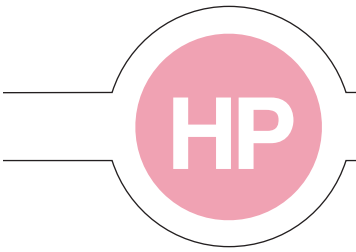


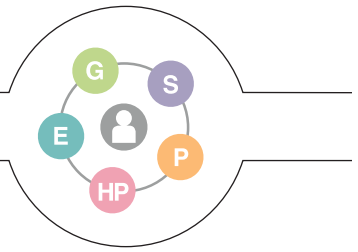
Rethinking – *DesignThinking* **– Health Care**

The Health Plan Role

Appendices

Matthew Gardner, Kichu Hong, Preethi Lakshminarayanan, Peter Rivera-Pierola, Sriram Thodla

IIT INSTITUTE OF DESIGN • SYSTEMS AND SYSTEMATIC DESIGN • FALL 2007



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Institute of Design
Illinois Institute
of Technology

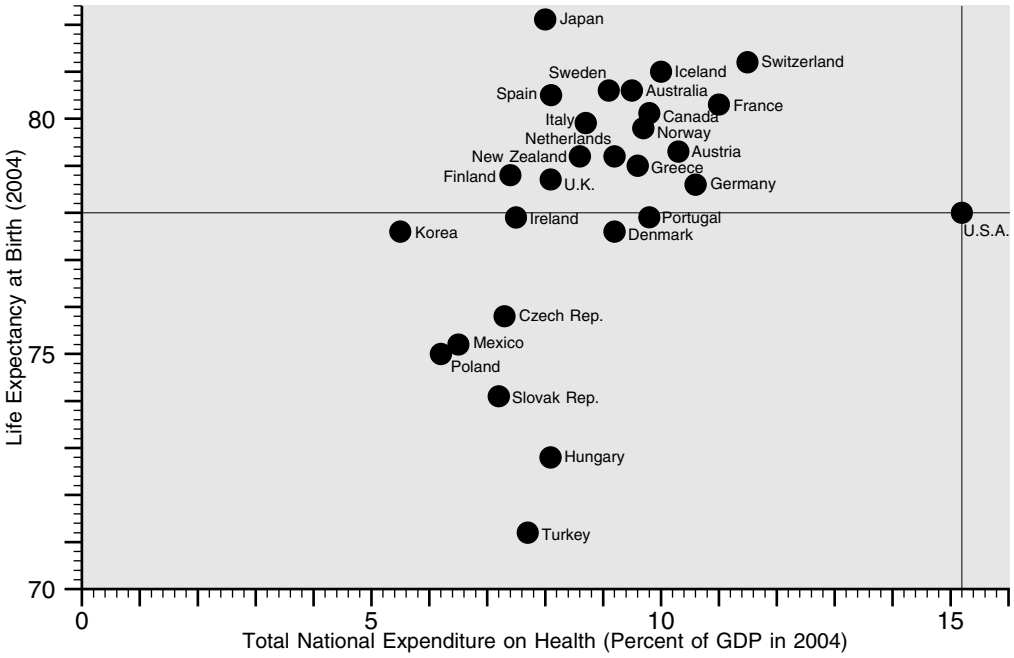
Rethinking – *DesignThinking* – Health Care

A Health Care Framework for Employers, Providers, Health Plans, Suppliers and Governments

Charter

Background

"The U.S. health care system is notorious for its high costs, which Americans traditionally assumed was the price of excellence. Some American health care is truly superb, but we now know that serious quality problems also plague the system. There is compelling evidence that much care falls well short of excellence, that both too little and too much care is provided, and that alarming rates of medical error persist". [1]



"In the past two decades, health care has gone from being a source of national pride to one of America's preeminent concerns. The nation spends almost $2 trillion annually on health care, and costs continue to escalate to levels approaching a national crisis. As costs rise, more and more Americans have lost access to health insurance. As these individuals face insufficient or nonexistent primary and preventive care, quality suffers and costs rise even further. Unless there is dramatic change, the aging of the baby boomers will drive more cost escalation, followed by intense pressures for cost shifting, price controls, rationing, and reduced services for ever more Americans.

The combination of high costs, unsatisfactory quality, and limited access to health care has created anxiety and frustration for all participants. No one is happy with the current system—not *patients*, who worry about the cost of insurance and the quality of care; not *employers*, who face escalating premiums and unhappy employees; not *physicians and other providers*; whose incomes have been squeezed, professional judgments overridden, and workadays overwhelmed with

bureaucracy and paperwork; not *health plans*, which are routinely vilified; not *suppliers of drugs and medical devices*, which have introduced many life-saving or life-enhancing therapies but get blamed for driving up costs; and not *governments*, whose budgets are spinning out of control." [2]

"The fundamental problem in the U.S. health care system is that the structure of health care delivery is broken. ... And the structure of health care delivery is broken because competition is broken. All of the well-intended reform movements have failed because they did not address the underlying nature of competition. ... The failure of competition is evident in the large and inexplicable differences in cost and quality for the same type of care across providers and across geographical area. Competition does not reward the best providers, nor do weaker providers go out of business. ... Why is competition failing in health care? Why is value for patients not higher and improving faster? The reason is not a lack of competition, but the *wrong kind of competition*. Competition has taken place at the wrong levels and on the wrong things. It has gravitated to a zero-sum competition, in which the gains of one system participant come at the expense of others. Participants compete to shift costs to one another, accumulate bargaining power, and limit services." [3]

"Competition on *value* must revolve around results. The results that matter are ***patient outcomes per unit of cost at the medical condition level***. Competition on results means that those providers, health plans, and suppliers that achieve excellence are rewarded with more business, while those that fail to demonstrate good results decline or cease to provide that service. ... Competing on results requires that results be measured and made widely available. Only by measuring and holding every system participant accountable for results will the performance of the health care system ever be significantly improved. ... ***Mandatory measurement and reporting of results is perhaps the single most important step in reforming the health care system."*** [4]

[1] **Porter, Michael E. and Elizabeth Olmsted Teisberg.** (2006) *Redefining Health Care. Creating Value-Based Competition on Results.* Cambridge, MA: Harvard Business School Press, p 1.
[2] Ibid, pp 1,2.
[3] Ibid, pp 3.4.
[4] Ibid, pp 6.7.

Relevant Trends

Health care in the United States is subject to many of the trends that other industries and institutions will experience. Among these, and trends within the industry generated by its own actions are:

Population Growth
Population growth continues in the U.S. Most developed countries have slowed population growth to near-replacement levels, and the U.S. birth rate is .9%, in line with the industrialized nations. Immigration in the U.S., however, is high and rising population figures reflect that. The August 2007 estimate of national population size is 302,500,000. For reference, the population in 1950 was 155,000,000.

Population Age Distribution
Age distribution in the U.S. faces radical change over the period from now until 2025. As baby boomers reach retirement, the population pyramid will shift from one with a central bulge, but relatively classic shape, to one with a slight slope from 85+ to 65 and then an almost vertical slope the rest of the way down. The pyramid will develop a significant "aged" segment during this time. In the oldest portions of this segment (70+), women will continue to outnumber men.

Population Movement
A combination of forces is creating a movement of people from rural to urban environments. In developed countries like the U.S., it is the renaissance of the city as a cultural center coupled with the progression from manufacturing to service to

information economies. In 2005, for the first time, the world's population was more urban than rural.

Health Care Costs
Health care in America is outstripping all other costs. In the 1950's it was 6% of the gross national product, compared with 6% for education and 6% for defense. By 2003, the figures were approximately 4% for defense, 6% for education and 14.2% for health care, more than 1.5 *trillion* dollars for health care alone. The growing elderly segment of the population pyramid guarantees further accelerated growth in health care costs unless there is radical change to the system.

Increasing expectations
The growing availability and capabilities of communications such as cellular telephones, satellite and cable TV, and the Internet are providing people with daily knowledge of living conditions, problems, products, threats and services everywhere. As the media create new and faster avenues of communication, they also raise levels of awareness and create expectations that both fuel demand and encourage willingness to change.

Internet Penetration
Computer use and Internet access grow exponentially every year. Information of encyclopedic detail can be obtained more and more easily, and complex, sophisticated processes can be used remotely. Access to high-quality communications and sophisticated computer tools are increasingly available to individuals and groups anywhere. In the United States, Internet penetration reached 70% in 2007.

Emerging Technologies
The pace of technological change continues to accelerate, bringing new science to industrial, institutional and governmental uses at an ever quickening pace. Most notable among many promising fields, major technological innovations can be expected in the new disciplines of molecular nanotechnology, robotics and the biosciences.

New Relationships
Greater public mobility and access to information is changing the nature of association for many individuals and organizations. Organizations that once operated in isolation are now players in a common environment. Sometimes the emerging relationships are competitive, sometimes cooperative, and new forms of relationship can be expected to be created as conditions evolve.

Project Statement

Using Structured Planning methodology, conduct an advanced planning project to develop information service systems and ways to measure their success for *employers, providers, health plans, suppliers*, and *government*.
Component proposals should:
1. consider Porter and Teisberg's ***Redefining Health Care*** as the primary guideline defining policy strategy.
2. plan services with the understanding that they will be incorporated in a universal health care system.
3. anticipate and plan for networked operational cooperation among all elements of the system—locally, regionally and internationally.
4. collect and incorporate best practices and concepts as they have been advanced by organizations, agencies and planning experts throughout the health care community.
5. accommodate concepts developed for the rest of the mix of players in the system—employers/providers/health plans/suppliers/government.
6. present the information of each component report and presentation in a common format with other components as a set of recommendations that can be used by candidates in the 2008 presidential election.

Goals

As general guidelines the project should:

• Explore a full range of possibilities, paying especial attention to the products of emerging technologies successfully advancing through research and development.

• Include ideas for any processes, tools, systems and products needed for services—including procedures, activities, organizational concepts and any relevant relationships among them.

• Explore revolutionary as well as evolutionary ideas.

• Plan for communication processes by means of which all elements of the system can be made aware of successes and failures.

• Consider potential costs and funding thoughtfully; proposals should not incorporate unnecessary frills, but should not ignore services possibly expensive but having great potential—simply to avoid costs.

• Conceive the properties and features of the concepts as means to build competition on the basis of quality as measured by change in medical condition.

• Consciously reflect the effect of the design approach as a demonstration of the power of design thinking applied to problems in the public domain.

Overall, the solution should:

• Assume that the proposal can be acted upon as it is conceived. Do not under-propose on the assumption that a concept might be politically opposed.

• Demonstrate what might be achieved. The value of the proposal is in its ideas, not its certain attainability. Ideas that might not be fully attainable or feasible today may be achieved tomorrow—*if they are known.*

Resources

Resources for the project will be:

Physical:

• The facilities of the Institute of Design, including Room 514 as meeting space for the beginning of each class session, and 3rd and 5th floors for team activities.
• Computing support from the fifth floor computer facilities.
• Equipment as necessary from ID resources.

Financial:

• Funding for approved research needs and report generation.

Human:

• Planning Teams

Services for Employers
Fei Gao
Margaret Jung
Rima Kuprys
Amber Lindholm

Services for Government
Hanna Korel
Soo Yeon Paik
Amy Palit
Alexander Troitzsch

Services for Suppliers
Amy Batchu
Min Joong Kim
Suat Hoon Pee
Amy Seng

Services for Providers
Ash Bhoopathy
Lin Lin
Lise Lynam
Gauri Verma
Ye Kyung Yoo

Services for Health Plans
Matthew Gardner
Kichu Hong
Sriram Thodla
Preethi Lakshminarayanan
Peter Rivera-Pierola

• Project Advisors:
Charles L. Owen Distinguished Professor Emeritus
John Pipino Adjunct Professor

Schedule

The project will be conducted from August 28 to December 7, 2007.

Week		Phase	Activity	Product
1	**Aug 28**	Introduction	Introduce project	
	Aug 31	Project Definition	Develop Issues & Defining Statements	
2	**Sep 4**			
	Sep 7			Issues DefStats 1
3	**Sep 10**		**Health Workshop**	
	Sep 11		Develop Modes and Activities of Function Structure	
	Sep 14		**In-Progress Review**	DefStats 2 Fn Struc 1
4	**Sep 18**	Information Development *Action Analysis*	Generate Functions, Design Factors and Solution Elements	
	Sep 21			
5	**Sep 25**			
	Sep 28			
6	**Oct 2**		**In-Progress Review**	DefStats complete Fn Struc 2 DesFacs 1 SolnEls 1
	Oct 5	Information Development *Action Analysis 2*	Complete Functions, Design Factors and Solution Elements	
7	**Oct 9**		**Health Workshop**	
	Oct 12			Fn Struc complete DesFacs complete SolnEls complete
8	**Oct 16**	Information Structuring *Interaction*	Score Soln Elements vs Functions	
	Oct 19	*Structuring*		RELATN input

Week		Phase	Activity	Product
9	**Oct 23** **Oct 26**	Concept Development	Means/Ends Analysis	Inf Structure
10	**Oct 30** **Nov 2**		Ends/Means Synthesis	Inf Struc named
11	**Nov 6**		**In-progress Review**	Initial System Elements
	Nov 9			
12	**Nov 13**		**Presentation**	Final SysEls
	Nov 16	Communication	Refine final SysEls; write report; complete illustrations	
13	**Nov 20**			
	Nov 23	***Thanksgiving*** Holiday		
14	**Nov 27** **Nov 30**			
15	**Dec 4**			
	Dec 7		**Final Presentation**	Illustrated Report

Methodology

The project will be conducted using Structured Planning (See articles on the subject by Charles Owen at ***http://www.id.iit.edu*** under the *Publications* section of *Our Research*:
1. *Context for Creativity,* 1991.
2. *A Critical Role for Design Technology,* 1993.
3. *Design, Advanced Planning and Product Development,* 1998.
4. *Structured Planning,* 2001.
Also, see the book by Charles L. Owen available at the Institute of Design: **Structured Planning. Advanced Planning for Business, Institutions and Government. *Notes on the Process with Summary Pages and Examples,*** 2007).

Issues

Consider the following topics as initial issues to be investigated. Supplement them with additional issues as information is developed during the first phase of the project.

Technology. What approach should be taken toward the use of advanced medical and information technologies and emerging technologies in general?

Adaptivity. How should elements of the system be prepared to respond to evolving demographic changes and emerging technological capabilities?

Networking. What policy should be taken toward partnering with health care institutions in other regions, suppliers of funding, suppliers of technology, goods, etc.?

Means of Introduction. How should services be introduced to facilitate acceptance and implementation?

Public/Private Sector Relationships . How should services be positioned with respect to authority/responsibility for implementation and operation?

Concept Communication. How should concepts of quality in medical condition terms and measurement strategies, processes and system concepts be communicated to the public and institutional users?

Cost Assignment. How should the distribution of the expected costs of services be approached?

Disaster Contexts. What provisions should be made for extreme conditions that can be expected with more frequent environmental emergencies (e.g., Katrina)?

Eligibility. What part should eligibility for care play in planning for the provision of services and measurement of their quality?

Health Responsibility. How should services approach the issue of personal vs societal responsibility for fundamental individual health care?

Defining Statement

Issue
Eligibility

1

Project
Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Originator
Sriram Thodla

Contributors

Nov. 2007.	Matthew Gardner
Nov. 2007.	Kichu Hong
Nov. 2007.	Preethi Lakshminarayanan
Nov. 2007.	Peter Rivera-Pierola

Sources
Personal Observation

Question at Issue

To what degree should health plans adapt based on the user's demographics?

Position

- ☐ Constraint
- ■ Objective
- ☐ Directive

Health plans should create a core set of services targeted at the specific time of life of the patient. In addition, they should also provide a menu of ancillary services that can be customized by the specific customer.

Alternative Position

- ☐ Constraint
- ■ Objective
- ☐ Directive

Health plans should offer tiers of services based on broad socioeconomic segments in order to lower risk as much as possible.

- ☐ Constraint
- ■ Objective
- ☐ Directive

Health plans should create a menu of services and products that can be assembled together for a specific person.

Background and Arguments

Currently, most health plans tier services based on cost and flexibility with plans such as HMO and PPO. However, very few take the life situation of the customer into account and are inflexible when it comes to customizing additional services to the core plans. Health plans should recognize that customer needs vary with their age and lifestyle and offer plans that take this into account.

Health plans can benefit from more personalization as customers will feel that their needs are more directly being met. In addition, Health plans can use their plan profiles to better balance their risk profile. Finally, offering a customizable set of services could mean that customers who would have otherwise been rejected from an inflexible plan can still get a modicum of coverage with a flexible plan.

Defining Statement

Issue
Outsourcing

2

Project
Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Originator
Sriram Thodla

Contributors

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Nov. 2007.	Peter Rivera-Pierola

Question at Issue

To what extent should health plans offer health services from locations outside the U.S.?

Position

- ☐ Constraint
- ■ Objective
- ☐ Directive

Health plans should avail themselves of health services outside of the U.S. in order to reduce cost as well as provide alternate therapies for traditional medical problems.

Sources

Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. Redefining Health Care. Boston: Harvard Business School Publishing.

Personal Observation

Alternative Position

- ■ Constraint
- ☐ Objective
- ☐ Directive

Health plans must deliver services regionally and only use outsourcing to reduce administrative costs.

- ☐ Constraint
- ■ Objective
- ☐ Directive

Health plans must focus on using regional services and sources of pharmaceuticals in order to ensure the highest level of quality.

Background and Arguments

The rising costs of managed health care and increasing competition between health plans dictate that health plans need to continuously find ways of competing effectively. Outsourcing technology, administrative and medical services where appropriate can help health plans gain efficiencies while providing health plan customers with exposure to new, innovative and alternative medical practices. (Porter 2006).

The outsourcing of health care administrative and technology processes can provide the costs savings that would allow smaller providers to compete with larger established but less nimble providers, increasing market competition. The proactive outsourcing of medical services can enable health plan customers access to affordable services worldwide that would have otherwise been unaffordable or too risky.

Defining Statement

Issue
Technology

3

Project
Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Originator
Sriram Thodla

Contributors

Nov. 2007.	Matthew Gardner
Nov. 2007.	Kichu Hong
Nov. 2007.	Preethi Lakshminarayanan
Nov. 2007.	Peter Rivera-Pierola

Sources
Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. Redefining Health Care. Boston: Harvard Business School Publishing.

Personal Observation

Question at Issue

To what degree should health plans share patient medical information with suppliers?

Position

- ☐ Constraint
- ■ Objective
- ☐ Directive

Health plans should share aggregate patient medical information, data on frequent diseases, effectiveness of treatments and opportunities for new devices with suppliers to drive the development of new medical solutions.

Alternative Position

- ☐ Constraint
- ■ Objective
- ☐ Directive

Health plans should actively partner with and fund suppliers to develop medical solutions that would only benefit their patient base.

- ☐ Constraint
- ■ Objective
- ☐ Directive

Health plans should auction to suppliers, aggregated medical information, data on disease prevalence and effectiveness of medicines etc.

Background and Arguments

In the health care industry, medical and patient information is not freely shared between the various players to improve the overall patient care cycle. Instead, information is used as leverage to shift or lower costs (Porter, 2006). While various mandates such as Electronic Health Record are slowly being adopted, Health Plans should actively and aggressively lead the charge in sharing aggregated medical information.

Sharing medical information will have multiple benefits. Doing so will benefit Health Plans as suppliers will be able to more accurately target their drug and technology development efforts. Providing the information on treatment effectiveness can help suppliers develop new treatments that can better serve the needs of the patient. It is important to provide this information to all suppliers instead of just a few which will allow the benefits of market competition to develop a competitively priced and technically sound product, ultimately benefiting health plans and their customers.

Defining Statement

Issue
Cost Assignment

4

Project
Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Originator
Matthew Gardner

Contributors

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Nov. 2007.	Preethi Lakshminarayanan
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Nov. 2007.	Peter Rivera-Pierola

Question at Issue

How should the cost of health care be divided between employers, government (society), and individuals?

Position

- ☐ Constraint
- ☐ Objective
- ■ Directive

The system (some mix of government/society and employers) ought to cover all individuals so that no one individual pays for his or her health care.

Sources

"Medicare and You," 2007. http://www.medicare.gov/Publications/Pubs/pdf/10050.pdf, CMS website.

Alternative Position

- ☐ Constraint
- ☐ Objective
- ■ Directive

To foster responsibility for personal health care, each person ought to share cost with a larger party (society or employer) so that he or she retains some responsibility for the cost of health care.

