Demand Side Management

Characteristics of a Successful Self-Care Program
Don R. Powell, Ph.D.

Despite efforts by the government, corporations, health care providers and insurance companies, health care costs continue to spiral in the United States. In 1995, over one trillion dollars or 14.1 percent of the gross domestic product was spent on health care. This represented a 7.1 percent increase over expenditures in 1994. This increase was the second smallest for any year since 1960. However, health care costs are currently $3,626 for every U.S. citizen. Physician services alone accounted for about $700 per capita.

Most of the efforts to control health care costs have involved supply-side management. This involves the use of a gatekeeper, i.e., case manager or utilization reviewer, whose role is to restrict consumer access to health care services and/or steer them to lower cost services. Over the last five years, more consideration has been given to reducing consumer demand for health care services and this has led to a concept called demand-side management. In demand-side management, consumers are taught to become better health care consumers. The result will reduce their actual and perceived need for health care services.

Demand-side management encompasses a number of areas including:

- Wellness programs
- Chronic disease management
- Benefit designed financial incentives
- Employee assistance programs
- Disability management
- Self care and wise consumerism

This article will focus on the last area - self care and wise consumerism - which I prefer to call self-health management. Consumers who are knowledgeable about health care systems can make more informed medical decisions and tend to use fewer services. The goal of self-health management is to eliminate inappropriate use of the system, not appropriate use. And inappropriate use is rampant.

According to the National Center for Health Statistics, in 1992 there were over 762 million visits to primary care physicians in non-federally employed physician offices. It has been estimated that 25 percent or 190.5 million of these visits were unnecessary. The American Hospital Association has stated that 55.4 percent of the 97.4 million visits to emergency rooms in 1994 were for non-urgent conditions.

Besides producing lower health care costs, self-health management empowers patients, increases their satisfaction and improves the overall quality of care.

Self-Health Management Program Components

There are four major elements that can comprise a self-health management program: self-care guides, workshops, promotional materials and health information telephone hotlines. Each of these elements can be offered individually or combined to produce a more comprehensive intervention.

Self-Care Guide

The most important ingredient in a self-care program is the guide. This can be either a book or booklet, depending on how comprehensive you want the publication to be and your budget. The material will address the most common health problems, such as colds, earaches and cuts. Table 1 lists 27 of the most common health conditions as identified by the National Center for Health Statistics.
Self-care guides help consumers recognize, treat and manage their own health problems. They help consumers decide whether medical care is needed when a symptom or injury occurs. The guides also let them know how to determine the urgency of the signs or symptoms so that they can choose the right type of care. When a doctor is not required, the guides suggest home treatments and over-the-counter medications. Many of these guides use easy-to-follow flow charts (see Figure 1) with clearly defined icons. The advice generally consists of the following:

- Get emergency care
- See provider
- Call provider
- Use self care

**FIGURE 1**

<table>
<thead>
<tr>
<th>Questions to Ask</th>
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<tbody>
<tr>
<td>Do you have any of the following?</td>
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<tr>
<td>• A tightness in your chest that radiates to the neck, jaw or arm?</td>
</tr>
<tr>
<td>• Sweating or shortness of breath?</td>
</tr>
<tr>
<td>• Nausea?</td>
</tr>
<tr>
<td>• Discomfort that gets worse with exertion?</td>
</tr>
</tbody>
</table>

| YES | Seek Emergency Care |
| NO |

| Are you vomiting black or red-colored material? |

| YES | Seek Emergency Care |
| NO |

| Are your stools tar-like and black in color? |

| YES | See Doctor |
| NO |

| Do you also have pain that goes through to your back or a gripping pain in the upper abdomen? |

| YES | See Doctor |
| NO |

| Are you having a hard time swallowing? |

| YES | Call Doctor |
| NO |

| Has the heartburn occurred often over 3 days? |

| YES | Call Doctor |
| NO |

<table>
<thead>
<tr>
<th>Provide Self-Care</th>
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Source: HealthyLife Self-Care Guide
American Institute for Preventive Medicine

**Self-Care Workshops**

When self-care guides are given out at a workshop, use of the self-care guides and subsequently the cost savings can increase. Workshops are not practical, however, when there is a large number of managed care subscribers you want to reach, or if you do not have instructors. Because of this fact, approximately 80 percent of all managed care organizations (MCOs) that use the American Institute for Preventive Medicine's self-care guides, distribute them to subscribers through the mail. This is another reason for offering a simple-to-understand guide to your subscribers rather than one that is complicated and may need instruction.

