S; Fitness computer game with a bodily user interface; Proceedings ICEC 2003; 2003 []

Suhonen; Seriously fun: exploring how to combine promoting health awareness and engaging gameplay; 2008 [\*]

Search term: "exercise computer game"

None

**Search term**: other (most of these resources were discovered during other searches)

Lieberman DA; Interactive video games for health promotion: effects on knowledge, self-efficacy, social support, and health; APA PsycNET; 1997 [NA]

Papastergiou M; Exploring the potential of computer and video games for health and physical education: A literature review; Computers & Education; 2009 [\*]

(>) Russel W; Physical educators' perceptions and attitudes toward interactive video game technology within the physical education curriculum; Missouri Journal of Health Physical Education Recreation and Dance; 2007

Ryan RM; The motivational pull of video games: a self-determination theory approach; Motivation and Emotion; 2006 [\*]

## Behavior 7: Participate in an employer-provided interactive computer intervention about improving exercise (US)

An individual in a US workplace wellness program participates in employer-provided computer feedback about improving exercise habits.

Search term: "exercise feedback"

None

Search term: "interactive computer intervention exercise"

None

**Search term**: other (most of these resources were discovered during other searches)

Franklin PD; Using Sequential email messages to promote health behaviors: Evidence of feasibility and reach in a worksite sample; Journal of Medical Internet Research; 2006 [\*]

Hawkins RP; Understanding tailoring in communicating about health; Health Education Research; 2008

Lewis BA; User attitudes towards physical activity websites in a randomized controlled trial; Preventive Medicine; 2008 [\*]

- (>) Leslie E; Engagement and retention of participants in a physical activity website; Preventive Medicine; 2005 [\*]
  - (>) Sciamanna CN; User attitudes toward a physical activity promotion website; Preventive Medicine; 2002 [?]
  - (<) Vandelanotte C; Website-delivered physical activity interventions: a review of the literature; American Journal of Preventive Medicine; 2007 [\*]
  - (<) Ferney SL; Website physical activity interventions: preferences of potential users; Health education research; 2006 [\*]

Marcus BH; Using electronic/computer interventions to promote physical activity; British Journal of Sports Medicine; 2009 [\*]

Van den Berg MH; Internet-based physician activity interventions: a systematic review of the literature; Journal of Medical Internet Research; 2006 [\*]

- (>) Napolitano M; Evaluation of an internet-based physical activity intervention: a preliminary investigation; Annals of Behavioral Medicine; 2003 [?]
- (>) Marshall AL; Print versus website physical activity programs: a randomized trial; American Journal of Preventive Medicine; 2003 [?]
- (>) Wantland DJ; The effectiveness of Web-based vs. non-Web-based interventions: a meta-analysis of behavioral change outcomes; Journal of Medical Internet Results; 2004 [?]

White MA; Mediators of weight loss in a family based intervention presented over the Internet; Obesity; 2012 [\*]

# Behavior 8: Start an employer-provided exercise program (US)

An individual in a US workplace wellness program starts a recommended exercise improvement program.

Gochman DS; Handbook of health behavior research; Plenum Press; 1997

(>) King AC; Determinants of physical activity and interventions in adults; Medicine and Science in Sports and Exercise; 1992

# **Barriers to participation**

- (>) Etkin SE; Reaching the hard to reach: Active living programs for low socioeconomic individuals; In Quinney HA (Ed), Toward active living (Champaign, IL: Human Kinetics); 1994 [?]
- (>) King AC; Determinants of physical activity and interventions in adults; Medicine and Science in Sports and Exercise; 1992 [?]
- (>) Lee C; Factors related to the adoption of exercise among older women; Journal of Behavioral Medicine; 1993 [?]
- (>) Sallis JF; A multivariate study of determinants of vigorous exercise in a community sample; Preventive Medicine; 1989 [\*]
- (>) Sallis JF; Predictors of adoption and maintenance of vigorous physical activity in men and women; Preventive Medicine; 1992 [\*]
- (>) Verhoef MJ; Exercising at work: Barriers to women's participation; American Association of Occupational Health Nurses; 1993 [?]
- (>) Zakarian JM; Correlates of vigorous exercise in a predominantly low SES and minority school population; Preventive Medicine; 1994 [\*]

### **Environmental barriers**

- (>) Brownell KD; Evaluation and modification of exercise patterns in the natural environment: American Journal of Psychiatry; 1980 [?]
- (>) Dubbert PM; Predictors of exercise maintenance in community women; Paper presented at the meeting of the American Psychological Association, San Francisco; 1991 [?]
- (>) Godin G; An evaluation of the potential role of the physician in influencing community exercise behavior; American Journal of Health Promotion; 1990 [?]
- (>) King AC; Determinants of physical activity and interventions in adults; Medicine and Science in Sports and Exercise; 1992 [?]
- (>) Sallis JF; A multivariate study of determinants of vigorous exercise in a community sample; Preventive Medicine; 1989 [\*]

## Behavior 8: Start an employer-provided exercise program (US) continued

- (>) Sallis JF; Distance between homes and exercise facilities related to frequency of exercise among San Diego residents; Public Health Reports; 1990 [\*]
- (>) Shephard RJ; A critical analysis of work-site fitness programs and their postulated economic benefits; Medicine and Science in Sports and Exercise; 1992 [?]
- (>) Wallace PG; Are general practitioners doing enough to promote healthy lifestyle? Findings of the Medical Research Council's general practice research framework study on lifestyle and health; British Medical Journal; 1987 [\*]

## Cognitive barriers

- (>) Armstrong CA; Stages of change, self-efficacy and the adoption of vigorous exercise: A prospective analysis; Journal of Sport and Exercise Psychology; 1993 [?]
- (>) Dishman RK; Determinants of participation in physical activity; In Bouchard C (Ed), Exercise, fitness and health (Champaign, IL: Human Kinetics); 1990 [?]
- (>) Marcus BH; Assessing motivational readiness and decision-making for exercise; Health Psychology; 1992 [\*]
- (>) Marcus BH; Motivational readiness, self-efficacy and decision-making for exercise; Journal of Applied Social Psychology; 1992 [?]
- (>) Marcus BH; Self-efficacy, decision making and stages of change: An integrative model of physical exercise; Journal of Applied Social Psychology; 1994 [?]
- (>) Marcus BH; The stages of processes of exercise adoption and maintenance in a worksite sample; Health Psychology; 1992 [\*]
- (>) Reynolds KD; Psychosocial predictors of physical activity in adolescents; Preventive Medicine; 1990 [\*]
- (>) Sallis JF; Predictors of adoption and maintenance of physical activity in a community sample; Preventive Medicine; 1986 [\*]
- (>) Sallis JF; Predictors of adoption and maintenance of vigorous physical activity in men and women; Preventive Medicine; 1992 [\*]
- (>) Sallis JF; The development of self-efficacy scales for health-related diet and exercise behaviors; Health Education Research; 1988 [?]