- ☐ Constraint
- ■ Objective
- ☐ Directive

The government/society should pay the complete costs of health care in a single payer system.

Background and Arguments

The costs of health care must be covered by someone. We can't expect users in all strata of society to be able to pay for their own health care costs; in fact, almost no one can reasonably be expected to pay for some of the large bills that health care incurs. People in some demographics may not even be able to pay a fraction of the costs.

One possible payer is society. The movie Sicko investigates four social health care systems that appear to be very successful: France, Canada, England, and Cuba. Every person who needs health care receives it without cost to them (outside of taxes) or very inexpensively. Value to the user is high: the life expectancy for some of the four countries is higher than that of the US; and the infant mortality rate lower. It seems like a good case for socialized medicine. However, what is not discussed is the efficiency of these systems. Socialized health care may lead to more waste and extraneous services. And with one payer, it is unlikely that the competition to drive innovation and improvement would exist.

Currently, employers pay for much of the costs of private health care. Employees pay the balance to cover them and their families. Though Porter does recommend that in the ideal scenario employers would not be a part of the picture, they must still continue to be involved in order to help shoulder the costs of health care. Besides, employers have an interest in maintaining a healthy staff. Healthy employees can be expected to work at higher productivity levels than unhealthy. Employers save on sick time when their employees avoid serious conditions by receiving quality care. Employers should pay a part of the costs of health care for those who they employ.

There are large segments of the population who are not able to pay for health care. This means they are dependent on other parties for paying. Employers have no vested interest in and do not gain economically by paying health care costs of those they do not employ. Supporting these members of society falls to the employed segment of society through taxes.

Currently, government programs administer and pay health care costs of members of society unable to pay. Federal government subsidized health care is broken down into two programs: Medicare and Medicaid. Medicare is a health insurance program for people over 65 years old and for those with End Stage Renal Disease. ("Medicare and You," 2007. http://www.medicare.gov/Publications/Pubs/pdf/10050.pdf). It is administered by the federal government. Qualifying individuals may or may not have to pay out of their own pocket to supplement what the program covers. "Medicaid is a program available only to certain low-income individuals and families who fit into an eligibility group that is recognized by federal and state law." (CMS website). The program is administered at the state level, but overseen by the federal government. "Medicaid does not provide medical assistance for all poor persons." People must meet certain eligibility requirements before they can qualify for Medicaid assistance. States may also have additional programs to help poor people.

In short, competition is necessary for innovation and improvement. A single payer would not allow for competition. Thus we need to continue to allow multiple, competing players. However, there is no obvious motivation for private payers to include individuals under their coverage who are unable to pay. To resolve the two strongly opposed realities, we must create a system in which health plans administer the care of not only their paying users, but also the government qualified individuals. Based on Porter's arguments for competition, costs will, in time, be lowered allowing for the government to subsidize on an even more widespread basis.

Defining Statement

Issue
Public/Private Sector Relationships

5

Project
Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Originator
Matthew Gardner

Contributors

Nov. 2007.	Kichu Hong
Nov. 2007.	Preethi Lakshminarayanan
Nov. 2007.	Sriram Thodla
Nov. 2007.	Peter Rivera-Pierola

Sources
Personal Observation

Question at Issue

To what extent should both public and private health plans coexist?

Position

- ☐ Constraint
- ■ Objective
- ☐ Directive

Private health plans should play the primary role in ensuring quality health care to all people, while government plays a secondary role.

Alternative Position

- ☐ Constraint
- ■ Objective
- ☐ Directive

The population should be divided into market segments and private health plans should cover health care administration of some of the segments, while other segments are administered by public health plans.

- ☐ Constraint
- ■ Objective
- ☐ Directive

Health care should be divided into types of services and the entity (private or public) most able to perform the functions should be responsible for that service.

Background and Arguments

Due to its non competitive nature, the government is not run efficiently. To ensure that patients get the best care, they need to be served efficiently and as immediately as possible. Because of the competitive nature of health plans, they are better able to develop an environment in which care is not only the primary concern, but also efficiently administered.

In the existing conditions, we have market segments. The retired segment is primarily served by the government, as is the low income segment. Because there is little or reduced competition in these sectors, inefficiencies occur. Because these programs are not always sufficient to treat in early stages, costs become higher. These segments of the population need concerned attention that have a vested interest in quality care for individuals.

If the government ever were put in a competitive position, we would eventually see that it has an unfair position with the ability to write policy and pass legislation. Competition between the private and public arena could lead to changes that don't necessarily create better care.

If private and public health plans served different segments in parallel operation, we would probably see that the two systems would exist out of balance. They would most likely each generate services that would duplicate or approximate the services of the other, and the two systems would not strive for competitive improvements.

Due to its non competitive nature, the government is not run efficiently. To ensure that patients get the best care, they need to be served efficiently and as immediately as possible. Because of the competitive nature of health plans, they are better able to develop an environment in which care is not only the primary concern, but also efficiently administered.

Defining Statement

Issue
Networking

6

Project
Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Originator
Matthew Gardner

Contributors

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Nov. 2007.	Peter Rivera-Pierola

Question at Issue

To what extent should health plans develop/foster community relationships between providers?

Position

- ☐ Constraint
- ■ Objective
- ☐ Directive

Health plans should not be concerned with relationships between providers because they have no particular interest in the success of one particular provider over another.

Sources

John S. Luo, MD, "Social Networking: Now Professionally Ready." Primary Psychiatry. 2007;14(2):21-24. http://www.primarypsychiatry.com/aspx/articledetail.aspx?articleid=975

McShane, Steven L., and Mary Ann Von Glinow. 2006. Communicating in Teams and Organizations. In Organizational Behavior: Emerging Realities for the Workplace Revolution, 314–333. Boston: McGraw-Hill.

Alternative Position

- ☐ Constraint
- ☐ Objective
- ■ Directive

Health plans ought to develop proprietary tools to foster relationships between providers.

- ☐ Constraint
- ■ Objective
- ☐ Directive

Health plans should support third parties (medial associations and societies and other interested groups) in the development of effective social networking tools.

Background and Arguments

Shifts in the communication paradigm due to technological advances are changing the world. Business and society are feeling this change as more email is sent and more information and opinions are shared via blogs, e-zines, and other electronic media.

Social networking has also experienced a paradigm shift as more networking has shifted to electronic media. No longer is a physician's network limited by locale. He or she can develop a network with many other physicians who are looking at similar problems. Porter recommends that physicians and hospitals develop strong ties. He particularly recommends that general care providers network with the best specialists so that patients not only benefit from their general practitioner, but also from the general practitioner's network. A practitioner who has strong ties with a particular specialist may have better chance of getting his patient an appointment.

Luo suggests that the environment is ready for providers to respond to electronic social networks. Several medically related social network web sites have already been developed though participation on these sites has been limited.

However, benefits of provider networking are small to health plans. If providers do not contract with a particular group of providers, they would get no benefit from fostering provider networks. This responsibility falls to other parties. [This position is contingent on the position taken in Health Plan–Provider Relationship issue].

Defining Statement

Issue
Service: Preventative Health Care

7

Project
Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Originator
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Contributors

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Question at Issue

To what extent should health plans be fostering preventive health care?

Position

- ☐ Constraint
- ■ Objective
- ☐ Directive

Health plans should develop and foster preventive health care services in order to reduce/prevent health problems and thus reduce medical cost.

Sources

Porter, M.E., Redefining Health Care, Boston: Harvard Business School Press, 2006.

Introduction of law for periodical examination of health, Seoul: Naver encyclopedia.

Increase of carcinoma of large intestine rate for past 20 years, Seoul: YTN News.

Laine, C., The Annual Physical Examination: Needless Ritual or Necessary Routine?, Annals of Internal Medicine, May 7, 2002.

Alternative Position

- ☐ Constraint
- ■ Objective
- ☐ Directive

Health plans should provide choices for preventive health care services at additional cost.

- ■ Constraint
- ☐ Objective
- ☐ Directive

Health plans must evaluate medical cost generated from preventable health problems and compare it with the cost for providing preventive health services and choose lower cost model in order to reduce overall cost of health plans.

Background and Arguments

Cost of treatment for health problems tends to rise if it develops chronically. Serious medical treatment involving surgical procedures also elevate the cost to health plans. By providing preventive health care services, health plans can reduce unexpected cost that could be used for value-added services otherwise. YTN News, Korea reported that the rate of carcinoma of large intestine in Korea has increased 12 times over the past 10 years, and this could be slowed down by regular health checkups (July, 2007). In addition to direct treatment cost, serious health problems generate cost for secondary and tertiary medical examinations and procedures. Preventive health services will reduce risks of future health problems and thus reduce overall cost.

Health plans can design various ways of providing and delivering health care services. Periodic health examination is one method. Possible services include planning proper diets for users, informing and alerting users about environmental factors such as air pollutants, providing timely inoculation for infectious or viral diseases such as colds, and educating users and providing resources to maintain their health

In addition to basic preventive services, health plans can introduce premium services such as elective cancer screenings for those who are willing to pay for.

It is highly likely that health plans will reduce their total cost of wellness for a patient who has taken advantage of preventative services. These benefits however are hard to evaluate but fall in line with Porter's objective of health plans becoming health institutions.

Defining Statement

Issue
Service: Reward Scheme

8

Project
Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Originator
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Sources

Porter, M.E., Redefining Health Care, Boston: Harvard Business School Press, 2006.

L. Getlen, Fighting health-insurance claim denials, Bankrate.com

R.D. Feldman, M. V. Pauly, American Health Care - Government, Market Processes and the Public Interest, Web summary, www.independent.org.

Question at Issue

To what degree should health plans reward users for healthy behavior?

Position

- ☐ Constraint
- ■ Objective
- ☐ Directive

Health plans should build reward schemes for all users in order to provide incentives for healthy behaviors.

Alternative Position

- ■ Constraint
- ☐ Objective
- ☐ Directive

Health plans must be enforced to implement minimum reward schemes by law.

- ☐ Constraint
- ☐ Objective
- ■ Directive

Health plans ought to provide exclusive member reward schemes.

Background and Arguments

Incentive programs developed by health plans can encourage individuals to improve their health. Incentives can be take the form of direct monetary means or other value-added services, e.g., rebating partial or full amount of unspent health plan expense to users, providing discount rate for upcoming years, or disbursing the unspent amount to provide health care services such as a fitness center membership. Incentive programs will encourage users to maintain good health and the introduction of rebating system will provide a positive stimulus to health plan market. Health plans will have to choose whether to spend on cost of care or on incentive programs. Assuming that preventative costs would be less than cost of care, can reduce their operational cost by promoting healthy standards, and not by denying care.

Exclusive membership provided with direct financial reward is another means of incentive schemes. A health insurance saving account can be one model of exclusive membership. Health plans can actively engage in investing activities such to earn profits which are returned to users as incentives or dividends. Private health insurance companies in Korea including global corporations such as Kyobo Life Insurance, Prudential, and Allianz offer health insurance services incorporated with financial services.

Defining Statement

Issue
Record Ownership

9

Project
Rethinking—*DesignThinking*—Health Care: The Health Plan Role

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Sources

Porter, M.E., Redefining Health Care, Boston: Harvard Business School Press, 2006.

Accounting for the Cost of Health Care in the United States, McKinsey Global Institute, 2007.

Question at Issue

How do we allow different health plans to share their records and facilitate transitions of users?

Position

- ■ Constraint
- ☐ Objective
- ☐ Directive

Health plans must build and use unified information system and thus reduce administrative cost and facilitate transitions of users between different health plans.

Alternative Position

- ☐ Constraint
- ■ Objective
- ☐ Directive

Health plans should share health care histories of users by providing free information access to different health plans chosen by users.

- ☐ Constraint
- ■ Objective
- ☐ Directive

Health plans should record health care histories of users and provide them to users.

Background and Arguments

Health care histories of users are valuable resources for designing customized health plans. We must define means of information sharing among different health plans and record ownership as well as authority levels of access to data. Information sharing will also make transitions between different health plans easier.

Health plans must build and implement one integrated and compact information system and thus reduce administrative and procedure cost. This will also facilitate transitions of users among different health plans and ultimately provide healthy incentive for competition between health plans. Databases of accumulated information from all health plans through an integrated system will be valuable resource for all participants in health care industry. However, there are problems such as cost sharing for building and implementing the integrated system, timing constraints and privacy issues. However, there numerous examples of industries adopting standards such as the financial industry.

One other factor to consider is ownership of information. Currently, individuals don't have complete access to their medical records. It would be valuable for individuals to have access to their health care histories including medical treatment records in order to compare different health plans, providers, and suppliers and make correct choices when needed. The problem is that users do not understand their conditions from the raw medical data. The data needs to be interpreted before it is understood.

Defining Statement

Issue
Means of Introduction

10

Project
Rethinking—*DesignThinking*—Health Care: The Health Plan Role

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Sources
Porter, M.E., Redefining Health Care, Boston: Harvard Business School Press, 2006.

Question at Issue
How should health plans make their services known to the public?

Position
- ■ Constraint
- ☐ Objective
- ☐ Directive

Health plans must efficiently allocate and utilize all relevant resources to make their services known to the public.

Alternative Position
- ☐ Constraint
- ☐ Objective
- ■ Directive

Health plans ought to be introduced to the public by well established third parties

- ■ Constraint
- ☐ Objective
- ☐ Directive

Health plans must not engage in unnecessary advertising or promotional activities to reduce cost.

Background and Arguments

Health plans reside in a complex and highly competitive market. Entry to the market is not easy. According to Porter, the market is highly competitive, but in a wrong way and this makes it hard for new entrants into the market

Consumers should have unbiased choices for health plans, and in order to do that, correct and updated information of different health plans must be provided for comparison. New as well as existing health plans seek ways of delivering information. This requires the allocation of resources such as employees and information technology as well as traditional analogue methods. Different resources and measures have different costs and the costs goes back to consumers. Thus, health plans must seek the most effective way for getting the same message out to their consumers. Information technology is a cost-effective methods to share and deliver information, but is not universally available. Analog methods such as consultants, personal representatives or counselors over phones are more expensive and geographically restricted, but have advantages of direct consumer contacts and can guide to better understanding. Different methods have different advantages and disadvantages, and health plans must be able to utilize all relevant resources and develop methods to make their services correctly known to the public.

Frustration increases when consumers search for suitable and affordable health plans. Currently, all we can get from internet search is numerous price comparing sites. It is hard to find one very proper health plan. Also it is very difficult to understand terms and conditions health plans suggest. Terminologies should be clearly defined and universally understood by health plans. Third party groups can also help, helping individuals understand which health plans are correct for them. The role of third parties can vary from simply introducing health plans to defining terminologies, rating health plans and making recommendations to consumers. However, it is also possible that the overall cost rises due to creation of new parties to the market.

To shift cost from overactive marketing and promotional activities to value-added services, health plans must eliminate unnecessary marketing activities. For example, spam mails are everywhere. Redundant marketing activities do not draw attention from consumers, but rather add frustration to consumers. Unnecessary and overly aggressive marketing only raise costs. Exaggerated advertising does not educate the consumer. Health plans must therefore be responsible in deploying their marketing efforts to ensure that the correct message is being delivered to the consumer.

Defining Statement

Issue
Disaster Context

11

Project
Rethinking—*DesignThinking*—Health Care: The Health Plan Role

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Question at Issue

To what extent should Health Plans shoulder responsibility during emergency conditions?

Position

- [x] Constraint
- [ ] Objective
- [ ] Directive

Health Plans must give access to and reimburse immediate treatment of patients in emergency situations with any provider.

Sources

Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. Redefining Health Care. Boston: Harvard Business School Publishing.

Healthcare that Works for All Americans Report: Citizens Healthcare Working Group

"Redesigning the US' Healthcare Model," The Heinz School Review, Vol 3, Issue 2, 2006

Alternative Position

- [ ] Constraint
- [x] Objective
- [ ] Directive

Health care during emergency should be treated in a increased co-payment basis with any provider.

- [ ] Constraint
- [ ] Objective
- [x] Directive

Medical Fee for emergency situations ought to be standardized.

Background and Arguments

When we define "emergency" as a possibly life threatening situation, the goal is to save lives. Many organizations are working toward a passage of national legislation that would require health plans to pay for emergency care received at any hospital.

47 states across USA have implemented a provision, known as a "prudent layperson" law, that requires the urgent nature of a patients condition to be judged according to his/her symptoms that led him to seek emergency medical care, rather than by the patient's final diagnosis. But the system is subjective and open to loop holes. For example, a patient might think he/she is getting a heart attack but it could turn out to be indigestion. If any patient is treated according to his/her perception of symptoms, then the emergency ward would cater to a lot of excitable patients with wrong self-diagnosis.

Prudent layperson law has been adopted by the congress for medicare and medicaid beneficiaries. Medicare and Medicaid managed care plans also may not require prior authorization for emergency medical care. This could also extend to non medicare medicaid consumers. Many health plans currently extend emergency service coverage with an increased co-pay. This would deter patients from exaggerating their ailment and using emergency only when really required. Some health plans require notification within 24 hours of going to an emergency department, or the expenses will not be covered. Some require you to call your primary care physician first, unless the condition is life threatening. And emergency co-pay is not standardized. Some charge a flat fee others require the consumer to meet a deductible.

From a humane point of view, emergency health care, should be treated on a pre-determined standard fee basis till stabilization, and not be subject to extremely high prices as it is today. Stabilization, is again an intangible, difficult to define status. Health plans, providers and patients may have different views on what is "stabilized." Instances of the emergency department coordinating post stabilization care with the health plan, which sometimes may not agree to cover recommended medical care, are one too many.

Hence, medical fee for emergency situations should be standardized, and health plans must cover emergency treatment from any provider.

Defining Statement

Issue
Adaptability

12

Project
Rethinking—*DesignThinking*—Health Care: The Health Plan Role

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Sources

Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. Redefining Health Care. Boston: Harvard Business School Publishing.

Tsai K, Kominski GF, Schweitzer SO, Franke TM, "Will Increased Competition Lead to Higher Patient Satisfaction?" Texas A&M University, 2001

"Redesigning the US' Healthcare Model," The Heinz School review, Vol 3, Issue 2, 2006.

Question at Issue

To what degree should the benefit structure of Health Plans adapt?

Position

- ☐ Constraint
- ■ Objective
- ☐ Directive

The benefit structure of a Health Plan should be determined within a limited framework based on service type and consumer health condition.

Alternative Position

- ■ Constraint
- ☐ Objective
- ☐ Directive

The benefit structure of a Health Plan must be completely determined by the consumer according to income.

- ☐ Constraint
- ☐ Objective
- ■ Directive

The benefit structure of Health Plan ought to provide complete coverage and health services to all consumers irrespective of financial capability.

Background and Arguments

Patient cost sharing is increasing and access to care has not improved as a result of higher cost per person. Choosing a particular health plan benefit structure is a very important part of determining health care coverage. Multi-tiered, simple to understand plans driven by individual preferences & decision making should be encouraged. The structure of the health plan should be modular, allowing people to make decisions and actively fashion their own list of benefits in consultation with a physician of choice, or a trained personal health planner.

Currently health plan structures are not very flexible and most often be chosen by employers with cost cutting goals. Many consumers do not have detailed knowledge of their coverages. Its only upon a medical emergency many identify limitations of their coverage like access to particular devices or drugs, to an allergist/immunologist or other specialists. Thus, providing a limited flexible framework for choosing a list of benefits that best suits a customer would be an practical alternative.

Eliminating choice by providing a universal list of benefits to every consumer for a certain basic pricing is another way to ensure primary health care. Currently universal health care is being experimented at local levels. The Commonwealth of Massachusetts is implementing a near-universal health care system by mandating that residents purchase health insurance by July 1, 2007. The City of San Francisco is also undertaking a universal health care system for uninsured residents. California, Maine, Vermont and Hawaii are also considering or seeking to implement universal or near-universal systems.

In the absence of a national mandate, benefit structures that offer options based on healthy behaviors and self-management should be encouraged. Benefits that vary by service type or patient condition, that use more efficient providers, and that vary by income can be innovated upon to arrive at patient centric benefit options.

Defining Statement

Issue
Service

13

Project
Rethinking—*DesignThinking*—Health Care: The Health Plan Role

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Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. Redefining Health Care. Boston: Harvard Business School Publishing.

