



CANCER DISEASE MANAGEMENT:

Improving communication
and coordination

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WHITE PAPER

INTRODUCTION

To stay competitive in today's market, it is critical that employers maintain a healthy, happy and productive workforce. As simple and obvious as this maxim is, it is becoming increasingly hard to achieve. Rising medical costs and escalating absenteeism weigh heavily on the minds of benefit and risk managers and their health insurers. When surveyed, benefit specialists cite controlling health and welfare costs as their number one priority.¹ Recent data from federal agencies that track health care spending support this concern.

Growth in health spending rose from 8.5 percent in 2001 to 9.3 percent in 2002, advancing much faster than the rest of the U.S. economy for the second consecutive year. Health expenditures grew twice as fast as the gross domestic product, causing health spending's share of the GDP to rise from 13.3 percent in 2000 (where it had remained largely unchanged since 1993) to 14.1 percent in 2001 and 14.9 percent by 2002. Aggregate health spending climbed to \$1.6 trillion, or \$5,440 per person.²

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A Deloitte & Touche survey of 287 companies indicated that over 70 percent of these companies had double-digit 2003 health care cost increases; one in three faced cost increases of over 15 percent.³ Faced with these higher costs, successful senior managers not only have to create efficiencies in the delivery of high-quality products and services, they also have to carefully manage health care costs and maintain a high level of worker productivity.

Within the past decade, disease management has been recognized as an effective solution for employers and health plans to improve the quality and cost-effectiveness of health services and help combat rapidly rising medical costs. Purchasers of disease management services now demand programs that address disease states with prolonged and complex clinical treatments that may incapacitate both the patient and his or her caregiver. Employers, whether self-insured or purchasing a program from a health insurer, want programs that not only reduce direct medical costs but also keep their employees on the job, working productively.

Disease management programs that provide the greatest assistance in maintaining a healthy, productive insured population are those that address a large number of preventable utilization events, lower unnecessary absences from work among active employees and provide coordinated care to retirees with chronic conditions.

Ideally, a disease management program should achieve the following goals:

1. Reduced medical costs (fewer inpatient events and days)
2. Improved quality of life (at work and home)
3. Gains in productivity (less absenteeism)
4. Decreased impairment at work (improved presenteeism)⁴

Cancer is a prime example of a disease state wherein proper management has the potential to generate a substantial reduction in medical costs and greater improvement in quality of life and gains in productivity. It is one of the most clinically challenging diseases and the second leading cause of death in the U.S. The care and treatment of a cancer patient can have a devastating impact

on both the diagnosed individual and his or her immediate family. Although a diagnosis of cancer is often fatalistically viewed as a short-term lease on life, the relative five-year survival rate continues to climb, and for all cancers combined is 60 percent for adults and 74 percent for children.⁵ Cancer is evolving from being an acute and terminal condition to being a chronic one. Like other chronic conditions, proper management of cancer treatment can generate a significant reduction in clinical care costs. More important, it can lead to improved understanding on the part of both patient and caregiver.

Knowing the psychological toll that cancer takes on patients and their caregivers is important in understanding the productivity losses associated with a cancer case. The spouse, daughter or son of a cancer patient is often forced to take frequent leave from work to provide care and assistance to the cancer patient. Thus, the true cost impact of cancer is not limited to the direct medical costs. It also includes substantial health and productivity costs associated with extended family medical leave or leave of absence by the caregiver. A well-designed and executed cancer management program can reduce the anxiety of the caregiver, allowing them to be at the workplace and more productive while they are there.

PREVALENCE AND COSTS OF CANCER

The financial costs of cancer are great, both for the individual and for society as a whole. Cancer treatment costs constitute 7 percent of health plans' medical expenses, placing this category third after cardiac disease and maternity care.⁶ Earlier disease detection, reduced mortality and an aging population will contribute to a 50 percent increase in the number of people living with cancer between 2000 and 2015.⁷

More than one million people are diagnosed with cancer each year. Approximately one of every two American men and one of every three American women will have cancer at some point during their lifetimes. The American Cancer Society reports that more than 1.3 million new cases of cancer will be diagnosed in 2004 and nearly 600,000 cancer-related deaths will occur.⁸ Figure 1 provides prevalence rates for the major forms of cancer.⁹ Breast and prostate cancer are the most commonly occurring cancers among women and men respectively, followed by colorectal cancer for both sexes. Lung cancer causes the most cancer deaths, with breast cancer second in women and prostate cancer second in men. Colorectal cancer is the third most common cause of cancer death for both men and women.