## Behavior 8: Start an employer-provided exercise program (US) continued

## Barriers specific to women

- (>) Dishman RK; Compliance/adherence in health-related exercise; Health Psychology; 1982 [\*]
- (>) Dishman RK; The determinants of physical activity and exercise; Public Health Reports; 1985 [\*]
- (>) King AC; Determinants of physical activity and interventions in adults; Medicine and Science in Sports and Exercise; 1992 [?]
- (>) Lee C; Factors related to the adoption of exercise among older women; Journal of Behavioral Medicine; 1993 [?]
- (>) Marcus BH; Application of theoretical models to exercise behavior among employed women; American Journal of Health Promotion; 1994 [?]
- (>) Marcus BH; Physical activity in women: Current status and future directions; In Stanton A (Ed), Women's health (Washington, DC: American Psychological Association); 1995 [?]
- (>) Sallis JF; Predictors of adoption and maintenance of vigorous physical activity in men and women; Preventive Medicine; 1992 [\*]
- (>) Verhoef MJ; Exercising at work: Barriers to women's participation; American Association of Occupational Health Nurses; 1993 [?]
- (>) Verhoef MJ; Women's exercise participation: The relevance of social roles compared to non-role-related determinants; Canadian Journal of Public Health; 1992 [?]

# Barriers related to aging

- (>) Astrand PO; Why exercise?; Medicine and Science in Sports and Exercise; 1992 [?]
- (>) Ballard-Barbash R; Physical activity and risk of large bowel cancer in the Framingham Study; Cancer Research; 1990 [\*]
- (>) Caspersen CJ; National estimates of physical activity among older adults; Medicine and Science in Sports and Exercise; 1991 [?]
- (>) Caspersen CJ; Physical activity patterns of adults aged 60 years and older; Medicine and Science in Sports and Exercise; 1990 [?]
- (>) Feather NT; Expectations and actions: Expectancy value models in psychology (Hillsdale, NJ; Erlbaum); 1982 [?]
- (>) Gartside PS; Determinants of high-density lipoprotein cholesterol in blacks and whites: The Second National Health and Nutrition Examination Survey; American Heart Journal; 1984 [\*]
- (>) Rogers RL; After reaching retirement age, physical activity sustains cerebral perfusion and cognition; Journal of the American Geriatric Society; 1990 [?]

## Behavior 8: Start an employer-provided exercise program (US) continued

(>) Rowe JW; Human aging: Usual and successful; Science; 1987 [\*]

# Barriers related to underserved populations

- (>) Lewis BS; The effect of physician advice on exercise behavior; Preventive Medicine; 1993 [\*]
- (>) Etkin SE; Reaching the hard to reach: Active living programs for low socioeconomic individuals; In Quinney HA (Ed), Toward active living (Champaign, IL: Human Kinetics); 1994 [?]

**Search term**: other (most of these resources were discovered during other searches)

Blue CL; Exercise among blue-collar workers: Application of the theory of planned behavior; Research in Nursing and Health; 2001 [\*]

Chinn DJ; Factors associated with non-participation in a physical activity promotion trial; Public health; 2006 [\*]

Dishman R; Compliance/adherence in health related exercise; Health Psychology; 1982 [\*]

(<) Marcus BH; The stages and processes of exercise adoption and maintenance in a worksite sample; Health Psychology; 1992 [\*]

Garber CE;. Correlates of the stages of change for physical activity in a population survey. American Journal of Public Health; 2008 [\*]

Hooper JM; Distinguishing starters from nonstarters in an employee physical activity incentive program; Health Education & Behavior; 1995 [?]

Kreuter MW; Social environment and physical activity: a review of concepts and evidence; Social Science and Medicine; 2006 [?]

Kreuter MW; The role of culture in health communication; Annual Review of Public Health; 2004 [?]

Napolitano MA; Mediators of physical activity behavior change: A multivariate approach; Health Psychology; 2008 [\*]

Williams DM; Acute affective response to a moderate intensity exercise stimulus predicts physical activity participation 6 and 12 months later; Journal of Sports and Exercise Psychology; 2008 [\*]

Williams DM; Comparing psychosocial predictors of physical activity adoption and maintenance; Annals of Behavioral Medicine; 2008 [\*]

## Behavior 9: Maintain an employer-provided exercise program (US)

An individual in a US workplace wellness program makes progress with a recommended exercise program.

Gochman DS; Handbook of health behavior research; Plenum Press; 1997

### Personal characteristics

- (>) Blair SN; Relationships between exercise or physical activity and other health behaviors; Public Health Reports; 1985 [\*]
- (>) Dishman RK; Exercise adherence in children and youth: Implications for adulthood; in Dishman RK (Ed), Exercise adherence (Champaign, IL: Human Kinetics); 1988 [?]
- (>) Godin G; The impact of physical fitness and health-age appraisal upon exercise intentions and behavior; Journal of Behavioral Medicine; 1987 [?]
- (>) King AC; Determinants of physical activity and interventions in adults; Medicine and Science in Sports and Exercise; 1992 [?]
- (>) King AC; Increasing exercise among blue-collar employees: The tailoring of worksite programs to meet specific needs; Preventive Medicine; 1988 [\*]
- (>) Marcus BH; Application of theoretical models to exercise behavior among employed women; American Journal of Health Promotion; 1994 [?]
- (>) Oldridge NB; Predictors of dropout from cardiac exercise rehabilitation; American Journal of Cardiology; 1983 [\*]

# Psychological characteristics

- (>) Dishman RK; The determinants of physical activity and exercise; Public Health Reports; 1985 [\*]
- (>) King AC; Determinants of physical activity and interventions in adults; Medicine and Science in Sports and Exercise; 1992 [?]
- (>) Martin JE; Exercise applications and promotion in behavioral medicine: Current status and future directions; Journal of Consulting and Clinical Psychology; 1982 [\*]
- (>) Sallis JF; Predictors of adoption and maintenance of physical activity in a community sample; Preventive Medicine; 1986 [\*]

## Behavior 9: Maintain an employer-provided exercise program (US) continued

## **Environmental and program characteristics**

- (>) Brownell KD; Evaluation and modification of exercise patterns in the natural environment; American Journal of Psychiatry; 1980 [?]
- (>) King AC; Effects of differing intensities and formats of 12 months of exercise training on psychological outcomes in older adults; Health Psychology; 1993 [\*]
- (>) King AC; Group- vs. home-based exercise training in healthy older men and women; Journal of the American Medical Association; 1991 [?]
- (>) Raglin JS; Influence of spouse support, self-motivation and mood state on the adherence of married participants to a 12-month exercise program; Paper presented at the annual meeting of the Society for Behavioral Medicine, San Francisco; 1993 [?]
- (>) Sallis JF; Predictors of adoption and maintenance of physical activity in a community sample; Preventive Medicine; 1986 [\*]

Search term: "health psychology exercise"

Ogden J; Health psychology: a textbook; McGraw Hill Open University Press; 2012

## **Demographics**

- (>) Dishman RK; Psychobiologic influences on exercise adherence; Journal of Sport Psychology; 1980 [?]
- (>) King AC; Determinants of physical activity and interventions in adults; Medicine and Science in Sports and Exercise; 1992 [?]
- (>) Shea S; The Washington Heights-Inwood Healthy Heart Program: a third generation community-based cardiovascular disease prevention program in a disadvantaged urban setting; Preventive Medicine; 1992 [?]