Peter Reid Kongstvedt, Essentials of Managed Health Care, Jones and Bartlett Publishers, 2003

"Redesigning the US' Healthcare Model," The Heinz School Review, Vol 3, Issue 2, 2006

Question at Issue

To what extent should Health Plans provide value added services to consumers in addition to health care coverage?

Position

- ☐ Constraint
- ■ Objective
- ☐ Directive

Affordable value added services should be provided on-demand to any consumer in addition to health care coverage.

Alternative Position

- ■ Constraint
- ☐ Objective
- ☐ Directive

Health Plans must provide fixed value added services according to consumer/community demographics to foster healthy lifestyles.

- ☐ Constraint
- ☐ Objective
- ■ Directive

Health plans ought to provide a portfolio of value added services by raising funds from related industries, incentivized by the government.

Background and Arguments

The traditional care system was built on a relationship of trust that managed care seems to be disregarding by non-personalizing the health care experience. In view of Porter and Teisberg, "Health plans must become health organizations... participants in health, not just payers." Value added services are a great way of building consumer trust and a wholesome health care system.

Providing additional care to the elderly, the disabled, pregnant women and new mothers are some of the services that could be provided by health plans. The right services could be identified and provided for a nominal additional cost, either by health plans themselves or with federal aid, thereby involving the government on the fringes of the health care system. Certain services targeted at preventive care can be offered for free, to incent healthy living. Health plans participating in such initiatives can also look forward to reducing their risk in a concentrated and efficient manner. The rich data that health plans possess on their consumers, will help them offer more targeted information and service to patients.

On-demand personalized care services can also be provided. This would generate employment by institutionalizing a satellite health care system and increase health care access across the entire life cycle of care.

Involving related industries to invest in health through health plans (like gyms, health foods, cycling clubs, alcoholic anonymous, yoga, mental health, educational institutions, city marathons, restaurants etc) will help health plans provide better quality services. Providing a moderately complete list of benefits to every consumer for a certain basic pricing is another way to ensure primary health care.

Because health insurance is subscription based, value added services should be made available on temporary basis as needed by patients. The focus of value based health services are always centered on the consumer. Hence, value added services would also increase competition among various health plans based on right incentives and effective service to consumers.

Defining Statement

Issue
Technology: Empowerment

14

Project
Rethinking—*DesignThinking*—Health Care: The Health Plan Role

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Question at Issue

To what extent can health plans utilize technology to educate, inform, and empower individuals?

Position

- [x] Constraint
- [ ] Objective
- [ ] Directive

The technology system must be standardized to provide relevant and accessible information to a wide range of users while maintaining overall system efficiency.

Sources

Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. Redefining Health Care. Boston: Harvard Business School Publishing.

Klein, Mike. Will technology improve healthcare delivery? http://wistechnology.com/article.php?id=2961

Gordon, James R. Capturing the benefits of web-based connectivity. http://findarticles.com/p/articles/mi_m3257/is_12_59/ai_n15980899

Medpac. Report to the Congress: New Approaches in Medicare. http://www.medpac.gov/publications/congressional_reports/June04_ch7.pdf

Medem. Engage Your Members Online with iHealth. http://www.medem.com/hp/hp.cfm

Alternative Position

- [ ] Constraint
- [x] Objective
- [ ] Directive

The technology system should allow access through various, flexible interfaces, ensuring mass adoption regardless of user knowledge or experience.

- [ ] Constraint
- [ ] Objective
- [x] Directive

Health plans ought to pursue empowerment through traditional methods to avoid segmenting users based on technological competence.

Background and Arguments

Information technology is poised to streamline the process of obtaining, comparing, and distributing health care information amongst all key players in the industry. Barriers to a fully digital database include cost and complexity, cultural roadblocks, privacy issues, and the existing fragmented delivery system.

Some policies propose that the Federal Government create incentives and opportunities for health care providers, in an effort to modify work-flows and maximize IT adoption. Although in-house customized offerings can seem appealing, the reality of designing, building, implementing, and maintaining this kind of technology platform can sap the time, finances, and employee resources of health plans (Gordon). Health plans need third-party developers to cooperatively create a universal, standardized information system for optimum efficiency and performance. Ultimately, this creates an accessible repository for extracting the value-based parameters needed for encouraging competition.

Technology is the inevitable answer for the back-end system of maintaining and distributing health information, however, flexibility is the key to the front-end interaction. Although "tech-savviness" and internet use is on the rise, many individuals over the age of 60 (who often are in the most need of health care) are still struggling with the transition to a digital world. Therefore, it becomes essential that the system be accessible by any member within the health care system. This may require a full range of both traditional and progressive methods of user interface.

An important factor, and possible third party industry, arises in the transcription of analog or antiquated data to digital data ready for system integration. Regardless, adoption will be most rapid if each stakeholder can comfortably interact with the system. The ideal information database should start and end with the customers, informing and empowering them to make the best decisions possible concerning their health.

As Porter and Teisberg said, "Health plans must become health organizations... participants in health, not just payers." Having a unified information system gives every stakeholder equal opportunity for rapid access. Not only that, but it provides the data necessary to focus on value-based competition throughout the full care cycle.

Defining Statement

Issue
Networking: Provider Relationship

15

Project
Rethinking—*DesignThinking*—Health Care: The Health Plan Role

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Question at Issue

To what extent should health plans develop relationships with providers?

Position

- ☐ Constraint
- ■ Objective
- ☐ Directive

Providers should be chosen on a per condition basis, keeping excellence and experience as the driving factors for selection.

Sources

Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. Redefining Health Care. Boston: Harvard Business School Publishing.

Center for Studying Health System Change. Getting Along or Going Along? Health Plan-Provider Contract Showdowns Subside. http://www.hschange.com/CONTENT/641/

Alternative Position

- ☐ Constraint
- ■ Objective
- ☐ Directive

Health plans should form provider groups that are strategically assembled to competently cover the full gamut of health conditions.

- ☐ Constraint
- ■ Objective
- ☐ Directive

Providers should take authority and select which health plans to associate with based on administrative values and capabilities.

Background and Arguments

Provider groups were originally formed to save costs, not provide increased value. Now, they do neither, instead shifting escalating costs back to the health plans, employers, and consumers. Providers have rapidly consolidated, thereby monopolizing the region and leveraging their bargaining power. Certain providers—particularly those perceived to have strong clinical reputations—continue to enjoy "must-have" status in health plan networks. Such status confers power to these providers and has triggered pleas from plans, purchasers and consumers for regulatory intervention (White, Hurley, and Strunk 2004). This leverage serves to not only increase costs, but to effectively eliminate competition and stifle innovation, creating a network of mediocre providers.

Provider groups add little to no value on a consumer level. Multiple physicians treating a patient rarely coordinate as a team, eliminating the entire purpose of networking and replacing it with administrative costs and paperwork. Just because the provider is in the network, does not mean that they are the best option for care. Patients are best treated by a hospital that is truly excellent in addressing their current condition (Porter & Teisberg 2006, 40). Even groups that are adequately assembled to cover a large range of conditions, cannot avoid the issues caused by strict contractual agreements, miscommunication, and a lack of competitive self-awareness.

Many plans have recognized and accepted their weaker position relative to providers, suggesting the recent lull indicates plans have found it in their interests to accommodate provider demands for higher payments, rather than resist them and possibly trigger a contract showdown (White, Hurley, and Strunk 2004). With this power, providers could conceivably take on an authoritative role and select which health plans to associate with based on their administrative capabilities and overall value. Ideally, relationships would be symbiotic, with health plans serving as the coordinating, information-gathering entity and the providers focused on simply delivering care.

Exclusive provider relationships trap consumers in networks that may not excel in providing appropriate care to individuals. Strong forces are created to refer patients within the group, further limiting competition on costs and results at the medical condition level (Porter & Teisberg 2006, 41). Even in the rare case that an individual is referred out-of-network, the approval process is so cumbersome that it discourages consumers from attaining proper care. Health plans should instead search out the best possible providers for the given medical conditions in question, thereby avoiding all the administrative hoops and focusing instead on excellence and experience. This strategy creates benefits throughout the service line: the consumer gets more effective care and is freed from extraneous network-related stresses; the excellent providers get more patients than the mediocre ones, thereby increasing learning and efficiency which decreases costs; finally, the health plans receive the cost cuts from providers, as well as from the reduction of administrative complexity. This all effectively serves to create trust in the system, and along with other measures, can increase the collective health for all its constituents.

Defining Statement

Issue
Networking: Employer Relationship

16

Project
Rethinking—*DesignThinking*—Health Care: The Health Plan Role

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Question at Issue

To what extent should employers play a role in the health plan coverage for employees?

Position

- ☐ Constraint
- ■ Objective
- ☐ Directive

Employers should support and motivate employees in managing their own health through incentives and advising services.

Sources

Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. Redefining Health Care. Boston: Harvard Business School Publishing.

Center for Studying Health System Change. Getting Along or Going Along? Health Plan-Provider Contract Showdowns Subside. http://www.hschange.com/CONTENT/641/

Decision Resources, Inc. Employers Role in the U.S. Health Care System: Part 1--The Nonelderly Population. http://www.researchandmarkets.com/reportinfo.asp?report_id=314812

Alternative Position

- ■ Constraint
- ☐ Objective
- ☐ Directive

Employers must take responsibility and choose health plans for their employees based on illustrative and quantifiable measures of health value received.

- ☐ Constraint
- ■ Objective
- ☐ Directive

Employers should allow employees to freely choose and customize their health plans and providers according to their individual needs and conditions.

Background and Arguments

Employer-sponsored health insurance is by far the most important source of health care coverage in the United States. In 2003, approximately 159 million non-elderly US residents received employer-sponsored health insurance (White, Hurley, and Strunk 2004). Employers have tough decisions to make when considering health plans for their employees. Selecting health plans is commonly a strictly financial decision between human resources and the company vice president or chief financial officer. Traditionally, employers have been more supportive of providers to protect their employees' interests—namely choice of provider and access to medical services—and thereby undermined plans' negotiating leverage with providers. But large payment rate increases for providers translate directly into premium increases for purchasers, and employers have been hit hard with double-digit premium increases over the past three years (White, Hurley, and Strunk 2004).

This phenomena has caused several reactions from employers. One result causes the employer to simply find the most economical plan available, often short-changing the employees in the process. The other common reaction, consumerism—the policy of requiring consumers to assume increased economic responsibility for their health care choices and (potentially) to bear a greater proportion of costs—is expected to expand rapidly in the next several years.

Employees, however, have been sure to share their opinions. For instance, the growth of preferred provider organizations (PPOs) has signaled an interest by employers both to broaden choices and transfer more responsibility to consumers while promoting more price sensitivity. PPO options with coinsurance, where patients pay a percentage of the total bill, can offer considerable transparency to consumers about covered benefits, provider networks and level of coverage based on the site of service. This process relieves plans of some decision-making burden and absolves them of some blame for high health care costs (White, Hurley, and Strunk 2004).

The optimal scenario involves both employer and employee cooperation. First of all, patients and their families, working with their physicians and advisers, need to accept more responsibility both as consumers of health care services and in managing their own health (Porter & Teisberg 2006, 316). Secondly, employers need to worry less about controlling provider practices and use their clout to create the right kind of competition in the system (Porter & Teisberg 2006, 310). Employers must support the health plans that excel at informing and supporting their employees and providers. Healthy and happy employees are more productive, and the high-value providers supported by these plans drive down costs through efficiency. To do this, employers must develop measures to track health value, using blinded data drawn from their own human resource records together with information from health plans and plan administrators (Porter & Teisberg 2006, 320). Employers can also add value by directly empowering their employees through educational sessions, fitness programs, financial incentives, and health information services (Porter & Teisberg 2006, 316-317).

Defining Statement

Issue
Concept Communication: Measuring System

17

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

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Question at Issue

To what extent should health plans develop a standardized measuring system for patient health care?

Position

- ☐ Constraint
- ■ Objective
- ☐ Directive

Health plans should work cooperatively with providers and third parties to develop appropriate measures and standards for results, cost, experience, methods, and patient attributes across the full care cycle.

Sources

Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. Redefining Health Care. Boston: Harvard Business School Publishing.

Lee, Peter V. 2007. Pacific Business Group on Health. American Health Information Community. http://www.hhs.gov/healthit/documents/m20070313/pbgh_files/outline/index.html

Ateev Mehrotra, Sei Lee, R. Adams Dudley. Hospital performance evaluation: What data...? Institute for Health Policy Studies, University of California, San Francisco.

Alternative Position

- ☐ Constraint
- ■ Objective
- ☐ Directive

Providers should independently gather relevant information for health care activities, that is then compiled, assessed, and standardized by health plans and enforced by the government.

- ☐ Constraint
- ■ Objective
- ☐ Directive

Providers should develop a standardized measuring system for their peers that health plans would then enforce through various incentives.

Background and Arguments

Health plans are by far the best suited constituents for establishing a standardized measuring system for health care. Unlike any one provider, health plans have experience and data across many members, many providers, many individual physicians, multiple treatments, virtually all medical conditions, and over the full care cycle. Health plans should be able to measure and compare providers at the level of medical conditions (Porter & Teisberg 2006, 242).

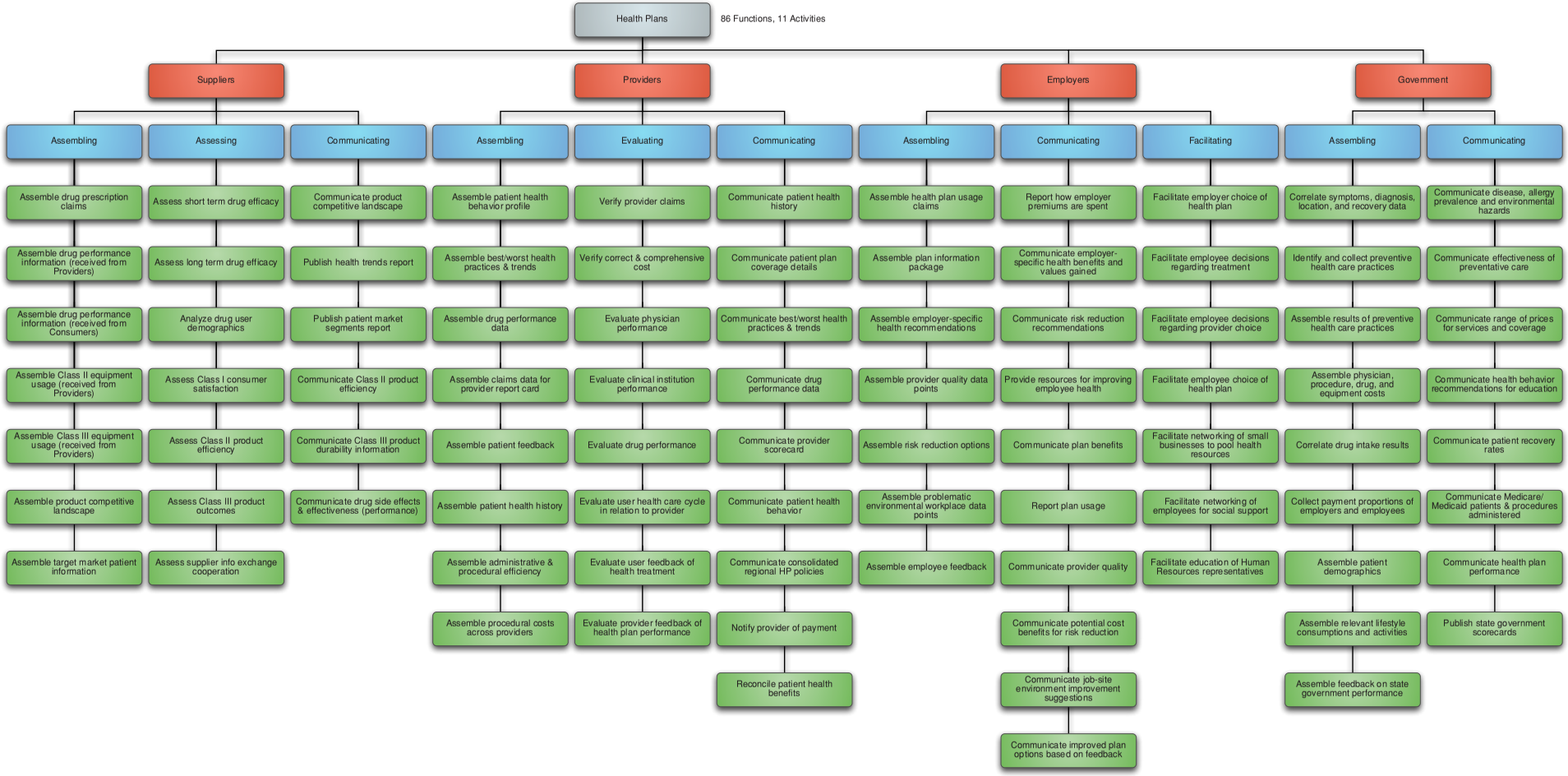
Porter and Teisberg warn that some providers will resist greater health plan involvement in results measurement due to skepticism and potentially self-threatening data. In this new results-based relationship, collaboration and transparency are necessary in creating value competition.

There have been many past and ongoing attempts at measuring results in health care. They can be categorized into three classic quality measures: structures, processes, and outcomes. Structural indicators, like those proposed by The Leapfrog Group, are easy to measure, but do not necessarily relate back to the key outcomes of cost and clinical results. Validated process measures, as seen in the GAP project, are salient to both providers and consumers, however cost-benefit calculations vary from hospital to hospital. Outcomes-based measures, like the NHQC, featured inexpensive surveys to improve the patient experience, but had trouble relating back to more difficult measures like mortality; more complex evaluations require sophisticated risk adjustment.

Performance evaluators choose among various data sources to compile their reports. Administrative data, though easily obtained, does not contain enough pertinent information. Chart reviews, on the other hand, are more costly to obtain, but provide excellent information in both depth and breadth. Patient and provider surveys are in between for data collection costs, but are only truly beneficial to a short list of quality measures. Perhaps encouraging pervasive feedback protocols throughout the entire patient care cycle, would help collect a more holistic and comprehensive data set for analysis.

Sources support the stance that Health Plans need not reinvent performance evaluation, but simply borrow credibility from those already doing it. The most efficient strategy involves aggregating various credible results and repackaging them to be relevant and accessible to consumers in an effort of creating a more informed patient population. Health Plans could then compete on developing processes to make said public information more accurate and engaging to their membership. Furthermore, embracing current (and future) information technologies encourage the creation of powerful, flexible platforms to compile and distribute these performance reports to the full spectrum of health care stakeholders.