If a workshop can be offered, there are several options including instructor-led workshops, video and audiotape workshops. Instructor-led workshops can be conducted with training manuals and with overheads supplied by self-care vendors.
Blue Cross Blue Shield of Massachusetts custom designed a totally new self-care guide that addressed their 25 most frequent health problems. Many health organizations want to put their own personalized influence on a self-care guide. Customization is important.

Cost
The budget for a self-care program will be a primary factor in what materials are selected. The cost for self-care guides can range from as little as $1.00 per copy for a booklet that addresses the 10 most common health problems in 32 pages and could be as high as $8.95 a copy for a book that addresses over 130 health problems and is over 400 pages in length. Even if a budget allows purchase of the most expensive self-care publication, it may not be the best one for your target population.

Managed care organizations that want to offer a very comprehensive self-health management program should consider a telephone counseling service. These phone lines are staffed by registered nurses with a number of years of clinical experience. Subscribers can access the lines 24 hours a day, 365 days a year. The nurses will not give a diagnosis, but they can offer general ideas on what a caller should consider doing in response to their symptoms. The nurses can also provide information about specific diseases, exams and tests, medications, surgical procedures and wellness. In addition to the ability to speak with a nurse, some of the services provide an audiotape library of popular topics and fax-on-demand literature.

Selecting a Self-Care Guide
There are a number of factors managed care professionals should consider when selecting or developing a self-care publication:

Reading Level
The guide should be written at a level appropriate for recipients. A glossary of terms will also enhance the readability of a self-care guide.

Graphic Design
The information should be presented in a manner that motivates subscribers to use the publication. Use of graphic elements, white space and color all play a role.

Type Size
The typeface should be simple and easy to read. The typesize should be no smaller than 10 point.

Clinical Review Team
The author and/or acknowledgment page should be reviewed to ascertain the expertise of those involved with the development of the guide. In general, specialists as well as primary care physicians should be involved.

Updates
Ask how the guide is kept current. Note the date of the last printing. Ask who is responsible for updates.

Research Studies
Make sure the publication does what it's supposed to do -- reduce health care costs. Ask to see studies that have been conducted on the effectiveness of the guide. Note how the studies were designed and if they have been published in a peer-reviewed journal.

Target Subscriber Groups
Most guides are general in content, but there are some that can address the needs of specific populations such as children, women, men, seniors, pregnant women, people who over-use the emergency room and Medicaid recipients. Also, find out if the guides are available in other languages.

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Length
Most self-care books are 350 pages or more. Although they present a lot of useful information, they could be intimidating and overwhelming to subscribers. The result will be that they'll get put on the bookshelf to collect dust. A shorter self-care guide may get used more often. A shorter, user-friendly guide could produce a greater reduction in health care costs than a lengthier publication.

MCOs that want to offer a very comprehensive self-health management program should consider a telephone counseling service.
Blue Cross Blue Shield of Massachusetts custom designed a totally new self-care guide that addressed their 25 most commonly used ICD-9 codes. Guides designed to promote physician referral programs can insert a list of staff physicians. Manufacturers of health care products can add center insert discount coupons. The medical protocols in some publications can also be altered. For example, one HMO wanted all their primary care doctors to be accessible by phone rather than through an office visit. Thus, all of the icons that said “See Health Care Provider” were changed to “Call Health Care Provider.”

Plan Identification

Plans want to differentiate themselves from their competitors. In this regard, private labeling of a self-care guide or offering a guide that has not saturated a particular market may be desirable. By providing a guide that the competition isn’t using can help distinguish an MCO in the marketplace. This is where customization also plays an important role.