### Social benefits

- (>) Beck F.; A theoretical investigation of the development of physical activity habits in retirement; British Journal of Health Psychology; 2010 [\*]
- (>) Hardy S; Preventing disability through exercise; investigating older adults' influences and motivations to engage in physical activity; Journal of Health Psychology; 2009 [\*]
- (>) Molloy GJ; Social support and regular physical activity: does planning mediate this link; British Journal of Health Psychology; 2010 [\*]
- (>) Riddle PK; Attitudes, beliefs, intentions, and behaviours of men and women toward regular jogging; Research Quarterly for Exercise and Sport; 1980 [?]

### Behavior 9: Maintain an employer-provided exercise program (US) continued

## Cognitive and emotional determinants

- (>) Lippke S; The protection motivation theory within the stages of the transtheoretical model stage specific interplay of variables and prediction of exercise stage transitions; British Journal of Health Psychology; 2009 [\*]
- (>) Plotnikoff RC; Protection motivation theory and physical activity: a longitudinal test among a representative population sample of Canadian adults; Journal of Health Psychology; 2009 [\*]
- (>) Riddle PK; Attitudes, beliefs, intentions, and behaviours of men and women toward regular jogging; Research Quarterly for Exercise and Sport; 1980 [?]
- (>) Sallis JF; Predictors of adoption and maintenance of physical activity in a community sample; Preventive Medicine; 1986 [\*]

### Costs and benefits of exercise

- (>) Cropley M; Job strain and rumination about work issues during leisure time: a diary study; European Journal of Work and Organizational Psychology; 2003 [\*]
- (>) Hausenblas HA; A missing piece of the transtheoretical model applied to exercise: development and validation of the temptation to not exercise scale; Psychology and Health; 2001 [\*]
- (>) Marcus BH; Assessing motivational readiness and decision making for exercise; Health Psychology; 1992 [\*]
- (>) Paxton SJ; Predictors of exercise program participation in older women; Psychology and Health; 1997 [\*]

## **Exercise self-efficacy**

- (>) Sallis JF; Predictors of adoption and maintenance of physical activity in a community sample; Preventive Medicine; 1986 [\*]
- (>) Sniehotta FF; Bridging the intention-behaviour gap: planning, self-efficacy, and action control in the adoption and maintenance of physical exercise; Psychology and Health; 2005 [\*]
- (>) Lippke S; The protection motivation theory within the stages of the transtheoretical model stage specific interplay of variables and prediction of exercise stage transitions; British Journal of Health Psychology; 2009 [\*]

### Behavior 9: Maintain an employer-provided exercise program (US) continued

# **Planning**

- (>) Molloy GJ; Social support and regular physical activity: does planning mediate this link; British Journal of Health Psychology; 2010 [\*]
- (>) Scholz U; Beyond behavioural intentions; planning mediates between intentions and physical activity; British Journal of Health Psychology; 2008 [\*]
- (>) Sniehotta FF; Bridging the intention-behaviour gap: planning, self-efficacy, and action control in the adoption and maintenance of physical exercise; Psychology and Health; 2005 [\*]

# Value on health (belief that fitness is important)

- (>) MORI; Public attitudes towards fitness; research study conducted for Fitness Magazine; MORI London; 1984 [?]
- (>) Riddle PK; Attitudes, beliefs, intentions, and behaviours of men and women toward regular jogging; Research Quarterly for Exercise and Sport; 1980 [?]

## Affect (emotion)

- (>) Hardeman W; Theory of planned behavior cognitions do not predict self-reported or objective physical activity levels or change in the ProActive trial; British Journal of Health Psychology; 2011 [\*]
- (>) Rhodes RE; A review and meta-analysis of affective judgments and physical activity in adult populations; Annals of Behavioral Medicine; 2009 [\*]
- (>) Scott EJ; The theory of planned behavior predicts self-reports of walking, but does not predict step count; British Journal of Health Psychology; 2007 [\*]

## Past behavior (habit)

- (>) Brickell TA; Using past behaviour and spontaneous implementation intentions to enhance the utility of the theory of planned behaviour in predicting exercise; British Journal of Health Psychology; 2006 [\*]
- (>) Norman P; The theory of planned behaviour and exercise: an investigation into the role of prior behaviour, behavioural intentions and attitude variability; European Journal of Social Psychology; 1995 [\*]

## Behavior 9: Maintain an employer-provided exercise program (US) continued

## Special research

(>) Armitage CJ; Can the theory of planned behaviour predict the maintenance of physical activity? Health Psychology; 2005 [\*]

## Systematic reviews about evidence for promoting exercise

- (>) Dishman RK; Worksite physical activity interventions; American Journal of Preventive Medicine; 1998 [\*]
- (>) Eakin EG; Telephone interventions for physical activity and dietary behavior change; a systematic review; American Journal of Preventive Medicine; 2007 [\*]
- (>) Marcus BH; Physical activity interventions using mass media, print media, and information technology; American Journal of Preventive Medicine; 1998 [\*]
- (>) Rubak S; Motivational interviewing: a systematic review and meta-analysis; The British Journal of General Practice; 2005 [\*]

Search term: "stages of change exercise program"

Blissmer B; Testing the requirements of stages of physical activity among adults: the comparative effectiveness of stage-matched, mis-matched, standard care, and control interventions; Annals of Behavioural Medicine; 2002 [\*]

Burn GE; Assessment of stages of change for exercise within a worksite lifestyle screening program; American Journal of Health Promotion; 1999 [?]

Courneya KS; Predicting exercise stage transitions over two consecutive 6-month periods: a test of the theory of planned behaviour in a population-based sample; British Journal of Health Psychology; 2001 [\*]

Marcus BH; Assessing motivational readiness and decision making for exercise; Health Psychology; 1992 [\*]

Marcus BH; Physical activity behavior change: issues in adoption and maintenance; Health Psychology; 2000 [\*]

Marcus BH; The stages and processes of exercise adoption and maintenance in a worksite sample; Health Psychology; 1992 [\*]

Marcus BH; The stages of exercise behavior; Journal of Sports Medicine and Physical Fitness; 1993 [?]

Marcus BH; Using the stages of change model to increase the adoption of physical activity among community participants; American Journal of Health Promotion; 1992 [?]