Function Structure



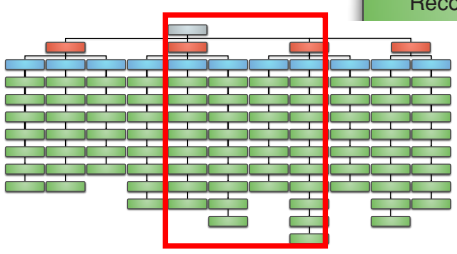
Function Structure

Function Structure

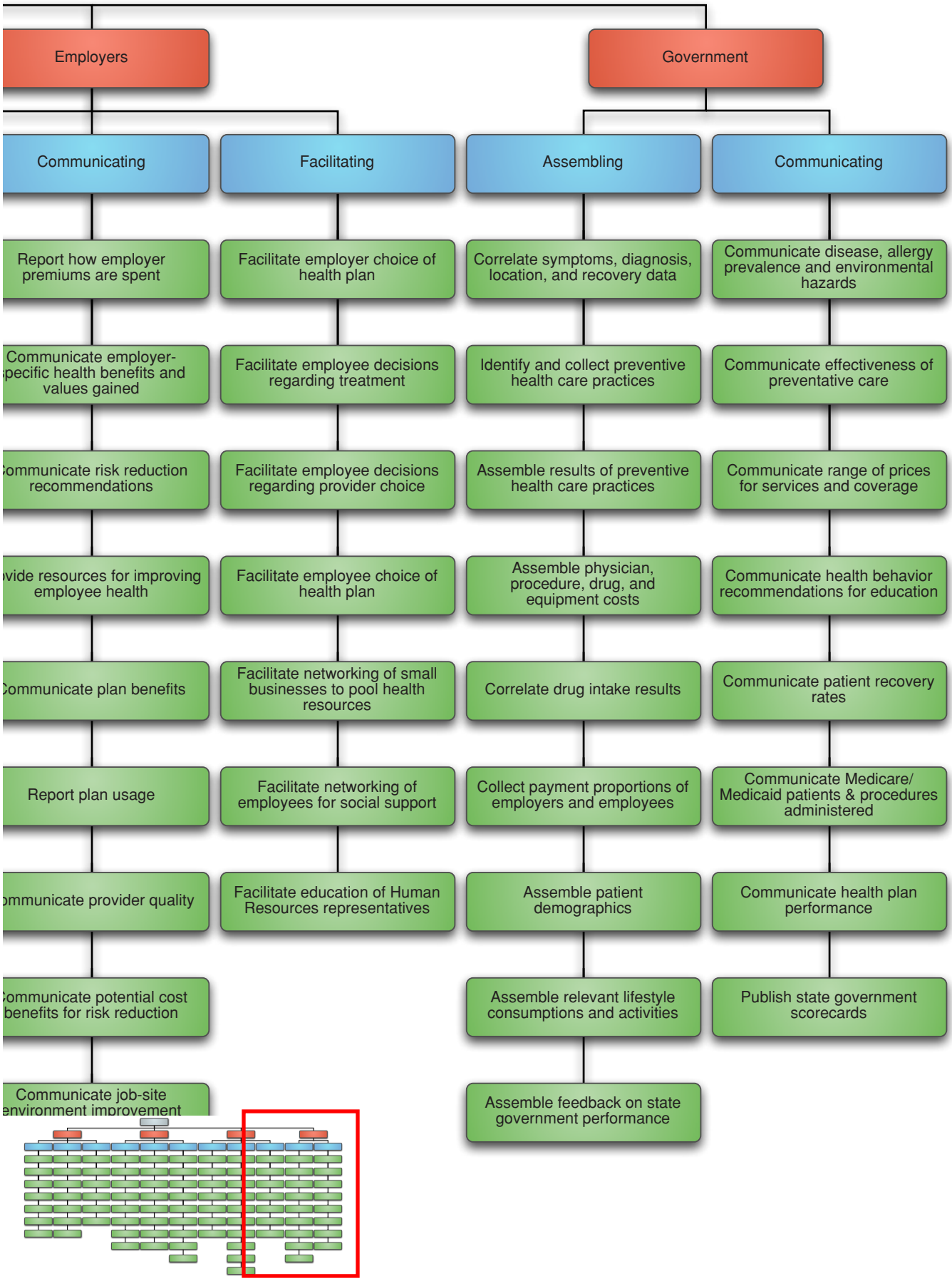
Health Plans

86 Functions, 11 Activities

- Providers
  - Evaluating
    - Verify provider claims
    - Verify correct & comprehensive cost
    - Evaluate physician performance
    - Evaluate clinical institution performance
    - Evaluate drug performance
    - Evaluate user health care cycle in relation to provider
    - Evaluate user feedback of health treatment
    - Evaluate provider feedback of health plan performance
  - Communicating
    - Communicate patient health history
    - Communicate patient plan coverage details
    - Communicate best/worst health practices & trends
    - Communicate drug performance data
    - Communicate provider scorecard
    - Communicate patient health behavior
    - Communicate consolidated regional HP policies
    - Notify provider of payment
    - Reconcile patient health benefits
- Employers
  - Assembling
    - Assemble health plan usage claims
    - Assemble plan information package
    - Assemble employer-specific health recommendations
    - Assemble provider quality data points
    - Assemble risk reduction options
    - Assemble problematic environmental workplace data points
    - Assemble employee feedback
  - Communicating
    - Report how employer premiums are spent
    - Communicate employer-specific health benefits and values gained
    - Communicate risk reduction recommendations
    - Provide resources for improving employee health
    - Communicate plan benefits
    - Report plan usage
    - Communicate provider quality
    - Communicate potential cost benefits for risk reduction
    - Communicate job-site environment improvement suggestions
    - Communicate improved plan options based on feedback



Function Structure



Design Factor

Potential for correlation errors in measuring performance

1

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Suppliers, Employers

Activity

Communicating

Originator

Peter Rivera-Pierola

Contributors

Sources

Wikipedia. Evidence-based Medicine. http://en.wikipedia.org/wiki/Evidence-based_medicine

Personal Observation

Associated Functions

15 Communicate product competitive landscape
18 Communicate Class II product efficiency
19 Communicate Class III product durability information
20 Communicate drug side effects & effectiveness (performance)
54 Communicate employer-specific health benefits and values gained
55 Communicate risk reduction recommendations
59 Communicate provider quality

Observation

It is difficult to correlate performance to individual factors.

Extension

Many medical professionals express skepticism at establishing a unified system for measuring performance due to the sheer number of factors that determine the success or failure of a particular treatment on a individual. Evidence-based medicine (EBM), also called scientific medicine, attempts to apply the standards of evidence gained from the scientific method to certain aspects of medical practice. The goal involves using evidence relative to the risks and benefits of treatment to make the soundest medical decisions possible. However, individual factors like quality and lifestyle are only partially subject to this form of analysis.

Overall, there are mixed reports on its effectiveness. Controlled trials can be unethical and expensive, certain groups have been historically under-researched, and the quality of such studies ranges, often misleading the results. However, it seems to excel on an organizational level, where the overall functioning of a health care organization can be assessed against the best of currently-available evidence. This is perhaps the level at which equipment, players, and competitors can be evaluated with the most successful results.

Another potentially relevant trend to consider is the rise of online crowdsourcing as an efficient way to gather large amounts of qualitative information. By using the collective experiences & opinions of the masses, you could feasibly rule out negligible variables and establish norms.

Design Strategies

Gather a larger data set
Monitor information continuously
Use multiple sources of assessment

Solution Elements

M Evaluative Crowdsourcing
M Product Performance Log
S Value Weighted Scoring
E Pervasive Risk Reporting

Design Factor

Information transparency is required for proper reporting

2

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Employers

Activity

Communicating, Assembling

Originator

Peter Rivera-Pierola

Contributors

Sources

Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. Redefining Health Care. Boston: Harvard Business School Publishing.

Personal Observation

Associated Functions

46 Assemble health plan usage claims
47 Assemble plan information package
48 Assemble employer-specific health recommendations
52 Assemble employee feedback
53 Report how employer premiums are spent
58 Report plan usage
59 Communicate provider quality

Observation

Cloudy communication channels can create faulty information that discredits quality assessments, usage statistics, cost calculations, and restrains overall information exchange.

Extension

Health plans have a unique position in the current system as data collectors and assessors. Their core competencies are currently utilized simply to cut costs, but with modifications they can serve as the foundation for a universal health database. The problem lies in the public's perception of insurance/payer organizations. They are distrusted, even vilified as inhumane, money-hungry entities who only care about the bottom line.

The ideal system requires the use of incentives to promote its value to all players. Competition alone can spark change once enough of the industry has already begun, however, it is essential to provide ample reason for the early adopters to shift. Health plans should restructure their business models to embrace transparency as a means of keeping their members healthy and saving costs over time by avoiding chronic ailments. To do this, all players must share the same level of authenticity. Accurate measures of provider quality are necessary to determine the best actions for any given patient/condition. Corrupt or inaccurate data may harm both the patient and the system as a whole.

Employers would gain to understand exactly how their employees are using their plan coverage, and what requested benefits are missing, thus keeping them healthy, happy, and productive. This can also extend beyond a single organization, comparing Employers to one another for a more inclusive view of status. Incentives can aid the adoption of compiling consistent, factual information for reporting to all relevant players.

Design Strategies

Encourage personal communication
Rate stakeholders on cooperation
Mandate transparent publishing

Solution Elements

M Touch-Base Consultation
E 1-on-1Feedback Sessions
M Pervasive Dynamic Reviews
M Resource Allocation Index
M Plan Itemized Statements
M Provider Stat Tracking
E Provider Regional Standings

Design Factor

Patients may not trust Health Plans as feedback depositories

3

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Employers

Activity

Assembling

Originator

Peter Rivera-Pierola

Contributors

Sources

Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. Redefining Health Care. Boston: Harvard Business School Publishing.

Personal Observation

Associated Functions

52 Assemble employee feedback

Observation

Health plans, particularly the insurance/payer components, are often vilified for being overly callous and financially oriented; potentially breeding patients' distrust of Health Plans as a feedback repository.

Extension

The new roles for health plans involve a radical transformation not only in their relationships with subscribers and providers but also in the internal culture that is needed (Porter, Teisberg 2006, 280). The unfortunate legacy of health plans is one of denial, particularly for claims and choice. Although they're trying to move away from this culture, many are still based on maintaining provider networks and constraining choice in an effort to cut costs.

To shed these negative perceptions, health plans must focus on providing responsive, consistent, and honorable services. Much of this movement involves reconnecting with members and ensuring health benefits through candid interaction. Members should feel that contributing to health plan-run feedback systems will prove productive in their favor. Health plans can gain this trust through incentives, customized efforts, and health-based results. The eventual goal being to transform the health plans from financial companies to health advisory institutions.

Design Strategies

Translate feedback to benefits/results

Reward valuable feedback

Reward continuous feedback

Solution Elements

M Plan Discount Options

S Custom Plan Points

S Serial Suggester Benefits

S Honorary Board Member

Design Factor

Findings may not always be relevant

4

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Suppliers

Activity

Communicating

Originator

Peter Rivera-Pierola

Contributors

Sources

Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. Redefining Health Care. Boston: Harvard Business School Publishing.

Personal Observation

Associated Functions

16 Publish health trends report
17 Publish patient market segments report

Observation

As the amount of accessible information increases, it becomes more difficult to find relevant results.

Extension

Many organizations already publish health reports about everything from trends and best practices to product prevalence and distribution. The problem with these general, census-like reports is that they may not necessarily be relevant enough to satisfy today's fickle stakeholder.

Suppliers, for example, would benefit from information that Health Plans could gather concerning product performance and distribution within their patient membership. Generic health trend reports and product sales figures may not always be useful to all Suppliers. Some may prefer more targeted, contextual reports about a particular piece of medical equipment, or within a specific market or region; all information that can be easily obtained by Health Plans. It becomes a matter of achieving quality, not quantity in results.

This specific information could be further concretized through the use of cross-stakeholder consultants to facilitate the adoption and comprehension of tailored reports. Porter says "The health plan is arguably the entity in the best position to aggregate information on the patient's full cycle of care..." (Porter, Teisberg 2006, 252) due to their involvement with such a wide variety of health care professionals. An open dialogue must be established to achieve relevancy across the health care industry. This way, each stakeholder can get exactly what they need to improve care-giving and to advance value-based competition.

Design Strategies

Deliver personalized information

Use industry sources to determine relevancy

Solution Elements

M Customized Health Reports
M Annual Health Report
E Health Trends Newsletter
M Relevant Market Subscriptions

Design Factor

Sources for data are uncertain

5

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Suppliers, Employers

Activity

Communicating, Assembling

Originator

Peter Rivera-Pierola

Contributors

Sources

Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. Redefining Health Care. Boston: Harvard Business School Publishing.

Personal Observation

Associated Functions

18 Communicate Class II product efficiency
19 Communicate Class III product durability information
20 Communicate drug side effects & effectiveness (performance)
49 Assemble provider quality data points
52 Assemble employee feedback
59 Communicate provider quality

Observation

The democratization of information allows anyone to share their opinion, often leading to questionable sources and misinterpretation.

Extension

Health plans are in the tricky situation of needing to become full-fledged health institutions, while shedding their vilified image. Much of this negative connotation comes from forceful penny-pinching tactics and inadequate communication. If health plans want to create healthier dialogues with patients, they must first earn back that lost trust.

Transparency and honesty are key factors in trust-building for health plans. Health plans must work hard to ensure the accuracy and reliability of their clinical outcomes data, and take care to distinguish where valid information exists and where it is not yet well enough developed (Porter, Teisberg 2006, 275).

Expert groups, possibly of third party origin, could be created to both collect and monitor valuable and relevant information on products, services, and stakeholders. Health plans could leverage these third parties and serve as data compilers, collecting only approved and highly reliable information to distill and distribute to the appropriate audiences. This puts them in direct control of what is published, and allows them to customize their outputs for each stakeholder. This personalized consideration, coupled with reputable regulators, creates a trusted source for health care information.

Design Strategies

- Create dependable, expert groups
- Monitor information continuously
- Encourage peer expert regulation
- Incentivize open communication

Solution Elements

- M Medical Consumer Reports
- M Medical Product Inspectors
- S Product Maintenance Tracking
- E Medical Peer Reviews
- S Most Valuable Exchange Rewards
- M Rotating Authenticity Proctors

Design Factor

Players may be unwilling to participate

6

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Employers, Suppliers

Activity

Assembling, Communicating

Originator

Peter Rivera-Pierola

Contributors

Sources

Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. Redefining Health Care. Boston: Harvard Business School Publishing.

Personal Observation

Associated Functions

46 Assemble health plan usage claims
51 Assemble problematic environmental workplace data points
56 Provide resources for improving employee health
61 Communicate job-site environment improvement suggestions

Observation

Transparency means that all information, whether good or bad, should be made available for all to see. Fear or uncertainty may prevent many stakeholders from participating in a reformed system.

Extension

Currently, relationships between health plans and other industry stakeholders could be described as "adversarial." Not only does this go against the collaboration needed to reform the health care system, it also creates a stigma that takes time and effort to remove.

Health plans cannot just simply mandate at their whim for fear of intensifying present animosity. Rather, health plans should leverage their strengths and support other stakeholders in information sharing and incentive promotion. Porter agrees that "the health plan is in the best position to help the patient navigate the care cycle" (Porter, Teisberg 2006, 252). They are responsible for making sure that the experience is smooth and seamless and that all information is transferred appropriately. The same can apply for peers and other industry stakeholders.

Facilitation efforts could be made on behalf of health plans to assist weary adopters entering a reformed system. This can be accomplished through personalized consultations and awareness programs set on encouraging open dialogues between stakeholders. The other half of this involves delivering value and fulfilment for participation; in other words, offering tangible incentives and results. Establishing proper communication channels will allow parties to determine the appropriate incentive criteria desired by each industry player.

Design Strategies

- Mandate transparent participation
- Perform periodic valuations
- Make participation more fulfilling
- Provide more assistance and facilitation

Solution Elements

- S Mandatory Usage Tracking
- M Impromptu Inspections
- E Anonymous Employee Hot-line
- M Health Improvement Program
- M Workplace Improvement Consultant

Design Factor

Immediate costs may overshadow options and benefits

7

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Employers

Activity

Assembling, Communicating

Originator

Peter Rivera-Pierola

Contributors

Sources

Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. Redefining Health Care. Boston: Harvard Business School Publishing.

Personal Observation

Associated Functions

50 Assemble risk reduction options
57 Communicate plan benefits
60 Communicate potential cost benefits for risk reduction
62 Communicate improved plan options based on feedback

Observation

The transition from the current system to a reformed, collaborative, and transparent one will take time and resources. To many, these costs will outweigh the eventual benefits of adoption.

Extension

Although setting up electronic platforms for information exchange can be costly up front, both in price and adoption speed, the eventual benefits trump the immediate costs. Porter supports this by saying that "Electronic transactions have major benefits in cost, accuracy, and reduction of claims disputes," and The introduction of electronic medical records will further simplify transactions and reduce the need for redundant information (Porter, Teisberg 2006, 267).

Information technology will allow patients to share their records with relevant stakeholders at their discretion. But before that can happen, the appropriate foundation must be laid; namely the standardization of forms, definitions, and interfaces. Reaching agreement on these criteria will be a challenge, but once set forth, the industry will have to play catch up with the brave few. Collaboration with a trusted third party could also expedite adoption and ensure security and authenticity of the data collected.

Much like with many reforms, incentives must be in place to encourage swift and ample participation. Immediate incentives like rewards, discounts, or competitive matching could ease stakeholder hesitation. Services that could help determine the true cost of adoption over time, can help put options into perspective, and allow players to make informed decisions on reformation.

Design Strategies

Provide more methods of control
Offer immediate incentives to participants
Calculate "true cost" over time

Solution Elements

S Pitfall Tracking & Identification
S Rotating Benefits Package
M Competitor Benefits Matching
M Resource/Benefits Audit
S Co-Alignment Declarations

Design Factor

Providing resources does not imply their actual use

8

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Suppliers, Employers

Activity

Communicating

Originator

Peter Rivera-Pierola

Contributors

Sources

Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. Redefining Health Care. Boston: Harvard Business School Publishing.

Personal Observation

Associated Functions

16 Publish health trends report
54 Communicate employer-specific health benefits and values gained
56 Provide resources for improving employee health

Observation

Simply providing information is not enough; there is too much of it available. Health plans must find ways to compel patients to take more responsibility for their own health.

Extension

Health plans must conquer many mind-set barriers to adopt this new role as health institutions. One is that consumers are not sophisticated enough to deal with health care decisions; which consumers are already proving invalid (Porter, Teisberg 2006, 279). As information expands, it becomes necessary for health plans to foster the growth of patient responsibility and empowerment. But simply making the information accessible is not enough.

Health information must be compelling, relevant, and aimed at individuals at the condition level. Patients would benefit from receiving contextual information as it relates to their current stage in the care cycle. Health plans could strive to understand their patient memberships, and deliver results that matter to them, when they matter.

Education plays a huge role in patient empowerment. Information accessibility is critical, but so is its delivery and application. Collaborative sessions with patients could advance comprehension and encourage retention of health awareness issues. Ultimately, by empowering the consumer base, the industry can look forward to serving educated patients capable of making informed health decisions.

Design Strategies

Engage consumers with relevant information
Empower consumers via education

Solution Elements

M Annual Health Report
S Health Progress Report
S Plan Member Workshops
M Health Improvement Program

Design Factor

Health history may be incomplete

9

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Providers

Activity

Communicating

Originator

Matthew Gardner

Contributors

John Pipino November 2007

Sources

Notes from a podcast about EMRs, as recounted by John Pipino, October 2007.
Personal Observation

Associated Functions

37 Communicate patient health history

Observation

Over the course of their lifetime, many patients have seen multiple primary care physicians, and probably some additional specialists. Each provider has their own records about an individual patient, and they have not been centrally located.

Extension

In every record there is the possibility for missing information. This missing information can of two kinds. Either the information is missing because it is recorded elsewhere, or it is missing because it was never recorded. As the US medical system migrates toward electronic medical records, and personal health records, missing information will become a problem. In the system we envision, we need to ensure that there are ways to help consolidate multiple records that have in the past been disparate.

Electronic Medical Records are coming online. These records need to be able to be added to, and need to be accessible to multiple other systems. Either that, or they need to be able to be accessed by appropriately secure systems.

Design Strategies

Facilitate entry of health data an entry point

Consolidate an individual's medical records

Link disparate records so all can be accessed

Solution Elements

S New Health History Data Information Field

S Health History Consolidation Service

S EMR Network

Design Factor

Patient may want to restrict data provided. **10**

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for provider

Activity

Communicating

Originator

Matthew Gardner

Contributors

Sources

Groopman, Jerome. How Doctors Think. Houghton Mifflin Company, 2007.

Associated Functions

37 Communicate patient health history

Observation

While having a complete medical history can be helpful, there may be instances when a patient may want to restrict data or when it is in the best interest of the patient for data to be restricted.

Extension

Despite years of training, doctors do make mistakes. In some instances, those mistakes, such as misdiagnosis, travel with the patient from specialist to specialist. Each successive doctor builds his or her case on the previous doctor's diagnosis.

Patients themselves do not have the understanding about what information is beneficial to restrict, so they shouldn't be allowed to put limitations on their information.

The only people trained and qualified to make decisions about what information to view are doctors. But are the doctors wise enough to filter potentially incorrect information? Possibly the most harmful information is the diagnosis, which a doctor's analysis of information/data/symptoms.

Design Strategies

Restrict physician access

Hide previous diagnosis

Get doctor to think outside the box

Solution Elements

S Access lock

S Previous diagnosis screen

S Alternate possibilities prompt

Design Factor

Multiple parties in one institution may be interested in scorecard

11

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Providers

Activity

Communicating

Originator

Matthew Gardner

Contributors

Sources

Personal Observation

Associated Functions

41 Communicate provider scorecard

Observation

Within a competitive environment many more entities than just the entity being reviewed are interested in seeing how the reviewed entity scored. It is necessary to build in ways for all interested parties to see how the reviewed entity did.