Selecting a Nurse-Advice Telephone Service

Some of the criteria to consider when evaluating a telephone service are listed below:

Service Issues

1. Determine exactly how many nurse counselors are employed, the hours and days they work and where they are physically located.
2. Inquire about their call load characteristics and trends.
3. Find out how your callers access the service.
4. Determine if special information about your company’s benefit structure is made available to the nurses who, in turn, can inform your callers.
5. Inquire about the average call waiting time during prime hours before human contact is made.
6. Determine the percent of time callers receive a busy signal.
7. Ask if there are follow-up contacts and/or mailings with written educational materials.

Quality Control and Evaluation Issues

1. Find out about the evaluation process.
2. Determine the system for assessing customer satisfaction, both for the callers and the employer.
3. Find out the minimum requirements for staff credentialing and experience.
4. Inquire about how and how much in-service education is conducted for the phone staff each year.
5. Ask what percentage of eligible callers will use the service and how that percentage can be increased.
6. Ask to see sample reports and if they can be customized to meet your needs.
7. Determine how quality control is maintained by the nurses answering the calls.

Marketing Issues

1. Find out who is responsible for the marketing.
2. Inquire about what should be done at the outset to launch the telephonic service.
3. Ask how new members are made aware of the service.
4. Determine what printed material is available.
5. Determine what specialty advertising items, i.e., refrigerator magnet, medicine chest sticker, etc., are available and what they cost.
6. Determine if the marketing materials can be customized with your logo or name.

Research on Self-Care Guides

There has been a good deal of research to support the cost savings associated with implementing a self-care program. Below are the highlights from nine studies conducted on the HealthyLife Self-Care Guide publication by the American Institute for Preventive Medicine in Farmington Hills, Michigan.
Cost of health care. Strategies. By empowering their patients to make better health care decisions, MCOs can begin to make an impact on the high cost of health care. The data showed that employees who received the guide had decreases in both the frequency and total costs for all types of physician office visits, lab tests and emergency room visits. The 12-month savings was $39.06 per employee, which amounted to a 24.3 percent decrease in costs. The frequency of physician office visits was reduced by 18.4 percent while emergency room visits decreased 19.8 percent.

The study also demonstrated the benefits of the self-care program to the dependents of employees as they, too, reduced their utilization. An analysis of all members showed a 12-month savings of $21.67 per member. This represented a 17.8 percent reduction in costs. The frequency of physician and emergency room visits for members decreased 11 percent. Significant decreases in the frequency and costs for inpatient hospital visits were also found in both the employee and member groups after the self-care program was implemented.

A self-care program offered by Florida Hospital Medical Center in Orlando showed significant savings for 365 employees. An evaluation of this program revealed that employees had made 126 fewer physician office visits and 52 fewer emergency room visits during the period studied. Using the hospital’s insurance records, it was calculated that the average cost for a physician office visit is $55 and an emergency room visit is $462. This amounted to savings of $30,954 or $84.81 per employee in five months.

Florida Hospital conducted a second study that involved 436 employees. The results were similar to those in the first study. During a 5-month period of time, there was a reduction of 139 physician office visits and 47 emergency room visits. This produced a total savings of $29,359 or $67.34 per employee.

Florida Hospital also conducted a study on a children’s self-care guide. This study involved 183 parents. They found a reduction of 39 pediatrician visits and 31 emergency room visits. The total savings was $16,467 or $89.98 per family in five months. Bell South in Atlanta, Georgia did an evaluation of 229 employees who received the self-care guide. They found a reduction of 85 physician and 15 emergency room visits. The savings were $9,200 or $40.17 per employee in only three months.

Electronic Data Systems in Herndon, Virginia evaluated 65 employees who received the guide. During a six-month period, there was a reduction of 18 physician office and 5 emergency room visits. This produced a total savings of $3,290 or $49.85 per employee.

Indian Industries did a study on 197 employees. They found a reduction in 35 physician office visits and 34 emergency room visits. This produced a total savings of $14,840 or $75.33 per employee in a six month time period.

Western Southern Life Insurance Co. conducted a study on 197 employees six months after they received the guide. They found a decrease of 67 physician office visits and 20 emergency room visits. This produced a total savings of $11,350 or $57.61 per employee.