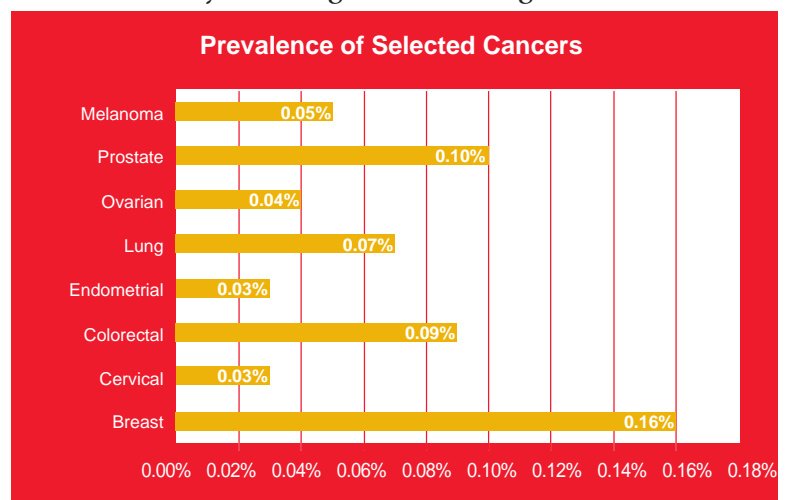


Figure 1

The National Institutes of Health estimate overall costs for cancer in 2003 at \$189.5 billion. Direct medical costs (total of all health care expenditures) accounted for only about one-third (\$64.2 billion) of the overall costs. Health and productivity costs (productivity losses due to illness and premature death) were estimated at \$125.3 billion.¹⁰

The cost for treating any form of cancer is high, but varies by cancer type. Figure 2 lists out the Per Member Per Month (PMPM) costs reported separately by commercial and Medicare patients for eight types of cancer.¹¹ Although lung cancer has a lower prevalence than breast or prostate cancers, it is the most

costly: more than \$5,000 PMPM for both commercial and Medicare patients. Advanced melanoma is the second most expensive cancer at more than \$4,000 PMPM. Other cancers with high monthly costs include colorectal, ovarian and endometrial. Breast cancer has a lower average monthly cost than lung or prostate cancers, but higher prevalence and greater length of treatment time make it a much more expensive disease in terms of overall health care costs.

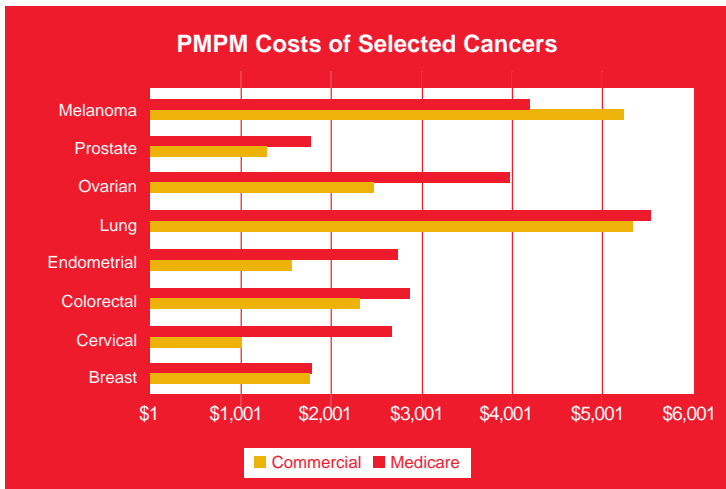


Figure 2

There are currently close to 10 million cancer survivors in the U.S. This number is expected to increase dramatically as the population ages and survival rates improve. The five-year survival rate for prostate cancer is over 98 percent and for breast cancer over 87 percent.¹² Ovarian, cervical and colorectal cancers are all over 50 percent. One of the unique attributes of cancer, however, is that even after active treatment ends there is still the need for continued monitoring for the recurrence of new cancerous growth. Given the increasing numbers of both actively treated and surviving cancer patients, the high costs of the treatment, coupled with the complexity of the treatment itself, strongly suggests the need for careful monitoring and coordination.

THE CLINICAL TREATMENT OF CANCER

The past two decades have witnessed dramatic breakthroughs in the detection and treatment of cancer. Technological advances combined with early detection have led to remarkable improvements in survival rates. Innovative methods of managing the side effects of cancer treatments have made it possible for more people with cancer to work while receiving chemotherapy and radiation therapies. New approaches to cancer treatment include:

- Targeted therapies including new drugs and improved therapy combinations
- Better management of cancer treatment side effects
- Less disfiguring surgery
- More preservation of function

While often thought of as a single disease, cancer is actually a group of more than 100 different diseases characterized by the uncontrolled, abnormal growth of cells that can potentially spread throughout the body. Because the rate of growth and extent of diffusion to other parts of the body is highly variable, cancer care requires a multi-faceted approach that includes making adjustments in the treatment program based on patient centered reactions, the progression of the disease and co-morbidities.