Extension

The challenge with reviews is publishing them in such a way that the people who need to see them see the right amount of information. Each person is interested in reviews for different reasons. Providers themselves are interested in seeing what they can do better and in learning how to do it better. The overseeing bodies are interested in seeing improvement. Consumers want to see the information that will help them make positive decisions regarding which providers to use.

How does a rating system tailor the output to meet the different needs to different parties? An individually published and unique document would be expensive and impractical. It would be a challenge to maintain a correct database of who wants what, and where they want it delivered too.

Design Strategies

Shift responsibility of finding to those interested in scores

Discover interested parties and provide special permission to them for E-database

Solution Elements

M Publicly available provider quality report

S Invited access to electronic provider quality database

Design Factor

Healthy individuals can't predict depth of coverage needed

12

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for employers

Activity

Facilitating

Originator

Matthew Gardner

Contributors

Sources

Commonwealth of Massachusetts Group Insurance Commission. "Weigh Your Options During Annual Enrollment" www.mass.gov Accessed October 11, 2007.

Burk, W. Abstract of "Family History as a Predictor of Asthma Risk." American Journal of Preventative Medicine, 24 no. 2 (Feb. 2003): 160–9.

Associated Functions

66 Facilitate employee choice of health plan

Observation

Healthy individuals are unable at the enrollment period to determine what level of coverage they will need through the course of enrollment

Extension

Regular maintenance on a car engine helps prolong engine life, but does not completely alleviate risk for large and expensive repairs. The same is true for the human body. As with cars, physical accidents can occur in which the human body is damaged and needs repair. These kinds of accidents are unpredictable.

On a slightly more predictable level, each body is a result of genetic programming. The more proficient we become at correlating genetic makeup with diseases, disorders, and tendencies, the more we will be able to predict what kind of care an individual would need. And regardless of the correlation, it may still be nearly impossible to predict if the genetic disease will show itself during the enrollment period in question.

Family history is a common predictor of risk because of the accessibility of the information, but people are generally not aware of or don't understand the implications that family history has on their own health.

Even when people are aware of the conditions that they have been diagnosed with and are being treated for, they may not take the costs of everything (i.e. Drugs, tests, procedures) into account when they are selecting the level of coverage that will optimize the coverage they need and the out of pocket expenses.

Design Strategies

Procure more information

Assess risk tolerance and fiscal health

Make suggestions based on personal information

Solution Elements

S Disease likelihood genetic examination

S Family health record links

S Medical investment test

S Provider Preferences questionnaire

S Coverage level recommendation generator

Design Factor

Multiple instances from which to gather data during patient care cycle

13

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Employers

Activity

Assembling

Originator

Matthew Gardner

Contributors

Sources

Personal Observation

Associated Functions

52 Assemble employee feedback

Observation

The health plan has multiple points from which it could gather feedback from plan members on its performance. Each of those moments must be assessed to discover at which points they can glean the most useful information.

Extension

Health plans need to be concerned about the care they provide to their plan members. This naturally results in a desire to get information back from them, and particularly at times when that feedback will be the most relevant.

There is a fine line between gathering what is useful and gathering what is excessive. Naturally the health plan must conduct a an audit to assess the incremental margin to be gained through conducting extra feed back requests. The health plan might find that there is a certain breaking point where conducting more feed back would be worthless. On the other hand, they might find that the extra effort translates into positive emotions and trust in the health plan.

Second, the health plan should assess the different points at which it could gather feedback, and try to align those points with the natural touch points, such as phone calls, billing cycles, and visits to the web site.

Design Strategies

Contact after billing

Allow for different kinds of feedback at different times.

Gather too much and work it into the branding

Solution Elements

M Post billing survey

S Employer collected feedback

S Post-enrollment follow-up call

S "We care" branding

Design Factor

Data points may come from multiple parties

14

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Employers

Activity

Assembling

Originator

Matthew Gardner

Contributors

Sources

Dr. Barbara Loeb, MD, Presentation Sept. 2007.

Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. Redefining Health Care. Boston: Harvard Business School Publishing.
Personal Observation

Associated Functions

49 Assemble provider quality data points

Observation

Currently there are multiple sources of provider evaluation. All of these different sources are confusing to consumers, who are not knowledgeable about what criteria drive the scoring.

Extension

Dr. Loeb presented on the state of provider reviewers. In her presentation she listed no fewer than 12 different entities that are currently involved in grading providers. The different entities grade different types of providers (hospitals versus physicians) and score them differently. This first group of scoring entities may be best qualified to score providers, but according to Porter they have their shortcomings.

Another group scoring entities are the many online doctor rating sites, such as www.ratemds.com, www.healthgrades.com, and scores of others. While these sites are well intended, the sheer number of them has resulted in a lack of useful information in any one location. Additionally, the information on these sites is generated at will, meaning that their scores may be biased toward very high or very low ratings; people seek out rating sites when they either have good experiences or bad experiences.

Design Strategies

Combine existing professional third party scores

Combine ratings from multiple sights

Solution Elements

S Weighted Provider Score Mashup

M PriceGrabber for Providers

Design Factor

Employees have limited knowledge of health/medicine

15

Project

Rethinking—DesignThinking—Health Care: A Health Care Framework for Health Plans

Mode

Provisions for Employers

Activity

Facilitating

Originator

Matthew Gardner

Contributors

Sources

Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. Redefining Health Care. Boston: Harvard Business School Publishing.

Personal Observation

Associated Functions

64 Facilitate employee decisions regarding treatment

Observation

The average person does not have an in-depth understanding of medicine and health care. How can a person be expected to make positive choices about health care with such basic levels of understanding about medicine?

Extension

As Porter says "The idea that patients can or should become medical experts and direct their own care is misguided and unrealistic" (Porter, 246). Of course the primary educator about health care and medicine should be the physician, who has completed long years of schooling and has practiced in the field, but health plans also have a role in educating their plan members.

It is therefore important that while the care delivered to the patient be chosen by the patient (to drive competition), the patient should receive help to make informed choices. The patient needs help from the physician and whatever additional sources of information available.

For the most part helpful sources are disparate and inaccessible. If the Health Plan (also motivated by the patient's good health) were to help inform the patient, it could serve as a reliable and easily accessible source of information.

Design Strategies

Provide education

Advise employees

Solution Elements

M Condition Specific Workshops

S Personal Health Adviser

S Online Medical Encyclopedia/dictionary/reference

Design Factor

Accounts receivable receives payment in multiple forms

16

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Providers

Activity

Communicating

Originator

Matthew Gardner

Contributors

Sources

Image Source. "Philips Medical Systems Realizes Efficiencies Through Accessibility In Accounting Department." www.imagesourceinc.com

Wikipedia. "Medical Billing." www.wikipedia.org/

Associated Functions

44 Notify provider of payment

Observation

While electronic methods of payment are becoming more frequent, businesses still use paper methods.

Extension

A lot of human effort is required to properly document the flow of payment. Photocopies or scans of checks and credit card receipts must be made. Older processes use a lot of paper, and require space to store, and resources to access again. Even when records are kept electronically, there must be a manual input into the system. This may mean that there is a human input when a bill is paid by the Health plans and possibly another human input when that payment is received and recorded.

Within recent years there has been a push to have all data transferred electronically. A number of systems exist; each office or hospital may use its own proprietary system, or one of a number of third party systems.

Design Strategies

Limit number of systems

Standardize communication between systems

Adopt as part of HP services

Solution Elements

S Electronic Communication Switchboard

E ANSI 837 File

S Payment records service

Design Factor

Physicians don't want to spare time for administrative work

17

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Providers

Activity

Evaluating

Originator

Kichu Hong

Contributors

Oct. 2007.	Matthew Gardner
Oct. 2007.	Preethi Lakshminarayanan
Oct. 2007.	Peter Rivera-Pierola
Oct. 2007.	Sriram Thodla

Sources

E. S. Williams. What do Physicians Want in Their Ideal Job?. Results from the Physician Worklife Survey, Health Services Research, Feb, 2002.

2004 CFPC/CMA/RCPSC National Physician Survey. Who's doing what? Time spent on committee and administrative work.

Personal Observation

Associated Functions

24 Assemble claims data for provider report card
29 Verify provider claims

Observation

Most of physicians get more job satisfaction with concentrating on medical practices than with conducting administrative work. Although physicians don't want to spare much time for administrative work, physicians, particularly in solo practice need to do administrative work including making and confirming claims.

Extension

According to 2004 CFPC/CMA/RCPSC National Physician Survey, percentage of the total number of hours spent on either committee or administrative work was varied by their fields of medicines, as lowest from 0.2% of immunologists and allergists to the highest of 40.4% of family physicians.
According to results from *the physician worklife study* in 2002, physician job satisfaction increases with concentrating on medical practices in contrast to conducting administrative work.

These two factors suggest that physicians need to do certain administrative work, but they don't want to spare much time on it. As health plans gather major information from provider claims data, health plans can help physicians to facilitate administrative workflow by making it as easier and simpler as possible for them, particularly, physicians in solo practice. By physicians' implementing the administrative kit, health plans can also benefit from more efficient and faster data flow with them. The kit should include informative materials for physicians to use and can provide periodical education about updated system and other relevant issues.

Design Strategies

Make workflow simple as possible
Clarify terms used in workflow
Provide informative materials
Provide periodical education

Solution Elements

S Physician Admin Kit
M Online Admin Training

Design Factor

Difficult to track user health behavior

18

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Providers

Activity

Assembling

Originator

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Contributors

Oct. 2007.	Matthew Gardner
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Oct. 2007.	Sriram Thodla

Sources

Conference call - Jane Rollinson

Personal Observation

Associated Functions

21 Assemble patient health behavior profile

Observation

It is very difficult to track individual behaviors due to privacy issues. Means of tracking are not defined and tracking is costly and time consuming activity for health plans. Self-reporting is one possible solution for tracking user health behaviors, but it can provide biased information.

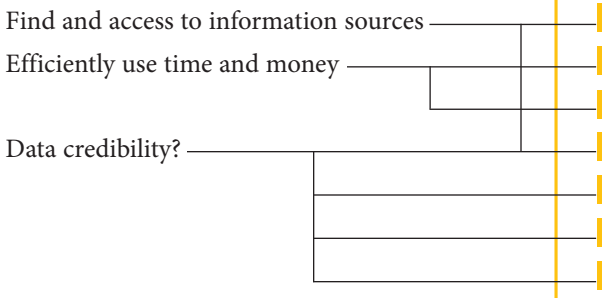
Extension

User behavior is an important factor that determines individual's health. In many cases, patients who fail to follow proper procedures directed by their physicians end up developing worse chronic states such as obesity and diabetes. Patients should take responsibility for their recovery from diseases.

Because it is very difficult to track all individual patients' behavior and also it is time and money consuming activity, means to gather reports from patients should be considered. For example, patients can be encouraged to do self-reporting if there are incentives or rewards for it. Also, easy and user-friendly means for reporting should be provided. However, self-reporting can provide biased information and data gathered from self-reporting cannot guarantee credibility. Also, it should be considered that patients who are willing to submit the reports are those who are more likely to follow physicians' advice. They are possibly more willing and diligent patients.

Random auditing of user behaviors and checkups with agents can help to increase data credibility. Privacy issues of users should be considered. Combined with these elements, it is possible to track patient health behavior at certain degree, providing useful sources for providers and generally enhancing health standards.

Design Strategies



Solution Elements

- S Behavior Self Report
- S Self Checkup Guide
- S Pervasive Scheduler
- S Regular Checkup
- S Behavior Audit
- S Credibility Scoring
- S Validate Member Data

Design Factor

Trend analysis needs special skill

19

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Suppliers

Activity

Communicating

Originator

Kichu Hong

Contributors

Oct. 2007.	Matthew Gardner
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Oct. 2007.	Sriram Thodla

Sources

Associated Functions

16 Publish health trends report

Observation

Trend analysis needs professional expertise. Analyzing data and publishing this data require specialized skill sets.

Extension

The term "trend analysis" refers to the concept of collecting information and attempting to spot a pattern, or trend, in the information. Trend analysis is often used to predict future events (Wikipedia).

Trend analysis provides valuable information for predicting market needs for suppliers to plan strategies and research and produce medical equipment and drugs. Also, the health care industry can benefit from suppliers' more accurate investment in R&D for new technology.

However, trend analysis often involves long period of research from collecting, compiling and analyzing data to making graphs, diagrams and other statistical materials. It needs time, money and expertise. Health plans have accumulated data, but analyzing data should be conducted by professional groups in order to generate more accurate data. The selection of a strategy for analyzing trend data will depend in part on the purpose of the analysis, and on careful consideration of regarding issues (D. Rosenberg). Health plans can build more credible data by outsourcing expert groups for generating and publishing trend reports.

Design Strategies

- Sort out accumulate data
- Efficiently use time and money
- Data analysis accuracy
- Generate reports in various forms
- Publish reports through various media

Solution Elements

- E Offshore Analysis
- S 3rd Party Data Audit
- M Online Report Library
- M Print publishing
- S Reports Sale

Design Factor

Consumers do not willingly provide feedback

20

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Providers

Activity

Assembling

Originator

Kichu Hong

Contributors

Oct. 2007.	Matthew Gardner
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Sources

Team deliberations

Associated Functions

25 Assemble patient feedback

Observation

Feedback from the consumer can provide valuable resource for improving performance of the health plan and other stakeholders.

Extension

Consumer feedback can provide valuable resources for improving performance of health plans and other stakeholders. However, we can't just expect to receive feedback from consumers automatically. Although by improving its performance, the health plan will eventually reward consumers, but in many cases consumers do not willingly provide feedback.

Health plans can properly reward consumers for their feedback to incentivize them. Also health plans should provide a system that consumers can easily access to and easily use to provide feedback. Considering that not all consumers use internet to share the information, multiple channels such as call centers and personal representatives should be used. Examples of rewards are custom points similar to millage programs and discount of memberships and they should be selected carefully.

Design Strategies

- Provide easy way to deliver feedback
- Contact consumers through multiple channels
- Provide reward for valuable feedback

Solution Elements

- M Online Feedback DB
- S Health Record Blog
- E Customer Call Center
- S Self Reporter Awards
- S Custom Plan Points

Design Factor

Internet is not always accessible to everybody

21

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Providers

Activity

Assembling

Originator

Kichu Hong

Contributors

Oct. 2007.	Matthew Gardner
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Sources

Team deliberations

Associated Functions

21 Assemble patient health behavior profile

Observation

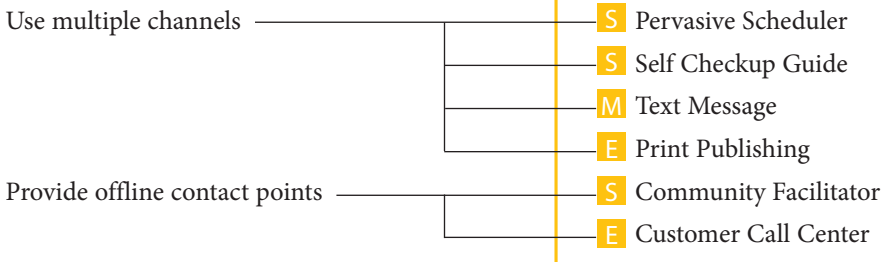
Internet covers vast area of information sharing, but not all of us don't use internet as a primary information sharing and some can't use it at all.

Extension

Enhanced information transparency is considered as a key factor that can resolve multiple problems residing in the current health care system by reducing medical problems and increasing value-added competition. Internet is the major tool to store, share, and communicates information amongst multiple users. It is fast, efficient, and also cost-effective tool. However, not all people can use internet properly. Some don't have internet access at locations, and some don't know how to use it. In order to provide proper access to various users, health plans should introduce and use multiple channels including traditional media, and new media such as mobile phones, text messages to share information, and thus increase information transparency.

Design Strategies

Solution Elements



Design Factor

Data may not be credible

22

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Employers

Activity

Assembling, Evaluating

Originator

Kichu Hong

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Oct. 2007.	Matthew Gardner
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Sources

Team deliberations

Associated Functions

21 Assemble patient health behavior profile
35 Evaluate user feedback of health treatment

Observation

Multiple data, sources and channels exist, but not all data is credible, so health plans need to find ways to measure data credibility.

Extension

Patient health behavior can affect patient recovery and also healthy living standard. Follow-ups after doctor visit can be more important than actual treatment. The patient health behavior tracking, as mentioned in earlier design factor(18), is very difficult and gathered data may not be credible. Also, other aggregated data from 3rd party evaluations and reports can be incomplete, and not fully credible. Health plans should set criteria and method to validate data. This includes credibility scoring by set metrics, and comparison with previous data or benchmark data. Viewing data from multiple perspectives and measuring the credibility, health plans can generate comparably more complete and valuable information.

Design Strategies

Set criteria for data credibility
Score data by value-weighting
Set data sets for comparison

Solution Elements

M Credibility Scoring
S Validate Member Data
S Benchmark Comparison

Design Factor

There is no defined medical fee

23

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Providers

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Evaluating

Originator

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Oct. 2007.	Matthew Gardner
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Sources

Michael E. Porter & Elizabeth Olmsted Teisberg. Redefining Health Care. Boston: Harvard Business School Publishing, 2006.

Team deliberations

Associated Functions

30 Verify correct & comprehensive cost

Observation

It is difficult to verify correct and comprehensive cost of providers due to the lack of set comparable medical fees.

Extension

To avoid unnecessary costs paid providers and eventually reduce the overall cost in the health care system, verifying correct and comprehensive cost is important. The fact that there is no defined medical fees makes it more difficult. Medical fees for the same medical procedure differ by regions, by providers, and it is not clear how to define quantitative medical fees.

However, construction of comparable data profiles is possible. It is important for health plans to know the general ranges of medical and doctor fees. Also, health plans should consider if there was any unnecessary medical procedures added to finalize verification. Patient surveys can provide helpful insights for how patients recognize medical fees.

Design Strategies

- Classify data into groups by medical procedures
- Compare data within groups
- Examine procedural alternatives

Solution Elements

- M Medical Fee List
- M Doctor Fee Charts
- S Claims Database
- S Alt Diagnosis Prompt
- S Alt Practice Survey

Design Factor

User health care cycles can be affected by previous health care histories

24

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Providers

Activity

Evaluating

Originator

Kichu Hong

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Oct. 2007.	Matthew Gardner
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Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. *Redefining Health Care*. Boston: Harvard Business School Publishing.

Team deliberations

Associated Functions

34 Evaluate user health care cycle in relation to provider

Observation

The overall health care cycle can be affected by previous health care histories, however, it is not easy to track previous records.

Extension

Because information sharing amongst different health plans as well as providers are not so active or efficient, it is difficult to get data regarding patient previous health care histories when they change plans or doctors. Individual health care histories are valuable information to improve the entire health care cycles and overall health standards. In order to keep records without losing some, advanced technology is required.

Claims database is the major information repository that stores resources to understand overall members' health care cycles. Other information technology and online information sharing will be quickly developed.
While access to the past information being important, protecting and preserving information is also important.

Design Strategies

- Build credible database
- Track previous history data
- Protect personal data

Solution Elements

- M Claims Database
- S Online Health Net
- S Health Net Admin Access
- S History Access Lock

Design Factor

Unclear supplier exchange metrics

25

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Suppliers

Activity

Assessing

Originator

Sriram Thodla

Contributors

Sources

Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. Redefining Health Care. Boston: Harvard Business School Publishing.

Personal Observation

Associated Functions

14 Assess supplier info exchange cooperation

Observation

It is hard to identify which metrics should be tracked when trying to measure the effectiveness of health plan interactions with suppliers.

Extension

To understand the operational effectiveness of the interactions between suppliers and health plans, we will need to create a scorecard. To effectively create a scorecard, we need to identify the metrics that are the most appropriate.. However, doing so is hard when there is no clear hierarchy of metrics - that there are no obvious metrics that stand out among the hundreds that can be measured.

The problem here is one of creating a hierarchy of metrics (not unlike something already done in the retail and supply chain industries). This hierarchy of metrics will directly correlate the metrics to a specific operational improvement such as the reduction of cost, the speeding up of a delivery etc.

Design Strategies

Pilot multiple studies

Analyze health plans using a supply chain lens

Study the supplier side of the equation

Solution Elements

M Supplier - Health plan tests

M Health plan - Supplier analytic group

Design Factor

Uncertain drug effectiveness thresholds

26

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Suppliers

Activity

Assessing

Originator

Sriram Thodla

Contributors

Sources

Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. Redefining Health Care. Boston: Harvard Business School Publishing.