Marcus; BH; Self-efficacy, decision-making, and stages of change: an integrative model of physical exercise; Journal of Applied Social Psychology; 1994 [NA]

Marshall SJ; The transtheoretical model of behavior change: a meta-analysis of applications to physical activity and exercise; Annals of Behavioural Medicine; 2001 [\*]

## Behavior 9: Maintain an employer-provided exercise program (US) continued

Peterson TR; Improving exercise behavior: an application of the stages of change model in a worksite setting; American Journal of Health Promotion; 1999 [?]

Prochaska JO; Attendance and outcome in a work site weight control program: Processes and stages of change as process and predictor variables; Addictive Behaviours; 1992 [\*]

Schwarzer R; Modeling health behavior change: how to predict and modify the adoption and maintenance of health behaviors; Applied Psychology; 2008 [\*]

Sutton K; Assessing dietary and exercise stage of change to optimize weight loss interventions; Obesity: A Research Journal; 2012 [?]

Ziegelmann JP; Adoption and maintenance of physical activity: Planning interventions in young, middle-aged, and older adults; Psychology and Health; 2006 [\*]

**Search term**: other (most of these resources were discovered during other searches)

Bock BC: Maintenance of physical activity following an individualized motivationally tailored intervention; Annals of Behavioral Medicine; 2001 [?]

Bungum TJ; Factors affecting exercise adherence at a worksite wellness program.; American Journal of Health Behavior; 1997 [?]

Erickson JA; Reasons women discontinued participation in an exercise and wellness program; 2000 [\*]

Garber CE;. Correlates of the stages of change for physical activity in a population survey. American Journal of Public Health; 2008 [\*]

Hammermeister JJ; Psychosocial, behavioral, and biometric characteristics of stages of exercise adoption; Psychological reports; 2000 [?]

King AC; Can we identify who will adhere to long-term physical activity? Signal detection methodology as a potential aid to clinical decision making; Health Psychology; 1997 [?]

Napolitano MA; Mediators of physical activity behavior change: A multivariate approach; Health Psychology; 2008 [\*]

Pekmezi D; Evaluating and enhancing self-efficacy for physical activity; ACSM'S Health & Fitness Journal; 2009 [\*]

Williams DM; Acute affective response to a moderate intensity exercise stimulus predicts physical activity participation 6 and 12 months later; Journal of Sports and Exercise Psychology; 2008 [\*]

Williams DM; Comparing psychosocial predictors of physical activity adoption and maintenance; Annals of Behavioral Medicine; 2008 [\*]

### Behavior 10: Offer employees workplace wellness program incentives (US)

A US employer offers its employees incentives to participate in its workplace wellness program.

Mattke, S; A review of the U.S. workplace wellness market; RAND Health publication; 2012

- (>) Kaiser Family Foundation; Employer health benefits: 2010 annual survey; The Kaiser Family Foundation; 2010 [?]
- (>) Mercer; National survey of employer-sponsored health plans: 2009 survey report; Mercer publication; 2010 [?]
- (>) PricewaterhouseCoopers; Health and well-being touchstone survey executive summary; PricewaterhouseCoopers publication; 2010 [?]
- (>) Hewitt; The road ahead: under construction with increasing tolls: survey findings; Hewitt Associates publication; 2010 [?]
- (>) Towers Watson; Raising the bar on health care: moving beyond incremental change; Towers Watson publication; 2010 [?]
- (>) Buck Consultants; Working well: a global survey of health promotion and workplace wellness strategies; Buck Consultants publication; 2010 [?]
- (>) Mello M; Wellness programs and lifestyle discrimination the legal limits; New England Journal of Medicine; 2008 [?]
- (>) U.S. Department of Labor (DOL); FAQs about the HIPAA nondiscrimination requirements; DOL publication; 2011 [?]
- (>) Office for the Assistant Secretary for Planning and Evaluation; Incentives for health behavior; Office publication; 2011 [?]

**Search term**: "wellness incentives employer characteristics"

Haisley E; Promoting completion of health risk assessments with lottery incentives; American Journal of Health Promotion; 2011 [\*]

Search term: "wellness incentives purpose"

None

**Search term**: other (most of these resources were discovered during other searches)

None

# CHAPTER THREE: ADVERSE SELECTION MODEL BEHAVIORS

# A. AGENT BEHAVIORS

Following are the primary agent behaviors in the Adverse Selection Model:

Agent role	Behavior
Individual person	Purchase an individual health insurance policy from an Exchange (US)
	2. Pay a penalty tax (US)
Insurance company	3. Negotiate fee schedule with a medical provider (US
	4. Set premium increase rates for individual health insurance (US)
	5. Offer an individual health insurance plan on an Exchange (US)
Provider network	6. Negotiate fee schedule with a health insurance company (US)
Exchange	7. Advertise an individual health insurance plan (US)
	8. Offer an individual health insurance plan (US)
Premium rate limit agency	9. Set health insurance premium increase limit (US)
Risk adjustment agency	10. Reallocate premiums to health insurers (US)

## **B. SEARCH RESULTS**

# Behavior 1: Purchase an individual health insurance policy from an Exchange (US)

An individual in the US health system selects and purchases an individual health insurance policy from a state-provided Health Insurance Exchange.

Search term: "health insurance choice"

Lambrew JM; "Choice" in health care: what do people really want? Commonwealth Fund report; 2005 [\*]

**Search term**: "choice behavior health utilization"

Baicker WJ; Health insurance coverage and take-up: lessons from behavioral economics; The Milbank Quarterly; 2012 [\*]

Buchmueller TC; The effect of price on switching among health plans; Journal of Health Economics; 1997 [\*]

Kolstad JT; Quality and consumer decision making in the market for health insurance and health care services; Medical Cale Research and Review (Supplement); 2009 [\*]

(<) Hibbard JH; What is quality anyway? Performance reports that clearly communicate to consumers the meaning of quality of care; Medical Care Research and Review; 2010 [\*]

**Search term**: "adverse selection"

Academy Health; Consumer choice in the health insurance and provider markets: a look at the evidence thus far; Issue Brief; 2007 [\*]

Bluhm WF; The Minnesota antiselection model; Actuarial Education and Research Fund; 1991 [\*]

Buchmueller T; Did community rating induce an adverse selection death spiral? Evidence from New York, Pennsylvania, and Connecticut; American Economic Association; 2002 [\*]

Cutler DM; Adverse selection in health insurance; NBER Working Paper Series; 1997 [\*]

Di Novi C; On the anatomy of adverse selection in health insurance market: evidence from MEPS; 2007 [\*]

Di Novi C; Adverse selection in the U.S. health insurance markets: evidence from the MEPS; Department of Public Policy and Public Choice (POLIS); 2008 [\*]

Dizon-Ross E; Adverse selection and consumer behavior in the viatical settlement market; Stanford University Department of Economics report; 2007 [\*]