In addition to the complexity in the progression of the disease, current treatment options available often require the patient and caregiver to make decisions between safer but more invasive approaches and decreases in quality of life. The treatment for the three most common cancers and the management issues associated with them include:

- **Breast Cancer** - Breast cancer continues to be detected at an earlier stage, allowing breast conservation with an excellent chance of long-term survival. For more advanced breast cancers, there are a variety of options such as breast removal with immediate reconstruction and neoadjuvant or adjuvant therapies. Depending on tumor size and nodal involvement, women with breast cancer may be able to choose between mastectomy and the less invasive lumpectomy. Lumpectomy rates have climbed from 15 percent in 1983 to almost 50 percent in 1995.¹³
- **Colorectal Cancer** - With wider application of screening guidelines, survival rates for colorectal cancer could rise from the present overall rate of 62 percent.¹⁴ Adjuvant chemotherapy is significantly improving survival rates for advanced cancer. New techniques and treatments are allowing alternatives to colostomies that can substantially improve patients' quality of life.
- **Prostate Cancer** - Prostate cancer is a slow-progressing disease and so "watchful waiting" may be preferable to treatment options that require the patient to weigh the risk of less-invasive treatment against unpleasant side effects such as impotence, incontinence and breast enlargement. There is conflicting evidence regarding the effectiveness of radiation versus surgery in the treatment of prostate cancer.^{15, 16} The American Urological Association's clinical guidelines endorse the presentation of all options and their respective risks to men with clinically localized prostate cancer.¹⁷ A supportive cancer management program can assist participants and their caregivers in weighing the various treatment options.

The expansion of different treatment options, each with their own set of risks and benefits, requires an informed patient. A well-designed cancer management program should provide guidance for navigating the options available to a cancer patient as well as how to get second opinions or alternative reliable information.

COMPONENTS OF A CANCER MANAGEMENT PROGRAM

The systematic coordination and management intrinsic to a well-designed disease management program have only recently been applied to cancer treatment. A cancer management program, like all other disease management

programs, should focus on eliminating uncoordinated care by different providers and different institutions and providing information on the latest treatment options for providers, program participants and their families.

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The basic components of a cancer disease management program include:

- **Evidence-based guidelines**

Nationally accepted clinical guidelines have been developed by the National Comprehensive Cancer Network (NCCN), an alliance of 19 of the world's leading cancer institutes. In addition to disease-specific conditions, guidelines also exist for the supportive care of cancer and the use of ancillary medications including antiemetics, hematopoietic growth factors and cytoprotectant agents, all of which add significantly to the cost of therapy. Despite published guidelines, deviations from proposed treatment plans are quite common for cancer. For example, 22 percent of women receiving breast-conserving surgery do not receive appropriate adjuvant radiation therapy or lymph node inspection, both of which are fundamental steps in breast cancer treatment pathways.¹⁸

- **Identification of the cancer population**

Cancer diagnosed patients can be identified through cancer-specific ICD-9 codes (International Disease Classifications, 9th Revision, the standard diagnostic codes used by health care providers for reimbursement). A successful cancer management program, however, also needs to identify the primary cancer in cases in which a patient has multiple cancers, and has to determine whether the cancer has reached a metastatic stage. Metastatic codes indicate that the cancer has spread to other parts of the body. Treatment and, thus, management of the disease requires additional efforts. The metastatic prevalence within the cancer population varies by type of cancer and ranges from approximately 40 percent for lung cancer to as low as 5 percent for prostate cancer.

- **Stratification and assessment of the at-risk population**

Correctly determining a population's health risk and accurately predicting customers' health care costs are essential to a successful disease management program. Using predictive modeling to stratify program participants along a continuum of expected future health care costs offers the greatest opportunity to reduce preventable utilization and improve health outcomes. A cancer management program should use a combination of predictive modeling and rules-based decision making. Any individual with a diagnosis of cancer who receives chemotherapy, radiation or surgery-related cancer treatment is experiencing sizable utilization costs and is in need of active management and immediate supervision at the completion of treatment.