Personal Observation

Associated Functions

9 Assess long term drug effectiveness

Observation

There are no standard ways of ensuring the effectiveness (not efficacy) of drugs since many potential problems may surface after the drug has been released to the mass market (ex. Vioxx)

Extension

While stringent regulations are in place by the FDA before approving drugs for sale, there are still numerous situations where drugs with dangerous side effects are released to the market. There is simply no way to ensure that the drug is 100% effective and completely safe during trials. However, there needs to be a way to detect early enough, any serious issues that arise after the drug has gone to market.

The health plans in combination with the providers are in the best place to assess this since repeated health problems that arise from the administration of drugs can be detected by analyzing the claims management system.

Design Strategies

Improve supplier to health plan cooperation

Analyze the claims data

Solution Elements

M Dedicated supplier exchange group

M Data analysis

S Supplier Collaboration Peer Forum

Design Factor

Information security might become an issue

27

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Suppliers

Activity

Assembling

Originator

Sriram Thodla

Contributors

Sources

Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. Redefining Health Care. Boston: Harvard Business School Publishing.

Personal Observation

Associated Functions

7 Assemble target market patient information

Observation

Health plans will need to be sensitive to information security concerns, both perceived and real in the exchange of patient information with suppliers.

Extension

Health plans are in a unique position, having detailed information on plan members which can be used to develop valuable capabilities with other players within the system. However, the information being handled is sensitive and might become an issue as more and more analysis is being performed on plan member data.

The right steps will need to be taken to insure that plan member data is secured against information theft. In addition, health plans should make it easy for plan members to change their privacy settings to provide them with peace of mind.

Design Strategies

Evaluate security frequently

Secure plan member information

Distribute plan member information

Solution Elements

M Information Security Analyzer

M Privacy control forms

M Aggregated Patient Information

Design Factor

No unified view of health care products

28

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Suppliers

Activity

Assembling

Originator

Sriram Thodla

Contributors

Sources

Personal Observation

MedWatch
http://www.fda.gov/medwatch/What.htm

Associated Functions

6 Assemble product competitive landscape

Observation

There are numerous providers of health care products in the current health care system and to reasonably evaluate all of them and provide reviews to plan members is a costly and time consuming task

Extension

With the distribution of medical products spread over thousands of suppliers, health plans are faced with the challenge of assessing the capabilities and effectiveness of these products in a timely and cost-effective manner. The challenge arises because there is no central body within the health care system which acts as a clearinghouse for all products. The implications of this are that health plans have no single location to get information from or submit information regarding the effectiveness of products.

MedWatch, the FDA's service for providing safety and adverse medical alerts on products focuses on reporting serious events that might require the product to be pulled from the marketplace. While this is extremely beneficial for critical issues, MedWatch makes no attempt to rate the products on their relative effectiveness.

Design Strategies

Work with suppliers

Develop a central product review body

Solution Elements

M Class I, II & III equipment list

S HP Supplier relationship

S Equipment usage analyzer

S Online information exchange portal

Design Factor

Subscriber lifestyle hard to track

29

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Government

Activity

Assembling

Originator

Sriram Thodla

Contributors

Sources

Personal Observation

Associated Functions

76 Assemble subscriber demographics
77 Assemble relevant lifestyle consumptions and activities

Observation

Trying to build a subscriber health profile by understanding their lifestyle can be challenging because there is little information that health plans would have access to.

Extension

Health plans could significantly improve subscriber health by understanding their lifestyle but it is very challenging to build such a profile. An accurate picture of a person's lifestyle would enable health plans to offer incentives to change unhealthy behavior, offer discounts on gym memberships and other value added services.

However, it is extremely hard to build an accurate picture of a subscriber through their claims information. Since the only physical contact with the subscriber happens through the provider, there is little or no insight into the subscriber themselves. In addition, subscribers may not want to reveal personal information that they feel might be used against them.

Finding a solution to this design factor would help Health Plans develop programs to enhance subscriber health while ensuring patient's privacy.

Design Strategies

Study regional trends
Ask the subscriber
Develop profile over multiple interactions

Solution Elements

S Patient lifestyle survey form
M Member demographic database
S Consumption and activities report
M Regional and neighborhood disease prevalence report

Design Factor

Demographics data hard to find

30

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

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Assembling

Originator

Sriram Thodla

Contributors

Sources

Personal Observation

Associated Functions

52 Assemble subscriber demographics

Observation

Demographic data is not up to date and hard to find.

Extension

Demographics data is currently available from the government but the information is updated every five years based on the national census. This results in out of date information which the health plans can't rely on to create health plan solutions that are targeted at regional demographics

Demographic data is also hard to find at the right level of detail. While large state wide demographics might exist, any further granular view of the people in a region or neighborhood is not available easily.

The ability to understand the accurate demographic disposition of a region would allow health plans to better assess risk, develop health products, foster community workshops etc.

Design Strategies

Get more frequent updates

Gather information yourself

Ask the subscribers

Solution Elements

M Census Feed

S Regional and neighborhood disease prevalence report

M Subscriber demographic database

Design Factor

Health data is widely spread, hard to collect and disparate

31

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

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Assembling

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Sriram Thodla

Contributors

Sources

Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. Redefining Health Care. Boston: Harvard Business School Publishing.

Personal Observation

Associated Functions

71 Identify and collect preventive health care practices

Observation

Health plans have a hard time collecting and understanding the numerous amounts of health practice data available.

Extension

Health plans need to identify and evaluate new health care practices to ensure that the providers they work with are using the best possible procedures. However, there are too many sources of information making it hard to evaluate which practices are beneficial

Health plans should track the latest practices because providers are not as up to date as we'd like to believe. There are numerous advances happening both nationally and internationally and health plans should collect this information to make sure that their subscribers are getting the best care possible.

Health plans are increasingly hiring medical personnel who are able to evaluate whether new practices would be beneficial. In addition, alternative therapies could offer similar or better benefits in certain cases allowing health plans to reduce cost without sacrificing quality of care.

Design Strategies

Partner to gather the relevant information

Gather information from subscriber

Store information in a easy to use format

Solution Elements

M Health partnership network

S Alternative health practice survey

S Open health knowledge base

Design Factor

Comprehensive collection a challenge

32

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

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Assembling

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Sriram Thodla

Contributors

Sources

Personal Observation

Associated Functions

2 Assemble drug performance information

Observation

Collecting the vast amounts of health plan data is a challenge.

Extension

Health plans can use the vast amounts of health care data but collecting all this data poses a challenge in terms of cost, capacity and ability to analyze the data effectively and in time to make changes.

Data currently exists in numerous places with no standard methods of collecting this information. Product information is spread across thousands of suppliers, health care information is spread across equally numerous clinics and demographic data exists in numerous public and government databases.

Health plans need to effectively reduce costs and improve their quality of care by using the available data but doing so represents a huge challenge.

Design Strategies

Partner with other health plans

Common knowledge sharing

Solution Elements

M Online information exchange portal

S Health Plan partnerships

Design Factor

No unified price list due provider variation and non disclosure

33

Project
Design Thinking Health Care—Health Plans

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Assembling

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Preethi Lakshminarayanan

Contributors

Sources
Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. *Redefining Health Care*. Boston: Harvard Business School Publishing.

Personal Observation

Team Deliberation

Associated Functions
28 Assemble procedural costs across providers

Observation
Its difficult for health plans to validate actual procedural costs of providers. This is a barrier to transparency. The lack of standardization creates leaps of disparity disallowing access to quality health care at reasonable prices.

Extension
Increasing people's awareness of their health care spending goes hand-in-hand with getting hospitals, physicians and eventually health insurance companies to share more price information. The initiative has to be first taken by the providers by actively allowing pricing and care quality information to be made public.

Hospital charges are typically much higher than the prices negotiated by private health plans or formulated by government programs. Although insured people are shown total charges on statements from their health plans, people rarely see detailed charges on a bill. With employers backing away from full health care coverage, there is a need for consumers to become health care shoppers.

Hospitals maintain that the price information would not be helpful to most patients and are not keen to open their books. The uninsured are practically the only people who see hospitals' actual charges on their bills. Price visibility can be used to bring down cost, improve quality and change the way hospitals provide care.

Design Strategies

Incentivize Providers to publish detailed procedural cost

Create information dissemination channels

Solution Elements

S V.Price

S QuickHealth Centers

Design Factor

Difficult to access patient health information

34

Project

Design Thinking Health Care—Health Plans

Mode

Provisions for employers

Activity

Facilitating

Originator

Preethi Lakshminarayanan

Contributors

Sources

Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. *Redefining Health Care*. Boston: Harvard Business School Publishing.

Personal Observation

Team Deliberation

Associated Functions

63 Facilitate employer choice of health plan

Observation

Its difficult for health plans to access protected health information. Access to health information would help plans innovate benefit structures with a view of providing better options to employees.

Extension

HIPPA prohibits health plans to create eligibility rules citing health status, medical history, disability etc. But any individual can share his/her protected health data (PHI) voluntarily.

Employers too are not privy to PHI's. The employee's don't have enough decision making aids to make choices by predicting their health. If the cost Versus benefits ratio has to swing up on benefits, then consumer based health plan has to be tailored to consumer health profiles and preferences.

Health plans would greatly benefit in being able to get aggregated PHI's of employees to offer a best suited list of coverage benefits according to employee health demographics. A degree of privacy can be ensured in this process by giving the user levels of disclosure as stated in HIPPA.

Design Strategies

Determine PHI access

Monitor PHI access

Incentivize consumers for PHI access

Educate on PHI and access procedure

Solution Elements

M Health Data Bank

Design Factor

Lack of comparable advice on procedure and cost

35

Project
Design Thinking Health Care—Health Plans

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Preethi Lakshminarayanan

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Sources
Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. *Redefining Health Care*. Boston: Harvard Business School Publishing.

Personal Observation

Team Deliberation

Associated Functions
64 Facilitate employee decisions regarding treatment

Observation
Comparable advice on procedure and cost is important to consumers choosing a provider. Currently the costs are not available, and the procedure and not compared or listed.

Extension
Many health plans are setting up decision aid tools for consumers. They are currently in form of web sites. But more such tools that reside with the patient (web site), that are available in provider hospitals/clinics (kiosks) or services that are open to patients under care (mobile services) can be developed.

Patient decision making tools that provide comparable guidance on type of procedures, quality of procedure and cost across providers will help patients choose the best and the reasonably priced provider. This would also help in increasing value based competition among providers.

Design Strategies
Create care decision aids for patients

Solution Elements
M Health Data Bank

Design Factor

Difficult to get credible qualitative data on preventative care

36

Project
Design Thinking Health Care—Health Plans

Mode
Government

Activity
Communicating

Originator
Preethi Lakshminarayanan

Contributors

Sources
Michael E. Porter & Elizabeth Olmsted Teisberg. 2006. *Redefining Health Care*. Boston: Harvard Business School Publishing.

Personal Observation

Team Deliberation

Associated Functions
80 Communicate effectiveness of preventative care

Observation
Preventive care efforts are disparate and its difficult to rate their effectiveness. Efforts are also largely distributed and implemented by various parties.

Extension

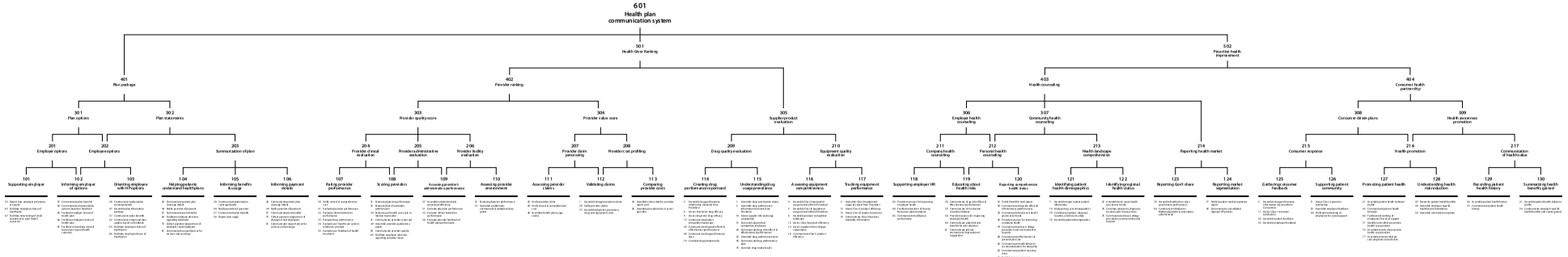
Responsibility of preventive care don't rest with a single stakeholder. Patients are also responsible for taking preventive care seriously. Health plans are well placed to act as health awareness creators due to their access to consumer profiles. As initiators of health awareness initiatives health plans can group their consumers under different categories and distribute targeted information on preventive care.

With health plans acting as nodal units that initiate and manage preventive care activities, it'll become easier to track effectiveness of initiatives. This would also lead to better communication of the results of such efforts and allow for improvement over time.

Design Strategies
Group consumers based on health needs

Solution Elements
S Health Support Groups

Information Structure



Information Structure

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63 Facilitate employer choice of health plan
67 Facilitate networking of small businesses to pool health resources

102
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63 Facilitate employer choice of health plan
66 Facilitate employee choice of health plan
67 Facilitate networking of small businesses to pool health resources

103
Orienting employee with HP options

38 Communicate patient plan coverage details
47 Assemble plan information package
57 Communicate plan benefits
62 Communicate improved plan options based on feedback
63 Facilitate employer choice of health plan
66 Facilitate employee choice of health plan

104
Helping patients understand health plans

38 Communicate patient plan coverage details
44 Notify provider of payment
57 Communicate plan benefits
64 Facilitate employee decisions regarding treatment
75 Collect payment proportions of employers and employees
81 Communicate range of prices for services and coverage

105
Informing benefits & usage

38 Communicate patient plan coverage details
44 Notify provider of payment
57 Communicate plan benefits
58 Report plan usage

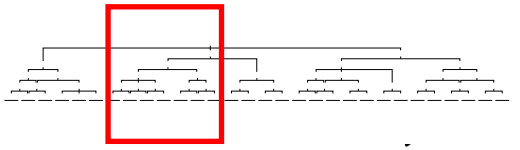
106
Informing payment details

38 Communicate patient plan coverage details
44 Notify provider of payment
57 Communicate plan benefits
75 Collect payment proportions of employers and employees
81 Communicate range of prices for services and coverage

107
Rating provider performance

30 Verify correct & comprehensive cost
31 Evaluate physician performanc
32 Evaluate clinical institution performance
33 Evaluate drug performance
34 Evaluate user health care cycle relation to provider
35 Evaluate user feedback of healt treatment

Information Structure



501
Health Giver Ranking

402
Provider ranking

303
Provider quality score

304
Provider value score

204
Provider clinical evaluation

205
Provider administrative evaluation

206
Provider facility evaluation

207
Provider claim processing

208
Provider cost profiling

107
Rating provider performance

- Verify correct & comprehensive cost
- Evaluate physician performance
- Evaluate clinical institution performance
- Evaluate drug performance
- Evaluate user health care cycle in relation to provider
- Evaluate user feedback of health treatment

108
Scoring providers

- 31 Evaluate physician performance
- 32 Evaluate clinical institution performance
- 34 Evaluate user health care cycle in relation to provider
- 41 Communicate provider scorecard
- 49 Assemble provider quality data points
- 59 Communicate provider quality
- 65 Facilitate employee decisions regarding provider choice

109
Assessing provider's administrative performance

- 27 Assemble administrative & procedural efficiency
- 31 Evaluate physician performance
- 32 Evaluate clinical institution performance
- 36 Evaluate provider feedback of health plan performance

110
Assessing provider environment

- 31 Evaluate physician performance
- 51 Assemble problematic environmental workplace data points

111
Assessing provider claims

- 29 Verify provider claims
- 30 Verify correct & comprehensive cost
- 46 Assemble health plan usage claims

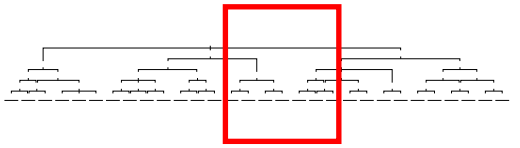
112
Validating claims

- 1 Assemble drug prescription claims
- 29 Verify provider claims
- 73 Assemble physician, procedure, drug, and equipment costs

113
Comparing provider costs

- 24 Assemble claims data for provider report card
- 28 Assemble procedural costs across providers

Information Structure



305 Supplier product evaluation

209 Drug quality evaluation

114 Creating drug performance reportcard

2 Assemble drug performance information (received from Providers)
8 Assess short term drug efficacy
9 Assess long term drug efficacy
15 Communicate product competitive landscape
20 Communicate drug side effects & effectiveness (performance)
40 Communicate drug performance data
74 Correlate drug intake results

115 Understanding drug usage prevelance

1 Assemble drug prescription claims
2 Assemble drug performance information (received from Providers)
14 Assess supplier info exchange cooperation
15 Communicate product competitive landscape
20 Communicate drug side effects & effectiveness (performance)
23 Assemble drug performance data
40 Communicate drug performance data
74 Correlate drug intake results

210 Equipment quality evaluation

116 Assessing equipment competitiveness

4 Assemble Class II equipment usage (received from Providers)
5 Assemble Class III equipment usage (received from Providers)
6 Assemble product competitive landscape
12 Assess Class II product efficiency
14 Assess supplier info exchange cooperation
18 Communicate Class II product efficiency

117 Tracking equipment performance

5 Assemble Class III equipment usage (received from Providers)
12 Assess Class II product efficiency
13 Assess Class III product outcomes
19 Communicate Class III product durability information

306 Employer health counseling

211 Company health counseling

118 Supporting employer HR

56 Provide resources for improving employee health
69 Facilitate education of Human Resources representatives
85 Communicate health plan performance

212 Personal health counseling

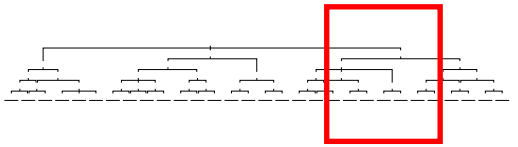
119 Educating about health risks

20 Communicate drug side effects & effectiveness (performance)
55 Communicate risk reduction recommendations
56 Provide resources for improving employee health
60 Communicate potential cost benefits for risk reduction
61 Communicate job-site environment improvement suggestions

120 Reporting comprehensiv health status

16 Publish health trends report
20 Communicate drug side effect effectiveness (performance)
39 Communicate best/worst heal practices & trends
56 Provide resources for improvir employee health
79 Communicate disease, allergy prevalence and environmenta hazards
80 Communicate effectiveness of preventative care
82 Communicate health behavior recommendations for educati
83 Communicate patient recover rates
86 Publish state government scorecards

Information Structure



502
Proactive health improvement

403
Health counseling

307
Community health counseling

Consume

213
Health landscape comprehension

214
Reporting health market

215
Consumer response

120
Reporting comprehensive health status

- Publish health trends report
- Communicate drug side effects & effectiveness (performance)
- Communicate best/worst health practices & trends
- Provide resources for improving employee health
- Communicate disease, allergy prevalence and environmental hazards
- Communicate effectiveness of preventative care
- Communicate health behavior recommendations for education
- Communicate patient recovery rates
- Publish state government scorecards

121
Identifying patient health demographics

- 7 Assemble target market patient information
- 10 Analyze drug user demographics
- 70 Correlate symptoms, diagnosis, location, and recovery data
- 76 Assemble patient demographics

122
Identifying regional health status

- 22 Assemble best/worst health practices & trends
- 70 Correlate symptoms, diagnosis, location, and recovery data
- 79 Communicate disease, allergy prevalence and environmental hazards

123
Reporting Gov't share

- 78 Assemble feedback on state government performance
- 84 Communicate Medicare/ Medicaid patients & procedures administered

124
Reporting market segmentation

- 17 Publish patient market segments report
- 43 Communicate consolidated regional HP policies

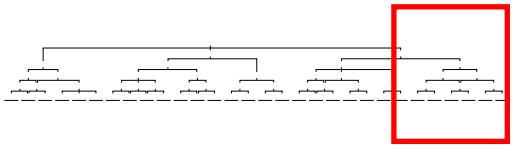
125
Gathering consumer feedback

- 3 Assemble drug performance information (received from Consumers)
- 11 Assess Class I consumer satisfaction
- 25 Assemble patient feedback
- 52 Assemble employee feedback

126
Supporting patient community

- 11 Assess Class I consumer satisfaction
- 52 Assemble employee feedback
- 68 Facilitate networking of employees for social support

Information Structure



502
active health
mprovement

404
Consumer health partnership

308
Consumer driven plans

309
Health awareness promotion

215
Consumer response

216
Health promotion

217
Communication of health value

et

124
orting market gmentation

patient market segments

nicate consolidated
HP policies

125
Gathering consumer feedback

3 Assemble drug performance information (received from Consumers)
11 Assess Class I consumer satisfaction
25 Assemble patient feedback
52 Assemble employee feedback

126
Supporting patient community

11 Assess Class I consumer satisfaction
52 Assemble employee feedback
68 Facilitate networking of employees for social support

127
Promoting patient health

21 Assemble patient health behavior profile
42 Communicate patient health behavior
68 Facilitate networking of employees for social support
71 Identify and collect preventive health care practices
72 Assemble results of preventive health care practices
77 Assemble relevant lifestyle consumptions and activities

128
Understanding health risk reduction

45 Reconcile patient health benefits
48 Assemble employer-specific health recommendations
50 Assemble risk reduction options

129
Recording patient health history

26 Assemble patient health history
37 Communicate patient health history

130
Summarizing health benefits gained

21 Assemble patient health behavior profile
54 Communicate employer-specific health benefits and values gained

Activity Analysis

Activity
Communicating

11

Project
Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode
Provisions for Government

Originator
Preethi Lakshminarayanan

Contributors

Oct. 2007.	Matthew Gardner
Oct. 2007.	Kichu Hong
Oct. 2007.	Peter Rivera-Pierola
Oct. 2007.	Sriram Thodla

Scenario

Health Plans can provide beneficial information to Government on current health trends across the country. Communicating these findings will help government better track health status and needs on a macro level.