Esponda I; Behavioral equilibrium in economies with adverse selection; New York University report; 2007 [\*]

Finkelstein A; Adverse selection in insurance markets: policyholder evidence from the U.K. annuity market; Harvard University; ca 2004 [\*]

Frank RG; Measuring adverse selection in managed health care; Journal of Health Economics; 2000 [\*]

## Behavior 1: Purchase an individual health insurance policy from an Exchange (US) continued

Handel B; Adverse selection and switching costs in health insurance markets: when nudging hurts; Northwestern University; 2010 [\*]

McDonough P; The social context of health selection: a longitudinal study of health and employment; Social Science & Medicine; 2001 [\*]

Rothschild M; Equilibrium in insurance markets: an essay on the economics of imperfect information; The Quarterly Journal of Economics; 1976 [\*]

**Search term**: other (most of these resources were discovered during other searches)

Academy Health; Choice and decision-making in a health insurance exchange: what does research and experience tell us? 2012 [\*]

(>) Hibbard JH; An experiment shows that a well-designed report on costs and quality can help consumers choose high-value health care; Health Affairs (Millwood); 2012 [?]

Amir O; Risk management for the future: age, risk, and choice architecture; report; 2012 [\*]

Aron-Dine A; Moral hazard in health insurance: how important is forward looking behavior? NBER; 2012 [\*]

Aron-Dine A; The RAND health insurance experiment, three decades later; NBER; 2012 [\*]

Baicker K; Behavioral hazard in health insurance; Dartmouth University report; 2012 [\*]

Baker T; Tontines for the invincibles: enticing low risks into the health-insurance pool with an idea from insurance history and behavioral economics: Wisconsin Law Review; 2010 [\*]

Besedes T; Age effects and heuristics in decision making; report; 2010 [\*]

Blavin F; How choices in exchange design for states could affect insurance premiums and levels of coverage; Health Affairs; 2012 [\*]

Bolhaar J; A dynamic analysis of the demand for health insurance and health care; report; 2010 [\*]

Carlin AS; Quantifying moral hazard in health insurance across medical services for the near-elderly; Georgetown University thesis; 2012 [\*]

Castaneda MA; Employer provided health insurance and the adverse selection problem; Public Finance Review; 2012 [\*]

Chernew M; The demand for health insurance coverage by low-income workers: Can reduced premiums achieve full coverage? Health Services Research; 1997 [\*]

Ericson KM; Age-based heterogeneity and pricing regulation on the Massachusetts health insurance exchange; NBER; 2012 [\*]

Ericson KM; Pricing regulation and imperfect competition on the Massachusetts health insurance exchange; NBER; 2013 [\*]

## Behavior 1: Purchase an individual health insurance policy from an Exchange (US) continued

Ericson KMM; Designing and regulating health insurance exchanges: lessons from Massachusetts; Inquiry; 2012 [\*] Gerfin M; How price sensitive is the demand for health care? Conference paper; 2012 [\*]

- (>) Chandra A; Patient cost-sharing, hospitalization offsets, and the design of optimal health insurances for the elderly; NBER; 2007 [\*]
- (>) Finkelstein A; The Oregon health insurance experiment; evidence from the first year; The Quarterly Journal of Economics; 2012 [\*]
- (>) Manning W; Health insurance and the demand for medical care: evidence from a randomized experiment; The American Economic Review; 1987 [\*]

Hanoch Y; Can limiting choice increase social welfare? The elderly and health insurance; Milbank Quarterly; 2006 [\*]

Horsley N; Risky business: health care reform's impact on the health benefits market; SSRN; 2012 [\*]

Kahn JH; The individual mandate tax penalty; unpublished article; 2012 [\*]

Kowalski AE; Estimating the tradeoff between risk protection and moral hazard with a nonlinear budget set model of health insurance; NBER; 2012 [\*]

Lin C; Moral hazard in health care: case study of Taiwan's national health insurance; Colorado State University thesis; 2012 [\*]

Liu Y; Market incentives and pricing behavior in health insurance; report; 2012 [\*]

Lobel O; Risk management for the future: age, risk, and choice architecture; SSRN; 2012 [?]

Polimeni R; Prices matter: comparing two tests of adverse selection in health insurance; Scholarship; 2012 [\*]

Quincy L; How consumers shop for health insurance: lessons for exchange designers; from book Facilitating state health exchange communication through the use of health literate practices; 2012 [\*]

Sinaiko AD; The experience of Massachusetts shows that consumers will need help in navigating insurance exchanges; Health Affairs; 2013 [\*]

Starc A; Designing health insurance exchanges: Key decisions; Leonard Davis Institute of Health Economics; 2012 [\*]

# Behavior 2: Pay a penalty tax (US)

An individual in the US health system rejects purchasing individual health insurance, and consequently pays a penalty tax.

Search term: "health insurance penalty tax"

Collins S; Young, uninsured, and in debt: why young adults lack health insurance and how the affordable care act is helping; The Commonwealth Fund report; 2012 [\*]

Cooter RD; Not the power to destroy: an effects theory of the tax power; Berkeley Law report; 2012 [\*]

Frakt A; What is the economic rationale for the health care law's individual mandate; JAMA Forum; 2012 [\*]

(>) Chandra A; The importance of the individual mandate-evidence from Massachusetts; The New England Journal of Medicine; 2012 [\*]

Kahn JH; The individual mandate tax penalty; unpublished article; 2012 [\*]

Mello MM; The taxing power and the public's health; The New England Journal of Public Health; 2012 [\*]

Nardin R; Reasons why patients remain uninsured after Massachusetts' health care reform: a survey of patients at a safety-net hospital; Journal of General Internal Medicine; 2012 [\*]

- (<) Ayanian JZ; The Massachusetts journey to expand health insurance coverage; Journal of General Internal Medicine; 2012 [\*]
- (<) Capoccia V; Sustaining enrollment in health insurance for vulnerable populations: lessons from Massachusetts; Psychiatric Services; 2013 [?]

Robson A; Private health insurance incentives in Australia: the effects of recent changes to price carrots and income sticks; The Geneva Papers on Risk and Insurance; 2012 [NA]

**Search term**: "health insurance penalty tax behavior"

Maher B; Some thoughts on health care exchanges: choice, defaults, and the unconnected; Connecticut Law Review; 2012 [\*]

Pauly MV; Lessons to improve the efficiency and equity of health reform; Hastings Center Report; 2012 [\*]

**Search term**: "health insurance tax choice behavior"

Congdon WJ; Psychology and economic policy; The Behavioral Foundations of Public Policy book; 2012 [?]

Korobkin R; Bounded rationality, moral hazard, and the case for relative value health insurance; Relative Value Health Insurance; 2012 [\*]

Parente ST; Health economics and policy: towards the undiscovered country of market based reform; International Journal of Health Care Finance and Economics; 2012 [NA]

## Behavior 3: Negotiate fee schedule with a medical provider (US)

A health insurance company in the US health system negotiates the medical reimbursement fee schedule with a medical provider.