These studies show a fairly strong correlation between distribution of self-care guides and a reduction in health care utilization. The results are summarized in Table 2.

### Table 2. Savings and Return on Investment Using Types of Self-Care Guides.

<table>
<thead>
<tr>
<th>Healthy Self-Care Evaluation Studies</th>
<th>Organization</th>
<th>Year</th>
<th>N</th>
<th>Period (mos.)</th>
<th>Doctor Visit Savings/Person</th>
<th>ER Visit Savings/Person</th>
<th>Total Savings/Person</th>
<th>ROI</th>
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<tbody>
<tr>
<td>Western Southern Life</td>
<td>1996</td>
<td>197</td>
<td>6</td>
<td>$17.00</td>
<td>$40.61</td>
<td>$57.61</td>
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<td>Capital Blue Cross</td>
<td>1995</td>
<td>371</td>
<td>12</td>
<td>$26.01</td>
<td>$13.05</td>
<td>$39.06</td>
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<tr>
<td>Capital Blue Cross</td>
<td>1995</td>
<td>938</td>
<td>12</td>
<td>$16.45</td>
<td>$5.22</td>
<td>$21.67</td>
<td>7:1</td>
<td></td>
</tr>
<tr>
<td>Indian Industries</td>
<td>1995</td>
<td>197</td>
<td>6</td>
<td>$8.88</td>
<td>$66.45</td>
<td>$75.33</td>
<td>30:1</td>
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<tr>
<td>Florida Hospital</td>
<td>1994</td>
<td>365</td>
<td>5</td>
<td>$18.99</td>
<td>$65.82</td>
<td>$84.81</td>
<td>42:1</td>
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<tr>
<td>Florida Hospital</td>
<td>1994</td>
<td>436</td>
<td>5</td>
<td>$17.53</td>
<td>$4.80</td>
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<tr>
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<td>1994</td>
<td>229</td>
<td>3</td>
<td>$18.56</td>
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<td>$40.18</td>
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<tr>
<td>EDS</td>
<td>1994</td>
<td>65</td>
<td>6</td>
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<td>$50.62</td>
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<table>
<thead>
<tr>
<th>Healthy Children’s Self-Care Evaluation Studies</th>
<th>Organization</th>
<th>Year</th>
<th>N</th>
<th>Period (mos.)</th>
<th>Doctor Visit Savings/Person</th>
<th>ER Visit Savings/Person</th>
<th>Total Savings/Person</th>
<th>ROI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida Hospital</td>
<td>1995</td>
<td>183</td>
<td>5</td>
<td>$11.72</td>
<td>$78.26</td>
<td>$89.98</td>
<td>45:1</td>
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**Physician Attitudes**

Physician attitudes toward self care have improved remarkably over the past 10 years. Initially, physicians were skeptical of self care, and there was active resistance from them.

Fortunately, today, most physicians understand the value of well-educated patients. Improved communication with patients can lead to fewer frustrations. There is also a reduced administrative burden on physicians, since more calls that may have been directed to them can be satisfied with the information provided in the self-care guide. In a sense, the self-care guide acts as a gatekeeper and prevents unnecessary calls to the doctor’s office. The reduced workload at physicians’ offices allows them to better use and focus their resources.

Patients will also view a physician who empowers and respects them more positively. Also, patients who take an active role in their treatment might be less likely to file a malpractice claim if something should go wrong.

**Self-care is in ideal program for MCOs.** The goal of self care is the appropriate use of the health care system, not to eliminate use. In this regard, patients who might normally have gone to the emergency room for treatment, may determine that after reviewing the self-care guide, their problem can be treated at home. By the same token, patients who determine a very minor problem can be treated at home can free up their physician's time to treat more serious problems. The cost savings to MCOs for these kinds of decisions can be quite significant.

**Conclusion** Managed care organizations can benefit from teaching their subscribers to manage their demand for health services. This strategy of self-health management should work in concert with the more traditional supply-side management strategies. By empowering their patients to make better health care decisions, MCOs can begin to make an impact on the high cost of health care.

**References**


Health Care Innovations
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