Users

- Employers
- Data analysts
- Insurance agents
- Customer service representatives
- Patients/Employees
- Providers
- Health inspectors/educators

System Components

- Reports
- Score cards
- Computers
- Data Analysis systems
- Telephones

Environmental Components

- Plan Information database
- Internet
- Forums
- Analysis tools
- Printing and publishing tools

System Functions

F79 Communicate disease, allergy prevalence and environmental hazards

F80 Communicate effectiveness of preventative care

F81 Communicate range of prices for services and coverage

F82 Communicate health behavior recommendations for education

F83 Communicate patient recovery rates

F84 Communicate Medicare/Medicaid patients & procedures administered

F85 Communicate health plan performance

F86 Publish state government scorecards

Associated Design Factors

- Health Plan data is representational
- Time lag between allergy, diseases and environmental prevalence data getting fed back to health plan
- Difficult to obtain and validate patient behavior data
- Difficult to get credible qualitative data on preventative care
- There is no single price list due to provider price variation
- Too much information for government
- Difficult to mandate and track follow up treatments
- Obtaining credible quantitative data on recovery rates is difficult
- No available metrics for recovery measurement
- No comprehensive record of procedures administered
- Self reported performance data cannot be validated
- Undefined metrics for scorecards

Activity Analysis

Activity
Communicating

3

Project
Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode
Provisions for Suppliers

Originator
Kichu Hong

Contributors

Scenario

Health plans communicate and publish useful information for suppliers such as product competitive landscape, health trends report, patient market segments report, Class II product efficiency, Class III product durability, and drug performance on users by interpreting and evaluating data that health plans collect.

Users

Suppliers
Doctors
Pharmacists
Medical facility managers
Buying staff
Patients

System Components

Medical claims data
Drug usage data
Medical equipment usage data
Medical equipment distribution data
User feedback data
Analysis metrics

Environmental Components

Database
Information access

System Functions

15 Communicate product competitive landscape
16 Publish health trends report
17 Publish patient market segments report
18 Communicate Class II product efficiency
19 Communicate Class III product durability information
20 Communicate drug side effects & effectiveness (performance)

Associated Design Factors

- Product landscape changes fast
- Product performances can be affected by different factors
- High tech products are produced by only a few suppliers
- There is no existing model for some high tech products for comparison
- Trend analysis needs special skill
- Data compiling is time consuming
- Difficult to source and collect regarding data
- Long term study is required
- Some old data is missing
- Difficult to sort out old data
- Data is not complete
- Drugs can perform differently on different users
- Consumers do not willingly provide feedback

Solution Element

E M S | Medical Investment Test | 31

Project
Rethinking—DesignThinking—Health Care: A Health Care Framework for Health Plans

Mode
Provisions for Employers

Activity
Facilitating

Originator
Matthew Gardner

Description
A questionnaire about financial and medical well being that helps to steer new enrollees toward Medical plans and options that would best suit their condition.

Contributors

Source
Personal Observation

Properties

- A questionnaire to determine an individual's fiscal strength
- An analysis of medical history
- An analysis of family medical history
- An analysis of current personal/family health needs such as medications, regular appointments
- A health risk calculator
- A financial risk calculator (similar to managed investments risk calculator)

Features

- Analyzes health risks to occur within the given enrollment period
- Prompts employee/subscriber to consider all known medical expenses to be incurred within enrollment period
- Helps individuals to determine their comfort with financial risk
- Provides data to "Coverage Level Recommendation Generator"

Associated Function/s
66 Facilitate employee choice of health plan

Source Design Factor/s
12 Healthy individuals can't predict the depth of coverage they will need

Solution Element

EMS | Family Health Record Links | 32

Project

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

Mode

Provisions for Employers

Activity

Facilitating

Originator

Matthew Gardner

Description

A reference to previous generations of family members' health histories which would quickly distill and display relevant information for hereditary disease query.

Contributors

Source

Personal Observation

Properties

- A link to biological relatives' medical record
- A pattern detection algorithm
- A search engine that operates within family links
- A hereditary disease risk report generator

Features

- Preserves connections to biological family members' records
- Displays family tree and highlights related information
- Searches symptom patterns
- Suggests likelihood of disease for patient in question

Associated Function/s

26 Assemble patient health history
37 Communicate patient health history
66 Facilitate employee choice of health plan

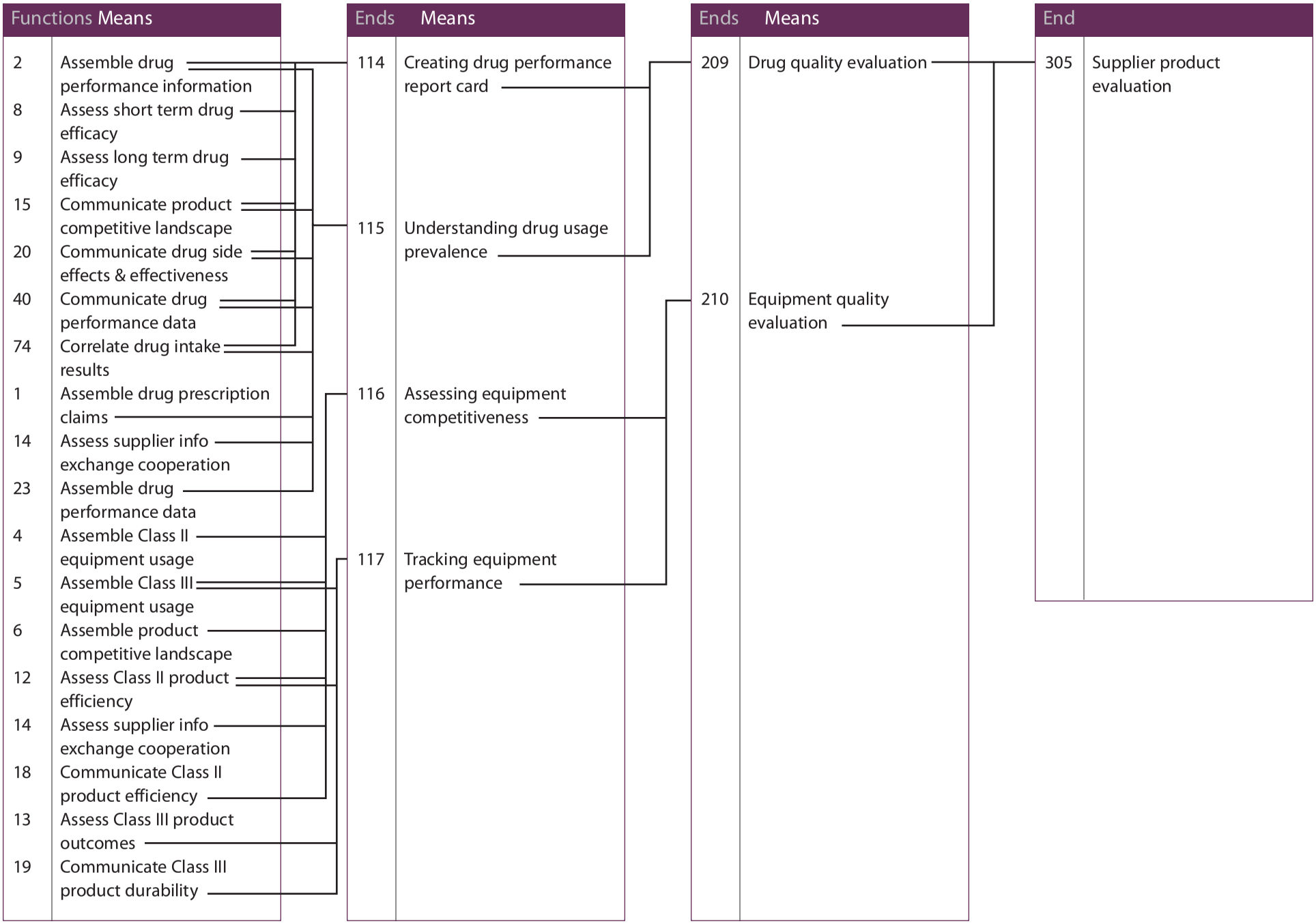
Source Design Factor/s

12 Healthy individuals can't predict the depth of coverage they will need

Means/Ends Analysis

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

305



Means/Ends Analysis

DesignThinking Health: Health Awareness Promotion

Cluster 309

Functions Means	
21	Assemble patient health behavior profile
42	Communicate patient health behavior
68	Facilitate networking of employees for social support
71	Identify and collect preventive health care practices
72	Assemble results of preventive health care practices
77	Assemble relevant lifestyle consumptions and activities
45	Reconcile patient health benefits
48	Assemble employer specific health recommendations
50	Assemble risk reduction options
26	Assemble patient health history
37	Communicate patient health history
21	Assemble patient health behavior profile
54	Communicate employer-specific health benefits and values gained

Ends	Means
127	Promoting Patient Health
128	Understanding Health Risk Reduction
129	Recording Patient Health History
130	Summarizing Health Benefits Gained

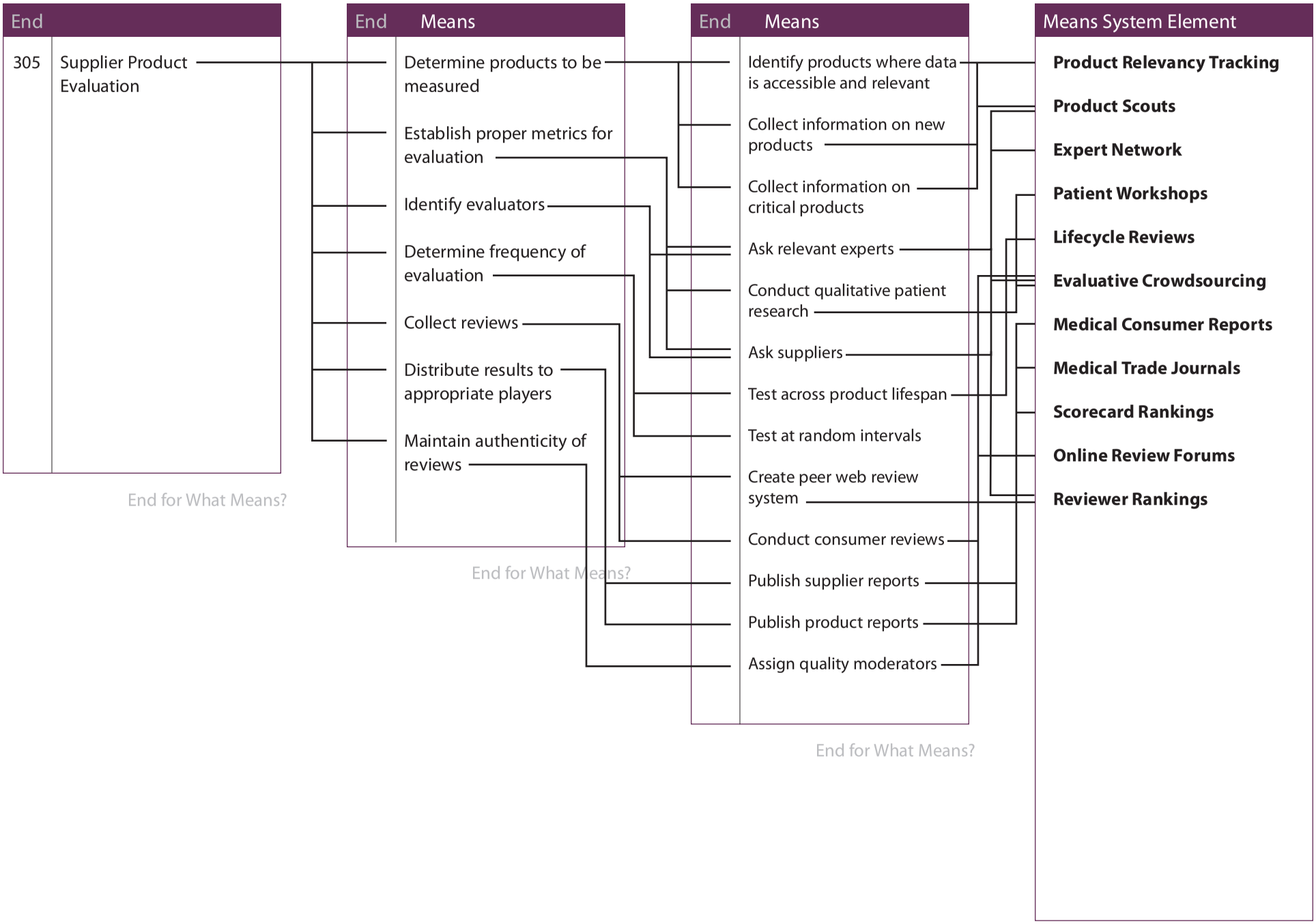
Ends	Means
216	Health Promotion
217	Communication Of Health Value

End	
309	Health Awareness Promotion

Ends/Means Synthesis

Rethinking—*DesignThinking*—Health Care: The Health Plan Role

305



Ends/Means Synthesis

DesignThinking Health: Health Awareness Promotion

Cluster 309

End	
309	Health Awareness Promotion

End for What Means?

End	Means
	Find and prioritize health awareness areas
	Identify user segments
	Plan promotion scale and objectives
	Implement promotions
	Evaluate promotions

End for What Means?

End	Means
	Analyze regional/national patient health behaviour
	Analyze regional/national disease trends
	Collaborate with providers and health care givers
	Map patients to awareness requirements
	Group families/communities to awarness requirements
	Create patient awarness goals
	Establish targetted promotional activites and contextual timeline
	Establish platforms for conducting promotional activities
	Analyze patient behavior information over time
	Analyze health trend info over time
	Analyze induvidual patient information

End for What Means?

Means System Element
Awareness threshold indicator
Awareness area survey
Awareness cluster
Health Awareness Policy
Awareness Per Patient Program
Awareness Per Family Program
Awareness Per Community Program
Awareness Per Network Program
Awareness per County/State Program
Awareness and promotion team
IVA indicator (Improvement via awareness)

Project: **Rethinking Health Care** - Health Plan *Cluster:* 305 *Page:* 1

		System Elements	Product Relevancy Tracking			Product Scouts					Expert Network		Patient Workshops		Lifecycle Reviews		Evaluative Crowdsourcing			Medical Consumer Reports		Medical Trade Journals		Scorecard Rankings		Online Review Forums		Reviewer Rankings			
		Features	1	2	3	1	2	3	4	5	1	2	1		1		1	2	3	1	2	1	2	1	2	1		1			
Functions	1	Assemble drug prescription claims	■		■	■		■							■																
	2	Assemble drug performance information (received from Providers)	■		■	■		■	■		■																				
	4	Assemble Class II equipment usage (received from Providers)	■		■	■		■	■		■																				
	5	Assemble Class III equipment usage (received from Providers)	■		■	■		■	■		■																				
	6	Assemble product competitive landscape	■	■	■	■	■	■	■	■	■	■					■	■	■							■		■			
	9	Assess long term drug efficacy	■		■	■		■	■		■	■	■		■				■									■			
	12	Assess Class II product efficiency	■		■	■		■	■		■	■	■		■				■									■			
	13	Assess Class III product outcomes	■		■	■		■			■	■	■		■				■												
	14	Assess supplier info exchange cooperation								■		■							■						■			■				
	15	Communicate product competitive landscape																■		■	■	■	■	■	■	■	■	■				
	18	Communicate Class II product efficiency																		■	■	■	■	■	■							
	19	Communicate Class III product durability information																		■	■	■	■	■	■							
	20	Communicate drug side effects & effectiveness (performance)																		■	■	■	■	■	■							
	23	Assemble drug performance data	■		■	■		■	■	■	■	■							■												
	40	Communicate drug performance data																		■	■	■	■		■	■						
	74	Correlate drug intake results	■			■			■	■	■		■						■													

■ Strongly supports fulfillment of the Function ■ Supports fulfillment of the Function

Project: Rethinking Health Care **Cluster:** 309 **Page:**

		System Elements	Awareness threshold indicator			Awareness area survey			Awareness Cluster			Awareness & promotion dept.			IVA Indicator		
		Features	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Functions	21	Assemble patient health behavior profile		■				▪	■	■						■	
	26	Assemble patient health history					▪								■		
	37	Communicate patient health history								▪				■			■
	42	Communicate patient health behavior							▪					■			■
	45	Reconcile patient health benefits															
	48	Assemble employer-specific health		▪	■				■								■
		recommendations															
	50	Assemble risk reduction options					▪									■	
	54	Communicate employer-specific health												▪	■		■
		benefits and values gained															
	68	Facilitate networking of employees for	■		■				■								
		social support															
	71	Identify and collect preventive health						■	▪			▪					
		care practices															
	72	Assemble results of preventive health		■				■									
		care practices															
	77	Assemble relevant lifestyle				■	■		■						■		
		consumptions and activities															

■ Strongly supports fulfillment of the Function ▪ Supports fulfillment of the Function

Form: 4/13/1998

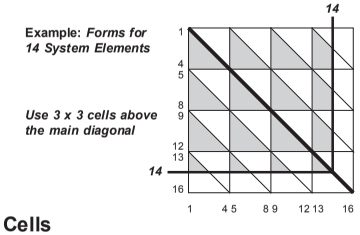
Project: **Rethinking Health Care** - Health Plan

System Element Pairings: 5-7 *row elements* with 1-4 *column elements*

Page: 1

System Element Relationships

Score
3. Critical relationship
2. Strong relationship
1. Slight relationship
0. No relationship



Cells
*To avoid duplication, use shaded cells only when the form is for comparisons where row numbers are greater than or equal to column numbers (e.g., **4x4** for 5-8 vs 1-4 or 1-4 vs 1-4; **3x3** for 2-4 vs 6-8)*

System Elements

1 Contextual Recommendation Engine	score 2 In combination with **Contextual Reccomendation Engine**, **PHSA** can provide appropriate reccomendations at the needed stages of the plan members' health life cycles	score 0	score 0	
2 Provider Performance Scorecard	score 1 In correlation of the aggregated information about the performance of plan members tracked by **PHSA**, with the provider performance, health plans can better understand the health effects of players' performance and make suggestions for improvements	score 0	score 3 **InfoGate** enables health plans to capture necessary information to generate provider performance reports and to properly communicate them to receivers	
3 Provider Performance Report	score ? **PHSA** can be a valuable tool for the **Employer Health Adviser** who can provide this service to employees as part of their health education program.	score 1 **MedForum** can collect information regarding employer/employee satisfaction with the plan, specific problems or opportunities and use this information to advise plan analaysts on areas to focus and products to develop	score 1 **Employer Health Adviser** can use **InfoGate** to capture workplace data and to deliver relevant recommendations and information to employees through **My Health Manager** of the employer side	score
4 Employer Health Adviser				