- **Interventions**

The two essential goals of a cancer management program are to ensure proper treatment and consistency of care to cancer patients through the application of evidence-based clinical practice guidelines, and to provide support and education about treatment options to program participants and their caregivers. A cancer management program should include regularly scheduled contact with program participants to cover the following subjects:

1. *Disease and treatment options education*: Program participants should receive education and interventions that are appropriate for their specific cancer types and symptoms. Skilled registered nurses need to facilitate understanding of treatment options, including new therapies; provide resources to increase the understanding of side effects and educate patients about safe use of over-the-counter and complementary medications and clinical trials. Finally, they must coach participants how to communicate more effectively with their care teams.
2. *Managing side effects*: Understanding treatment and controlling resulting side effects is empowering for participants. Promoting comfort and symptom control specific to cancer pain helps manage participant expectations and can prevent unnecessary hospitalizations due to side effects. Supportive telephone calls from informed nurses should be made to the participant at the start of all new therapies and continued throughout the treatment.
3. *Coordination of care*: Participants should receive guidance and support that promotes compliance with their treatment plans, plus spiritual and emotional resources including support group information, counseling referrals, depression monitoring and intervention and education on hospice, advanced directives and end-of-life care.
4. *Pharmaceutical management*: The disease management organization should coordinate with the participant's physician(s) to ensure medication levels are appropriate and not in conflict.
5. *Use of an Oncology Nurse Specialist*: Participants and their caregivers need access to an Oncology Nurse Specialist who has a thorough understanding of cancer-related issues and can educate them on new treatments as well as the pros and cons of all medications, including the newest releases. Oncology Nurse Specialists should also lead all communications with Oncologists.
6. *End-of-life education and care*: End of life is an extremely emotional time for cancer patients and their loved ones. Disease managers should be educated in framing the issues related to moving from a curative or reductive clinical treatment program to a palliative end-of-life program that focuses on minimizing pain and discomfort. They can discuss participant-specific values about end-of-life issues and appropriate place and manner of death. The goal of the program should be to reduce emotional stress and depression, decrease the length of hospital stays and increase the use of hospice services.

- **Educational material**

Cancer is a life-threatening disease that can hamper a patient's ability to absorb critical information and make informed decisions. Participants require an understanding of the disease process and the treatment options available to them. Cancer patients may consider unconventional or undocumented therapies in an effort to save their lives. Empowering participants through education for patient-centered treatment decision-making can assist program participants in making decisions they are comfortable with and is central to the success of a cancer management program. Educational materials and access to a registered nurse with a unique understanding of the participant's condition and history should be provided to help them manage expected side effects of treatment, the array of medication(s) they may be taking, symptom identification and when to seek emergency care.

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- **Physician and support service outreach**

The treatment of cancer often involves receiving care from multiple physicians at various points along their treatment continuum and, at times, simultaneously by two or more physicians. The patient's oncologists may order a series of tests or scans that have already been scheduled by the patient's surgeon. In addition to duplicative services, providers may offer conflicting advice — making it difficult for the patient to make an informed decision. A cancer management program needs to be based on the most current evidence-based medical practices and directed by top-volume providers from medical, radiation and surgical oncology practices. A physician advisory panel that includes oncology representatives can serve as program champions within the community to help break through any initial resistance and demonstrate the value of the program to local oncologists.

- **Outcomes measurements and reporting**

Performance outcomes for a cancer management program should include a combination of measures that are common to all disease management programs such as ER, hospitalization and outpatient visits. Due to the complexities of cancer treatment and the critical importance of patient-provider coordination, annual patient and physician satisfaction surveys take on greater importance. Cancer-specific outcomes measures include the following:

- Percent of eligible participants receiving annual mammogram
- Percent of eligible participants agreeing to hospice
- Percent of eligible participants on chemotherapy reporting stomatitis
- Quality of life survey

CASE STUDY

The following case study illustrates the benefits and comprehensive management of an effective health management program that is built upon guidelines-based education and support to the cancer program participant:

ML is a 57 year-old female who lived alone and had a limited support system. When ML was admitted to Cancer Solutions,SM CorSolutions' award-winning cancer management program, she had been diagnosed with breast cancer in her left breast and had already undergone a lumpectomy (removal of lump only) a few months prior to enrolling in the program.

Through ongoing support and guideline-based education from her Disease Manager, ML was armed with the knowledge she needed to empower her through her cancer treatment and to recognize other potential health issues. ML's Disease Manager spoke with her on a regular basis and followed up with her before and after any changes in her therapy (for example, chemotherapy). ML's Disease Manager became an active part of her healing and coping process, and was an added support system catering to her individual needs — both emotional and medical.

Six months after her initial diagnosis, and a few months after admission to the program, ML discovered a lump in her other breast. A needle biopsy of the breast was performed and Infiltrating Ductal Carcinoma of the breast was discovered. Due to diagnosis and previous history, a bilateral mastectomy was performed and chemotherapy and radiation was scheduled. As a single, working woman forced to face major life changes, ML became very depressed and frustrated. She began to struggle with her self-image and issues regarding her own sexuality, and lost interest and focus on her work.