Search term: "health insurance provider reimbursement negotiation"

Anderson G; High US health-care spending and the importance of provider payment rates; Forum for Health Economics & Policy; 2012 [NA]

Balto D; Consolidation in health care economics; Report; 2013 [\*]

(>) Berenson W; Unchecked provider clout in California foreshadows challenges to health reform; Health Affairs; 2010 [?]

Burns J; Reform forces health insurers to reinvent themselves; Managed Care; 2012 [\*]

Frakt A; Beyond capitation: how new payment experiments seek to find the 'sweet spot' in amount of risk providers and payers bear; Health Affairs; 2012 [\*]

Holahan J; Plan participation in health insurance exchanges: implications for competition and choice; Urban Institute report; 2012 [\*]

McKnight R; Insurance as delegated purchasing: theory and evidence from health care; NBER; 2012 [\*]

Search term: "health insurance negotiation dynamics"

Cutler DM; Paying for health insurance: the trade-off between competition and adverse selection; The Quarterly Journal of Economics; 1998 [?]

**Search term**: "health provider reimbursement contracting"

Bodenheimer T; The 1990s: the breakup of the provider insurer pact; Health Policy; 2012 [NA]

Ellis RP; Provider behavior under prospective reimbursement: cost sharing and supply; Journal of Health Economics; 1986 [\*]

Ma CTA; Optimal health insurance and provider payment; The American Economic Review; 1997 [\*]

Newhouse JP; Reimbursing health plans and health providers: efficiency in production versus selection; Journal of Economic Literature; 1996 [?]

Strunk BC; Health plan-provider showdowns on the rise; Center for Studying Health issue brief; 2001 [NA]

**Search term**: "health provider negotiation"

None

# Behavior 3: Negotiate fee level with a medical provider (US) continued

Search term: "health provider contracting"

None

Search term: other (most of these resources were discovered during other searches)

Wu VY; Managed care's price bargaining with hospitals; Journal of Health Economics; 2009 [\*]

Berenson RA; The growing power of some providers to win steep payment increases from insurers suggests policy remedies may be needed; Health Affairs; 2012 [\*]

# Behavior 4: Set premium increase rate for individual health insurance (US)

A health insurance company in the US health system sets the premium increase rate for an individual health insurance product offered on a state-provided Health Insurance Exchange.

Search term: "set health insurance premium rate"

Blavin F; How choices in exchange design for states could affect insurance premiums and levels of coverage; Health Affairs; 2012 [\*]

Dafny L; Does it matter if your health insurer is for-profit? Effects of ownership on premiums, insurance coverage, and medical spending; NBER; 2012 [\*]

(<) Ericson KMM; Pricing regulation and imperfect competition on the Massachusetts Health Insurance Exchange; NBER; 2013 [?]

Kowalski A; Estimating the tradeoff between risk protection and moral hazard with a nonlinear budget set model of health insurance; NBER; 2012 [\*]

Young RA; Who will have health insurance in the future? An updated projection; Annals of Family Medicine; 2012 [\*]

Search term: "pricing health insurance"

Bauhoff S; Do health plans risk-select? An audit study on Germany's social health insurance; Journal of Public Economics; 2012 [\*]

Day R; New state insurance exchanges should follow the example of Massachusetts by simplifying choices among health plans; Health Affairs; 2012 [\*]

Ericson KMM; Age-based heterogeneity and pricing regulation on the Massachusetts health insurance exchange; NBER; 2012 [\*]

Hackmann MB; Health reform, health insurance, and selection: estimating selection into health insurance using the Massachusetts health reform; NBER; 2012 [\*]

**Search term**: "health insurer pricing strategy"

Biener C; Pricing in microinsurance markets; report; 2012 [\*]

Ericson KMM; Consumer inertia and firm pricing in the Medicare Part D prescription drug insurance exchange; NBER; 2012 [\*]

Schwarcz D; Transparently opaque: understanding the lack of transparency in insurance consumer protection; unpublished paper; 2012 [\*]

SmartBusiness; How health insurance companies determine the premium businesses pay; interview; 2011 [\*]

## Behavior 4: Set premium increase rate for individual health insurance (US) continued

**Search term**: other (most of these resources were discovered during other searches)

Balto D; Consolidation in health care economics; Report; 2013 [\*]

- (>) Dafny L; Are health insurance markets competitive? American Economic Review; 2010 [?]
- (>) Dafny L; Paying a premium on your premium? Consolidation in the US health insurance market; American Economic Review; 2012 [?]

Kaiser Family Foundation; Health insurance market reforms: rate restrictions; Focus on Health Reform report; 2012 [\*]

"www.regence.com/transparency/regence-and-reform/how-insurers-set-premium-rates.jsp"

### Behavior 5: Offer an individual health insurance plan on an Exchange (US)

A health insurance company in the US health system offers an individual health insurance plan for a state-provided Health Insurance Exchange.

Search term: "health Exchange insurance plan"

Day R; New state insurance exchanges should follow the example of Massachusetts by simplifying choices among health plans; Health Affairs; 2012 [\*]

Holahan J; Plan participation in health insurance exchanges: implications for competition and choice; Urban Institute paper; 2012 [\*]

McBride TD; Federal employees health program experiences lack of competition in some areas, raising cost concern for exchange plans; Health Affairs; 2012 [\*]

Search term: "health Exchange insurer behavior"

Adler J; Cooperation, commandeering or crowding out? Federal intervention and state choices in health care policy; Kansas Journal of Law & Public Policy; 2011 [\*]

Blavin F; How choices in exchange design for states could affect insurance premiums and levels of coverage; Health Affairs; 2012 [\*]

Blumberg LJ; Improving health insurance markets and promoting competition under health care reform; Urban Institute statement; 2009 [\*]

Frank RG; Choice, price competition and complexity in markets for health insurance; Journal of Economics Behavior & Organization; 2009 [\*]

Greaney TL; Regulating to promote competition in designing health insurance exchanges; HeinOnline; 2010 [\*]

Hacker J; Flexible authority: ensuring health insurance exchanges shape the rules of the game; Health Care for America Now; 2012 [\*]

Handel BR; Adverse selection and switching costs in health insurance markets: when nudging hurts; NBER; 2011 [\*]

**Search term**: other (most of these resources were discovered during other searches)

Gabel JR; More than half of individual health plans offer coverage that falls short of what can be sold through exchanges as of 2014; Health Affairs; 2012 [\*]

# Behavior 6: Negotiate fee schedule with a health insurance company (US)

A medical provider group in the US health system negotiates a medical reimbursement fee schedule with a health insurance company.

Search term: "health provider reimbursement negotiation"

Gesma D; How to negotiate with health care plans; Journal of Oncology Practice; 2010 [\*]

(>) Todd MK; Managed care contracting handbook: planning and negotiating the managed care relationship; Productivity Press book; 2009 [?]