Some questions to ask:

1. How should System Element X work with System Element Y?

2. What new feature/s are possible if System Element X works with System Element Y?

3. What new property/ies would make System Element X work with System Element Y?

Personal Health Stats App (PHSA)	MedForum	InfoGate	
System Elements 5	6	7	

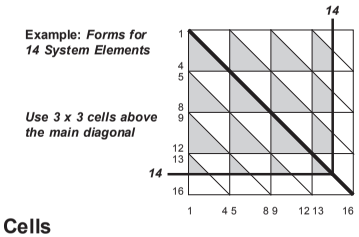
Project: **Rethinking Health Care** - Health Plan

System Element Pairings: 8-10 *row elements* *with* 1-4 *column elements*

Page: 2

System Element Relationships

Score
3. Critical relationship
2. Strong relationship
1. Slight relationship
0. No relationship



Cells
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System Elements	Personal Information Management System (PIMS)	Plan-to-Go	Community Health Program	
1 Contextual Recommendation Engine	score 2 — **PIMS** stores and communicates timely appropriate and relevant recommendations made by **Contextual Recommendation Engine** to plan members who subscribe to **PIMS**.	score 1 — The extent to which providers promote and cooperate in plan portability could be a point of evaluation.	score 1 — **1.** Community may provide community level feedback for provider performance. **2.** Health plans can provide relevant information regarding provider performance.	score —
2 Provider Performance Scorecard	score 0	score 1 — The extent to which providers promote and cooperate in plan portability could be a point of evaluation.	score 1 — **1.** Community may provide community level feedback for provider performance. **2.** Health plans can provide relevant information regarding provider performance.	score —
3 Provider Performance Report	score 2 — **PIMS** stores and communicates personalized **Provider Performance Report** to plan members who subscribe to **PIMS**.	score 0	score 1 — **1.** Community may provide community level feedback for provider performance. **2.** Health plans can provide relevant information regarding provider performance.	score —
4 Employer Health Adviser	score 1 — When requested from employers, **Employer Health Adviser** connects **PIMS** to **My Health Manager** of the employer side. Employees can choose to directly subscribe to **PIMS**.	score 1 — **Plan-to-Go** is a value-adding feature of health plans, and **Employer Health Adviser** can inform this to employers/employees to promote health plans and provide necessary information and suggestions.	score 1 — **Community Health Program** supports existing work support groups within the firms. The **Employer Health Advisor** serves as a liaison/moderator for intrafirm groups.	score —
System Elements	8	9	10	

Some questions to ask:

1. How should System Element X work with System Element Y?

2. What new feature/s are possible if System Element X works with System Element Y?

3. What new property/ies would make System Element X work with System Element Y?

System Element

EMS | Contextual Recommendation Engine | 1

Originator

Peter Rivera-Pierola

Contributors

Nov. 2007.	Matthew Gardner
Nov. 2007.	Kichu Hong
Nov. 2007.	Preethi Lakshminarayanan
Nov. 2007.	Sriram Thodla

Sources

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- The Health Care Product Evaluation Center at the University of Virginia School of Nursing. http://www.uva-hcpec.org/
- Consumer Reports Medical Guide. http://www.consumerreports.org/mg/

SuperSet Element(s)

Evaluation
Education

SubSet Element(s)

Product Relevancy Tracking
Aggregate Reviewer Weighting
Cost Comparison Report
Consumer Workshops
Online Review Forums

Related Elements

InfoGate
Personal Health Stats App
PIMS
Plan-to-Go
Community Health Program
Employer Health Adviser

Description

A timely decision-making aid that distributes health care recommendations to patients at appropriate times throughout the patient care cycle. The recommendations are sourced from aggregating and analyzing government health trends, provider advice, supplier product information, 3rd party aggregated reviews, and plan member feedback.

Properties — what it is

- An analysis and distribution engine that takes information from PIMS and distributes it contextually
- Comparative health care product ranks and evaluations from suppliers, providers, and government
- Aggregated review and product review information database (accomplished between InfoGate and third parties)
- Expert evaluations and consumer reviews
- Features Aggregate Reviewer Weighting to assign appropriate rank and value to evaluators
- Feedback workshops and forums (for gathering plan member opinions)

Features — what it does

- Collects third party product/service performance evaluations
- Works with InfoGate/MedMap to form appropriate delivery channels
- Contextually distributes recommendations throughout care cycle
- Empowers consumers with transparent, accessible, and relevant information
- Expedites the research process for customers in need of advice and suggestions
- Informs suppliers of peer offerings
- Encourages healthy competition due to publicized comparisons

Fulfilled Functions

1 Assemble drug prescription claims
2 Assemble drug performance information (received from Providers)
4,5,18 Assemble/Communicate Class II/III equipment usage (received from Providers)
6,15 Assemble/Communicate product competitive landscape
8,9 Assess short/long term drug efficacy
12 Assess Class II product efficiency
14 Assess supplier info exchange cooperation
20 Communicate drug side effects & effectiveness
40 Communicate drug performance data
74 Correlate drug intake results

Associated Design Factors

1 Potential for correlation errors in measuring performance
2 Information transparency is required for proper reporting
4 Findings may not always be relevant
8 Providing resources does not imply their actual use

Discussion

Although increased information access can empower customers, many will find the sheer number of newfound possibilities baffling, even overwhelming. To facilitate this decision-making process, Health Plans could leverage its data-collection capabilities to aggregate and distribute relevant information to its customers. Rather than simply suggest a comprehensive list of sources for research, targeted product recommendations could be made according to current customer health status and associated health needs.

Much like Amazon.com's 'Recommended for You' system, Health Plans could automatically and unobtrusively suggest appropriate health care recommendations based on real-time updates to patient electronic medical records (EMR) and personal health records (PHR) databases. For example, if a patient was recently diagnosed with hearing loss, InfoGate would communicate that to the aggregation system, which would then suggest a range of reviewed and ranked hearing aids covered by their policy. This minimizes the research efforts of the patient, while still encouraging them to make responsible health care decisions.

Evaluating health products and services can help increase transparency within the industry, thus encouraging healthy competition amongst all players in pursuit of maximum customer acquisition. Publishing this information and offering decision-making tools give more power to consumers and thereby elevates the importance of proper consideration. The end result empowers consumers to take responsibility for their own health, while stakeholders compete to remain desirable.

Medical products can be reviewed with a comparable degree of frequency and depth as common consumer products (such as electronics, housewares, and automobiles). Rather than having only a select few evaluators making all the decisions, the health care industry can leverage newfound connectivity offered through online social networking and crowdsourcing. By summoning the expansive efforts of the multitude, evaluations can eliminate biases and provide more efficient results in faster times (see Amapedia: a wiki dedicated to collaborative composition of a knowledge base of product reviews). Consumer Workshops can also be conducted by Health Advisers to gain more elusive, qualitative points of comparison. To maintain a distinct hierarchy between novice and expert evaluators, Aggregate Reviewer Weighting could be employed to rank the experience, prevalence, and overall value of each reviewer.

Health Plans can parse their claims data to try and determine the most relevant medical equipment, drugs, and services, however a larger data set can be achieved by leveraging the many third parties already conducting product evaluations. Efforts like the Health Care Product Evaluation Center (HCPEC) and Consumer Reports: MedicalGuide.org have established their own evaluation standards and offer authoritative, collaborative, and objective product analysis, followed by complete efficacy reporting and recommendations. Health Plans could form partnerships with such organizations, aggregate the results, and distill the most relevant portions to its membership.

Popularity models and case-based reasoning (CBR) could be used to determine products best suited for contextual recommendations. Another method involves examining which and when products are critical throughout the patient care cycle (Care Cycle Reviews). Once key products and categories have been identified, they could be rated across the entire product life cycle from manufacturing to disposal (Product Cycle Reviews). As reviews are compiled, leaders and benchmarks are established and ranked, providing clear results for consumers and suppliers alike. Reports can be published online or distributed through customer-preferred channels, ensuring proper and maximum exposure.

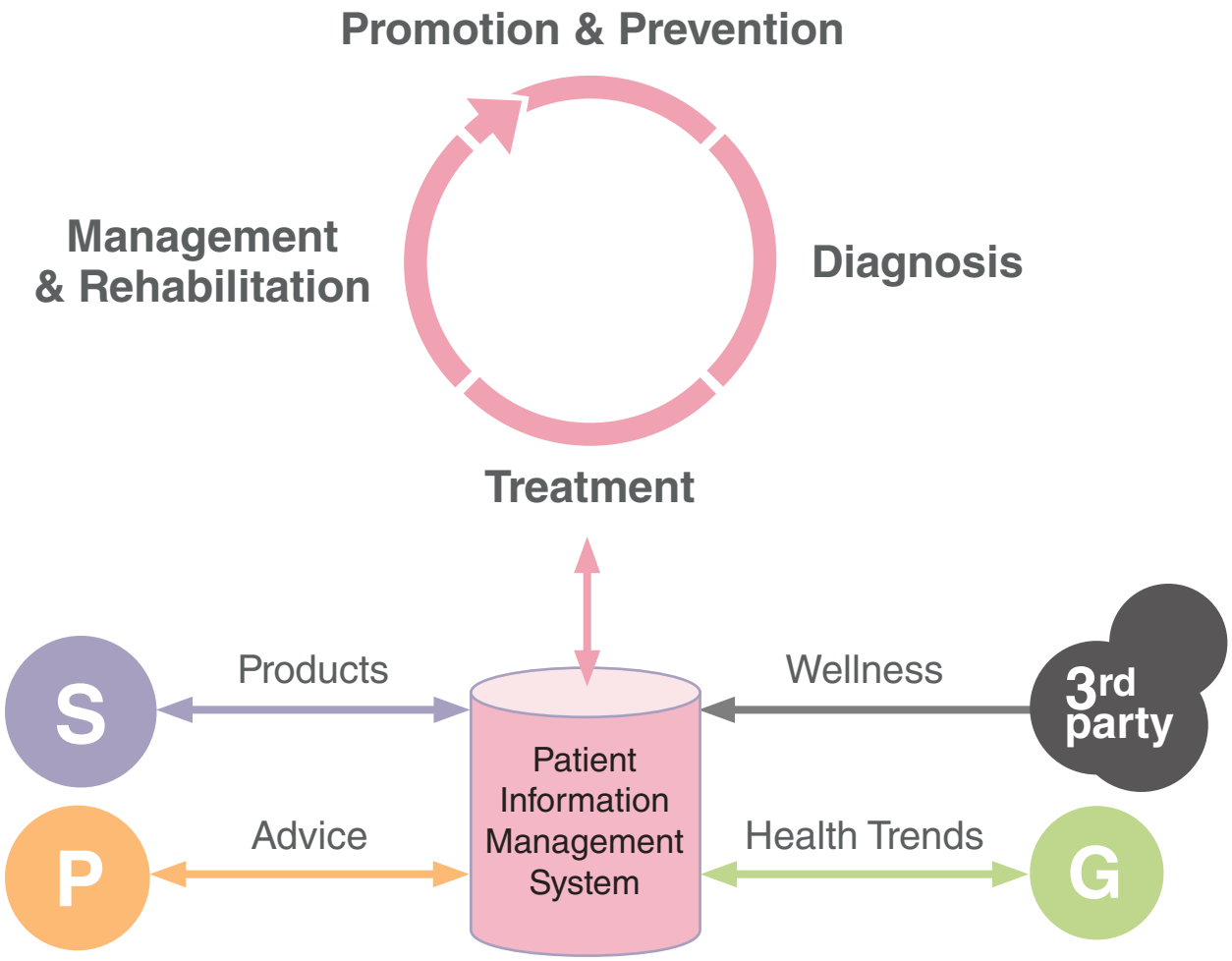
Discussion cont'd / Scenario

A patient schedules an appointment with his doctor to ask him about his recent hearing degradation. The doctor determines that the patient's diabetes has gotten out of control and attributes the hearing loss to the disease. The doctor prescribes him a hearing aid and sends him on his way with information and options.

Once the prescription has been entered into the patient's personal health record (PHR), the Health Plans' Contextual Recommendation Engine sees the information and begin collecting and ranking hearing aids for the patient. It pulls data from both stakeholders and third parties to achieve a balanced set of aggregations. The information is compiled and analyzed, then top recommendations are made and delivered immediately to the patient's PHR. These recommendations can then be accessed anywhere with a secure internet connection.

By automatically generating helpful recommendations, Health Plans save patients' time and effort, as well as promote just enough patient responsibility. The engine would work throughout the patient care cycle, giving contextual, relevant advice directly to the patient's preferred communication channels.

Recommendations would begin with Promotion and Prevention, for example, suggesting exercise and meal regiments. The Diagnosis phase would offer devices to monitor your health for instance. Much like in our scenario, the Treatment phase would suggest various products and service to cope with specific ailments. Finally, the Management and Rehabilitation phase would connect the patient to support networks and sessions to maintain health and wellness. The cycle is continuous, as are the recommendations provided.



System Element

EMS | Community Health Program | 3

Originator

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Sources

Personal Observation
Team Deliberations

SuperSet Element(s)

SubSet Element(s)

Related Elements

InfoGate
Employer Health Adviser
Personal Health Stats Application

Description

Community Health Program identifies risk pools within plan members and helps them connect with support groups and information networks that promote preventative care.

Properties — what it is

- A tool to group plan members based on risk pools
- Information dissemination channel for health improvement
- Network of external health support groups based on health conditions, communities, neighborhoods and organizations
- Outreach program for various community based health initiatives
- Feedback and open communication channel between plan members and health plan

Features — what it does

- Identifies risk pools within plan members
- Partners with external health support groups
- Directs members of risk pools to relevant support groups
- Identifies and encourages community run health programs
- Delivers information for health improvement to plan members in risk pools
- Organizes forums for meaningful interface between plan members and health plan

Fulfilled Functions

68 Facilitate networking of employees for social support
71 Identify and collect preventive health care practices
72 Assemble results of preventive health care practices
50 Assemble risk reduction options
25 Assemble patient feedback
3 Assemble drug performance information
52 Assemble employee feedback
21 Assemble patient health behavior profile
42 Communicate patient health behavior
77 Assemble relevant lifestyle consumptions and activities
48 Assemble employer-specific health recommendations

Associated Design Factors

40 Difficult to obtain and validate patient behavior data
39 Difficult to get credible qualitative data on preventative care
3 Patients may not trust HPs as feedback depositories
10 Patient may want to restrict data provided
20 Consumers do not willingly provide feedback
21 Internet is not always accessible to everybody
31 Health data is widely spread, hard to collect and disparate
29 Subscriber lifestyle hard to track

Discussion

The Community Health Program is a multi faceted initiative. While helping health plans reduce their risk pool over time, the program also creates awareness for health improvement. The Community Health Program addresses the need for individuals within the health care system to find support groups that can help them during their times of need. There are three groups that the community health program will help identify that correspond with the significant social nodes of interaction that people have today. First, a work support group is identified by the community health program. This program initially associates an individual in a company with other employees who might share similar health interests. The program would offer incentives such as reduced premiums to promote individuals to participate within this group.

The second major social groups are neighborhood groups. The program identifies social support groups that are regionally clustered around an individual and helps match the individual to specific groups that they might benefit from. There are lots of existing groups that already exist and the program can provide value by identifying those that are relevant to the individual. Resources to create new groups within plan members will also be facilitated. Incentives could reduce premiums or prices of health products to encourage engagement with these groups.

Finally, the above modes of interaction are supplemented by a robust online support group for the tech savvy members. The program promotes outreach activities like community owned resource centers where health devices like the daily stats monitors can be shared by plan members when required. The Health Plan communities also serve as an open feedback and conversation channel on drugs, provider and health plan performance.

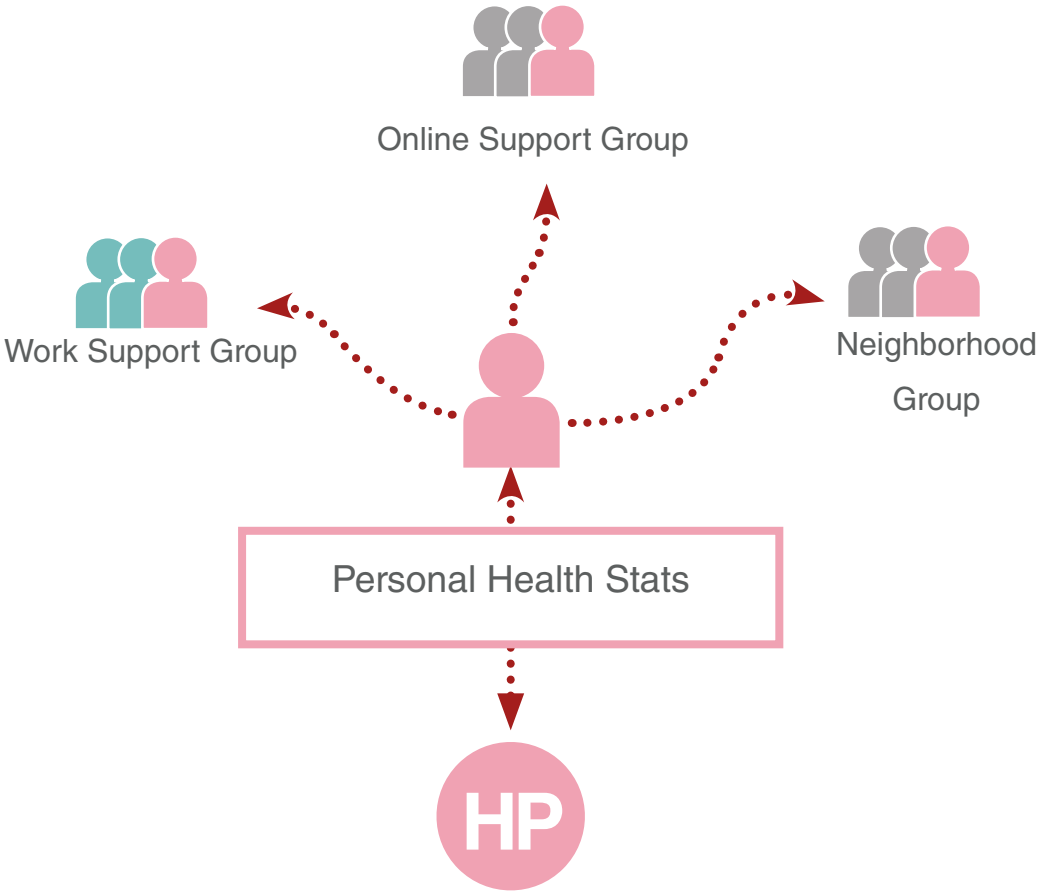
The value for health plans to pursue this program would be manifold. First, providing the ability for individuals to participate with health social networks would be a competitive advantage. Second, by encouraging individuals to join groups, there is a greater likelihood for individuals to adopt health practices. Ultimately, these would help encourage wellness and prevention of diseases rather than the current emphasis on treatment of diseases.

Discussion cont'd / Scenario

David is a pre-diabetic, over-weight 35-year-old man in a highly stressful job. Since he spends most his time at work, he prefers to form support groups within his work environment. The health plans, Employee Health Adviser visits organizations and does a work-place inspection. The adviser then studies the risk pools within the workplace and identifies 1 diabetic and 2 pre-diabetic employees with a possible genetic predisposition to diabetes.

The workplace inspection also leads to changes in cafeteria food. David and the others in his risk pool are notified of their presence in the pool through their preferred communication channel—e-mail. The diabetic plan member in the group is encouraged and incentivized to speak with the other members in his group and share his experiences, moderated by the adviser if the group is sufficiently large.

David attends his first diabetic meeting and finds himself comfortable asking questions to his coworkers. He learns his pre-diabetic condition is treatable. The health plan emails David and encourages him that he still has control over whether or not his health situation worsens and recommends a diet and moderate physical exercise. The plan also directs him to biking, jogging and swimming clubs within his neighbourhood through the web forum. David logs into the forum and reads more about the clubs and their activities.

He decides to begin his own club with the other diabetics in his office and they decide to play football every weekend. David moderates the group and regularly updates the groups page in the web forum. He gets relevant information published onto it from the plan. The employee health adviser monitors the groups progress and keeps in touch with them.

David sometimes borrows a health stats monitor from the community resource center and helps the plan track his health in a better manner. He opts in to disclose his personal health stats application information with other plan members. He is able to track his progress with those of others in the same health condition. This motivates David to maintain his weight and keep an eye on his diet.