ML also experienced several side effects of chemotherapy and radiation — nausea and vomiting, diarrhea, hot flashes and insomnia. With telephonic support, the Disease Manager continued to educate ML about her disease and the potential side effects of chemotherapy and radiation treatments. This regular contact with her Disease Manager, plus the wide range of materials provided to her, helped ML maintain her weight and ability to perform daily activities, and enthusiastically return to work.

In addition, ML's Disease Manager assisted her with several of her health benefits concerns, including direction on who to contact within her insurance company and definitions for complicated and confusing terms. The Disease Manager also directed ML toward support groups in the area and provided Internet-based resources. ML verbalized gratitude for the assistance and support of the nurses in Cancer Solutions who were available to help with issues as well as personal concerns.

CONCLUSION

Cancer is a complex affliction that generates substantial anxiety and confusion among patients and their caregivers. In addition, cancer generates significant health care costs. The rapid advancement and evolution of treatment options and new therapies in the cancer field will only add to patient uncertainty and potential for unnecessary utilization. A disease management program can reduce this anxiety through patient-centered education, and improve the coordination of treatment.

A properly designed cancer treatment program will:

- Increase adherence to the latest evidence-based guidelines
- Reduce practice variation
- Educate and involve program participants in patient-specific treatment options
- Improve the coordination of care across multiple providers and sites
- Provide pain management
- Address end-of-life issues

A cancer disease management program can assure patient-delivered care, shrewd management of resources and continuous quality improvement. Whatever new breakthroughs should develop over the coming years, they should complement, not replace, an effective patient-centered, physician-supported cancer management program.

- ¹ Deloitte & Touche LLP: “Top Five Benefit Priorities for 2003,” www.deloitte.com.
- ² Levit, K., Smith, C., Cowan, C., Sensenig, A., Catlin, A. “Health Spending Rebound Continues in 2002.” *Health Affairs*, Vol. 23, Issue 1, pgs. 147-159.
- ³ Deloitte & Touche, “2003 Consumer-Driven Health Care Survey.”
- ⁴ Employers Health Coalition. “The Hidden Competitive Edge: Employee Health and Productivity,” Managed Care Communications Inc., Newton, MA: 2000.
- ⁵ American Cancer Society. Cancer Risk Report. 2002. www.cancer.org.
- ⁶ Desch C.E., Hillner, B.E., Smith, T.J. “Economic Considerations in the Care of Lung Cancer Patients.” *Current Opinion on Oncology* 1996; 8:126-132.
- ⁷ SRI Consulting. “C4: Cancer Opportunities in the New Millennium.” Menlo Park, CA: SRI Consulting, 2000.
- ⁸ American Cancer Society, Cancer Facts & Figures: 2004. American Cancer Society Publication.
- ⁹ SEER Cancer Statistics Review 1975-2000, National Cancer Institute. www.nci.nih.gov.
- ¹⁰ American Cancer Society, Cancer Facts & Figures: 2004.
- ¹¹ Internal CorSolutions' analysis of multiplan database containing data on five million insured lives.
- ¹² SEER Cancer Statistics Review.
- ¹³ Guadagnoli, E., Weeks, J.C., Shapiro, C.L., Gurwitz, C.L., Borbass, C., Soumerai, S.B. “Use of Breast-conserving Surgery for Treatment of Stage I and Stage II Breast Cancer.” *Journal of Clinical Oncology* 1998;16:101-106.
- ¹⁴ American Cancer Society. Cancer Facts & Figures—1999. January 1999.
- ¹⁵ “Specialists' Biases Influence What Prostate Cancer Patients Are Told.” Associated Press, June 27, 2000.
- ¹⁶ Standord, J.L., Feng, Z., Hamilton, A.S., et al. “Urinary and Sexual Function After Radical Prostatectomy for Clinically Localized Prostate Cancer.” *JAMA* 2000; 283:354-360.
- ¹⁷ Middleton, R.F., Thompson, I.M., Austenfeld, M.S., et al. “Prostate Cancer Clinical Guidelines Panel Summary Report on the Management of Clinically Localized Prostate Cancer.” The American Urological Association. *Journal of Urology* 1995; 154:2144-2148.
- ¹⁸ Nattinger, A.B., Hoffmann, R.G., Kneusel, R.T., Shapira, M.M. “Relation Between Appropriateness of Primary Therapy for Early-stage Breast Carcinoma and Increased Use of Breast-concerning Surgery.” *Lancet* 2000; 356:1148-1152.



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