Methvin T; Healthcare provider supply chain management; Trinity course; 2011 [\*]

Shoemaker TS; Commentary: health care payment and academic medicine: threat or opportunity; Academic Medicine; 2010 [NA]

Search term: "medical fee schedule negotiation"

Anderson DG; Conflict resolution and negotiation in healthcare management; book Essentials of Management and Leadership in Public Health; 2011 [?]

Dunn A; Physician market power and medical-care expenditures; NBER; 2011 [\*]

- (>) Capps C; Competition and market power in option demand markets; The RAND Journal of Economics; 2003 [?]
- (>) Keeler E; The changing effects of competition on non-profit and for-profit hospital pricing behavior; Journal of Health Economics; 1999 [?]
- (>) Town R; Hospital competition in HMO networks; Journal of Health Economics; 2001 [?]

Ginsburg PB; Wide variation in hospital and physician payment rates evidence of provider market power; Center for Studying Health Center Change; 2010 [\*]

- (<) Brand K; Mergers when prices are negotiated: evidence from the hospital industry; seminar results; 2012 [\*]
- (<) Gaynor M; Competition in health care markets; NBER; 2011 [\*]
- (<) Gaynor M; Health care industry consolidation; statement; 2012 [\*]
- (<) Gaynor M; The impact of hospital consolidation Update; RWJF; 2012 [\*]
- (<) Lewis M; Diagnosing hospital system bargaining power in managed care networks; seminar results; 2013 [\*]
- (<) Roosevelt J; Insurer-provider payment negotiations: implications for health care spending; National Health Policy Forum; announcement; 2010 [\*]
- (<) White C; Health status and hospital prices key to regional variation in private health care spending; National Institute for Health Care Reform; 2012 [\*]

## Behavior 6: Negotiate fee level with a health insurance company (US) continued

Search term: "physician fee bargaining"

Blair RD; Physician cooperative bargaining ventures: an economic analysis; HeinOnline; 2003 [\*]

Bodenheimer T; Reimbursement controls; book Understanding Health Policy: a clinical approach; 2012

Crainich D; Hospital's activity-based financing system and manager: physician interaction; The European Journal of Health Economics; 2011 [\*]

Dor A; The hospital-physician interaction in US hospitals; European Economic Review; 1995 [\*]

Evans JH; Nonfinancial performance measures and physician compensation; Journal of Management Accounting Research; 2010 [\*]

Galizzi MM; The effects of hospitals' governance on optimal contracts: bargaining vs. contracting; Journal of Health Economics; 2011 [\*]

Green EP; Payment mechanisms in the healthcare industry: an experimental study of physician incentives in a multiple principal agent setting; University of Delaware Alfred Lerner College of Business and Economics working paper; 2012 [\*]

Lomas J; Paying physicians in Canada: minding our Ps and Qs; Health Affairs; 1989 [\*]

Lomas J; The price of peace. The structure and process of physician fee negotiations in Canada; Centre for Health Economics and Policy Analysis; 1992 [NA]

MacAdam M; Physician payment incentives; Health Policy Monitor; 2009 [\*]

Rodwin RG; Physician payment reform: lessons from abroad; Health Affairs; 1989 [\*]

Town R; Market power and contract form: evidence from physician group practices; International Journal of Health Care Finance and Economics; 2011 [\*]

**Search term**: "insurer provider payment bargaining"

Berenson RA; The growing power of some providers to win steep payment increases from insurers suggests policy remedies may be needed; Health Affairs; 2012 [\*]

Berenson RA; Unchecked provider clout in California foreshadows challenges to health reform; Health Affairs; 2010 [\*]

Fong K; Markov-perfect network formation: an applied framework for bilateral oligopoly and bargaining in buyer-seller networks; Conference on applied industrial organization; 2011 [\*]

Gottlieb J; Essays in public economics; Harvard paper; 2013 [NA]

Gowrisankaran G; Mergers when prices are negotiated: evidence from the hospital industry; Yale; 2013 [\*]

Wu VY; Managed care's price bargaining with hospitals; Journal of Health Economics; 2009 [\*]

# Behavior 6: Negotiate fee level with a health insurance company (US) continued

**Search term**: other (most of these resources were discovered during other searches)

McKnightR; Insurance as delegated purchasing: theory and evidence from health care; NBER; 2012 [\*]

## Behavior 7: Advertise an individual health insurance plan (US)

An Exchange in the US health system advertises an individual health insurance plan.

Search term: "Health insurance Exchange marketing"

Dafny L; Let them have choice: gains from shifting away from employer-sponsored health insurance and toward an individual exchange; NBER; 2010 [\*]

Day R; New state insurance exchanges should follow the example of Massachusetts by simplifying choices among health plans; Health Affairs; 2012 [\*]

Duggan M; The economics, opportunities, and challenges of health insurance exchanges; The Economists' Voice; 2010 [\*]

Funderburk F; Health literacy relevance to health insurance exchanges; in book: Facilitating State Health Exchange Communication through the use of Health Literate Practices; 2012

Hamilton CM; Establishing California's health insurance exchange under the affordable care act: governance and operating model; California State University thesis; 2011 [\*]

Jost TS; Health insurance exchanges and the affordable care act: eight difficult issues; The Commonwealth Fund; 2010 [\*]

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Jost TS; Implementation and enforcement of health care reform-federal versus state government; The New England Journal of Medicine; 2010 [\*]

Kingsdale J; Insurance exchanges under health reform: six design issues for the states; Health Affairs; 2010 [\*]

Lam A; HHS proposed rules on exchange implementation requirements; State Health Reform Assistance Network issue brief; 2011 [\*]

Weil A; New roles for states in health reform implementation; Health Affairs; 2010 [\*]

**Search term**: "Health insurance Exchange advertise"

Kingsdale J; Health insurance exchanges-key link in a better-value chain; The New England Journal of Medicine; 2010 [\*]

# Behavior 7: Advertise health insurance plan (US) continued

Search term: "Health insurance Exchange behavioral economics"

Auerbach DA; Will health insurance mandates increase coverage? Synthesizing perspectives from health, tax, and behavioral economics; National Tax Journal; 2010 [\*]

Baicker K; Health insurance coverage and take-up: lessons from behavioral economics; Milbank Quarterly; 2012 [\*]

(>) Bertrand MS; Behavioral economics and marketing in aid of decision making among the poor; Journal of Public Policy & Marketing; 2006 (\*)

Frank RG; Health insurance exchanges-making the markets work; The New England Journal of Medicine; 2009 [\*]

Hacker J; Flexible authority: ensuring health insurance exchanges shape the rules of the game; Health Care for America Now; 2012 [\*]

Maher B; Some thoughts on health care exchanges: choice, defaults, and the unconnected; Connecticut Law Review; 2012 [\*]

Sinaiko AD; The experience of Massachusetts shows that consumers will need help in navigating insurance exchanges; Health Affairs; 2013 [\*]

Young D; Curing what ails us: how the lessons of behavioral economics can improve health care markets; Yale Law and Policy Review; 2012 [\*]

## Behavior 8: Offer an individual health insurance plan (US)

An Exchange in the US health system offers an individual health insurance plan.

**Search term**: "health Exchange offer insurance"

Blavin F; How choices in Exchange design for states could affect insurance premiums and levels of coverage; Health Affairs; 2012 [\*]

Blumberg JL; State progress implementing health insurance exchanges: results from 10 state analyses; The Urban Institute; 2012 [\*]

Burns J; For health insurers, retail space available!; Managed Care Magazine Online; 2013 [\*]

Day R; New state insurance Exchanges should follow example of Massachusetts by simplifying choices among health plans; Health Affairs; 2012 [\*]

Ericson KMM; Age-based heterogeneity and pricing regulation on the Massachusetts health insurance exchange; NBER; 2012 [\*]

Gabel JR; More than half of individual health plans offer coverage that falls short of what can be sold through exchanges as of 2014; Health Affairs; 2012 [\*]

Gardiner T; Health insurance Exchanges of past and present offer examples of features that could attract small-business customers; Health Affairs; 2012 [\*]

Hacker J; Flexible authority: ensuring health insurance exchanges shape the rules of the game; report; 2012 [\*]

Hall MA; Establishing health insurance exchanges: three states' progress; The Commonwealth Fund Issue Brief; 2012 [\*]

Hoffmann SM; Health insurance exchanges under the patient protection and affordable care act: regulatory and design challenges; Journal of the American College of Radiology; 2012 [\*]

Jacobi J; Active or passive: the role of a New Jersey health insurance exchange; Rutgers Center for State Health Policy; 2012 [\*]

Jost TS; Health insurance exchanges and the affordable care act: eight difficult issues; report; 2010 [\*]

Jost TS; Health insurance exchanges and the affordable care act: key policy issues; 2010 [\*]

Kingsdale J; Health insurance exchanges – key link in a better-value chain; New England Journal of Medicine; 2010 [\*]

Kingsdale J; How small-business health Exchanges can offer value to their future customers – and why they must; Health Affairs; 2012 [\*]

Korobkin R; Bounded rationality, moral hazard, and the case for relative value health insurance; Unpublished manuscript; 2011 [\*]

Lore R; Choosing the "best" plan in a health insurance exchange: actuarial value tells only part of the story; The Commonwealth Fund Issue Brief; 2012 [\*]

## Behavior 8: Offer health insurance plan (US) continued

Rosenbaum S; State health insurance exchange laws: the first generation; The Commonwealth Fund Issue Brief; 2012 [\*]

van Ginneken E; Implementing insurance exchanges – Lessons from Europe; New England Journal of Medicine; 2012 [\*]

Search term: "Massachusetts Connector offer insurance"

Gruber J; Massachusetts points the way to successful health care reform; Journal of Policy Analysis and Management; 2011 [\*]

Sinaiko AD; The experience of Massachusetts shows that consumers will need help in navigating insurance exchanges; Health Affairs; 2013 [\*]

Lischko AM; The Massachusetts Commonwealth Health Insurance Connector: structure and functions; The Commonwealth Fund; 2009 [\*]

Search term: other (most of these resources were discovered during other searches)

Ericson KMM; Designing and regulating health insurance exchanges: lessons from Massachusetts; Inquiry; 2012 [\*]

## Behavior 9: Set health insurance premium increase limit (US)

A state governmental agency in the US health system sets the premium increase limit for a health insurance plan.

**Search term**: "health premium rate increase limit"

Corlette S; Monitoring state implementation of the ACA in 10 states: Rate review; Urban Institute paper; 2012 [\*]

**Search term**: "health insurance rate review"

Fulton BD; Health insurance premium rate review regulation: case studies to inform California; University of California Report; 2012 [\*]

Holahan J; Plan participation in health insurance exchanges: implications for competition and choice; Urban Institute; 2012 [\*]

Search term: "health insurance company behavior"

Dafny L; Does it matter if your health insurer is for-profit? Effects of ownership on premiums, insurance coverage, and medical spending; NBER; 2012 [\*]

Kemnitz A; A simple model of health insurance competition; German Economics Review; 2012 [\*]

Pauly M; Wussinomics: the state of competitive efficiency in private health insurance; International Journal of Health Care Finance; 2012 [NA]

**Search term**: other (most of these resources were discovered during other searches)

Families USA; Understanding how health insurance premiums are regulated; Issue Brief; 2006 [\*]

Maryland Insurance Administration; Frequently asked questions about health insurance rates and the Maryland Insurance Administration's rate review process; report; unknown date [\*]

## Behavior 10: Reallocate premiums to health insurers (US)

In order to adjust for risk exposures under ACA, a state governmental agency in the US health system reallocates premiums to health insurance companies.

Search term: "Massachusetts Connector risk adjustment"

Blumberg LJ; State progress in implementing health insurance exchanges: results from 10 state analyses; Urban Institute paper; 2012 [\*]

Ericson KMM; Age-based heterogeneity and pricing regulation on the Massachusetts health insurance exchange; NBER; 2012 [\*]

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(>) Brown J; How does risk selection respond to risk adjustment? Evidence form the Medicare Advantage program; NBER; 2011 [\*]

Ericson KMM; Pricing regulation and imperfect competition on the Massachusetts health insurance exchange; NBER; 2013 [\*]

Hacker J; Flexible authority: ensuring health insurance exchanges shape the rules of the game; 2012 [\*]

Horsley N; Risky business: health care reform's impact on the health benefits market; SSRN; 2012 [\*]

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Aaron JH; Why now is not the time for premium support; The New England Journal of Medicine; 2012 [\*]

Kessler DP; How should risk adjustment data be collected; Inquiry; 2012 [\*]

McGuire TG; Integrating risk adjustment and enrollee premiums in health plan payment; TAU; 2012 [\*]

Van Ginneken E; Implementing insurance exchanges – Lessons from Europe; The New England Journal of Medicine; 2012 [\*]

**Search term**: "premium risk adjustment"

Bucchner F; The new risk adjustment formula in Germany: implementation and first experiences; Health Policy; 2013 [\*]

Garfield R; Health reform, health insurance, and mental health; American Journal of Psychiatry; 2012 [\*]

Weiner JP; Adjusting for risk selection in state health insurance exchanges will be critically important and feasible, but not easy; Health Affairs; 2012 [\*]

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Barry CL; Risk adjustment in health insurance exchanges for individuals with mental illness; American Journal of Psychiatry; 2012 [\*]

Glazer J; Optimal risk adjustment in markets with adverse selection: an application to managed care; 2000 [\*]