Critical Decision Making: The Decision to Deploy a Clinical Management System

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Measured in terms of quality improvement versus cost, the value of virtually every product and service in our economy is being dramatically increased by information technology. However, in community oncology practices there has been very little movement to make investments in computerized clinical management systems. Many hold the view that

this is essential technology to assure high clinical quality. Every practice long ago made the investment in computerized billing and collecting systems, called practice management systems (PMSs) and it would be impossible to manage the complexity of billing and management operations without a PMS. The clinical component of the business of oncology is equally complex. This article describes the importance of implementing a clinical management system. We also clarify the purpose and need for such a system. The concluding article will describe processes of (1) effective product selection of the clinical management system and, (2) the post-implementation monitoring that will test whether the desired benefits are being achieved.

Why Now?

The economic survival challenges from the Medicare Modernization Act and from the anticipated demand growth due to the "Baby Boomer" population bulge, require better clinical management. W. Edwards Demming, one of the pioneers in industrial process improvement, noted, "A declining market exposes weaknesses: Management in an expanding market is fairly easy. It is difficult to lose when business simply drops into the basket. But when competition presses into the market, knowledge and skill are required for survival."¹ Medical oncology has been an expanding market. To suggest otherwise is to ignore objective data and the accepted experience of the industry. Figure 1 shows estimates of revenue growth and of practice expense. The increases in top line revenue and in practice expense from 1992 through 2004 have been remarkably high.

Beginning in 1997, exponential growth begins to occur, rather than the linear growth experienced earlier in the period. While not as dramatic, bottom-line revenue after operating costs, as well as physician compensation, has also posted continuous and powerful gains from 1999 through 2004. A look at the overall cost structure of medical oncology, shown in Figure 2, reveals that this growth was driven by the buy-and-bill pharmacy component of the oncology business.

From 1991 through 2004, the adage, "Keep doing what you're doing and you will keep getting what you're getting," was true. During this period, good oncology practice management was neither needed nor valued. Information technology investments were made in billing and collecting systems; the increasing complexity of the payment required information technology for practices to operate. Little capital was dedicated to development of practice management administrative expertise or clinical management improvement. Figure 3 shows that the trends in the overall contribution to revenue after cost from chemotherapy margins will dramatically reduce the total bottom line cash left to meet expenses and to operate the business. The reimbursements for the drugs that are used in oncology practice are falling dramatically. The reimbursements for services, particularly chemotherapy administration services, are improving. This is true on a unit of service basis and also when considering the number of billable services in the infusion suite. In 2003, first-hour infusion (96410), the bread

Figure 1. Trends in components of medical revenue and cost in oncology from 1991 – 2004 as reported in the MGMA cost survey and estimated for 2004 by Oncology Metrics.

Figure 2. Changes in the total physician cost per FTE physician for various specialists as reported in the MGMA Cost Survey 2000 through 2003 with 2004 estimated by Oncology Metrics

Figure 3. Distribution of practice expense in medical oncology from the MGMA/AOHA cost survey 2003 report based on 2002 data

and butter of medical oncology, was reimbursed around \$59, rose to \$217 in 2004, and fell back to \$177 in 2005. The reduction in 2005 was coupled with changes that permit both more drug-specific billing and a greater degree of specificity in billing in these areas. The addition of the Medicare symptom management demonstration project, (which pays for patient-specific data coded using the Rotterdam Symptom Assessment Checklist to measure the quality of life of cancer patients), adds new revenue for services. The demonstration project is likely to be one of the first steps toward some form of

measurement, and presumably payment, for outcomes, rather than efforts. The combination of these trends provides a relatively stable, though likely a short-term, economic base in which to make investments into a clinical management system.

There are three compelling reasons to implement computerized clinical management system now, one in each of the three domains of oncology practice management: to improve and document clinical quality, to streamline work flows for more effective and efficient operations, and to generate lower cost and thus a better return on invested capital.

Clinical Reasons

A major obstacle to achieving optimal outcomes is the time delay, frequently measured in years^{2,3,4} between the demonstration of clinical efficacy and the implementation in routine practice. For example, in the years between 1973 and 1986, the rate at which patients with regional rectal cancer received radiation therapy as part of the first course of treatment—the accepted best therapy for the time—grew six-fold. However, after that impressive growth rate, by 1986, fewer than 50% of eligible patients were receiving radiation therapy.⁵ Management of chemotherapy-induced anemia is another example of spotty implementation of an effective management strategy. It has been

estimated that approximately 50% of patients undergoing chemotherapy acquire anemia-related toxicity. Computerized clinical reminders, when incorporated into a functioning clinical management system,

Figure 4. Trends in cost, revenue, and marginal revenue per FTE physician from chemotherapy products in medical oncology based on MGMA published data with projections by Oncology Metrics

double the chance that this side effect will be recognized and addressed.⁶ The Medicare program, through its symptom management demonstration project, is gathering and paying for information about patients' experience with side effects of chemotherapy, including fatigue (and presumably anemia management).

These two examples illustrate that we as practitioners often do a poor job of integrating new therapies into our routine practice. The accelerating pace of innovation, the increasing complexity of oncologic care, and the integration of medical oncology, radiation oncology and diagnostic imaging, predict that it will be increasingly difficult to implement therapeutic change—to keep track of the necessary details—without a clinical management system. Furthermore, it is almost inconceivable to document adherence to quality standards without a functioning clinical management system.

Operational Reasons

Clinical coding for billing purposes, like the use of temporary “G” codes, the data submission requirements of the demonstration project, and the increasing need to validate the clinical reasoning behind services provided, all require a close integration of the medical chart and the billing process. There is no efficient way to accomplish this without access to the clinical record by multiple staff. In all but the smallest practices, the staff who must access the chart—the physician; the chemotherapy nurse; the pharmacy manager; the billing,

coding, and authorization staff—are usually in disparate locations. The limitations imposed by the paper chart make it almost impossible for these people to function efficiently. Efficient clinical operations are the heart of the business; only marginal improvements in clinical operations can be made without adapting modern information management.

The federal government, one of the largest purchasers of health care services, is promoting this operational efficiency step. Senator Bill Frist has written, “First, health information technology (HIT) is critical. Robust care information and access to it will help providers and patients creatively redesign clinical practice in ways that will improve quality and close these gaps. All providers, including safety-net providers, must have access to HIT.”⁷

Financial Reasons

Jim Molpus writes, “As 2005 looms, questions still remain. Where will the money come from for a national electronic medical record? Will the computer finally become a communication bridge between the patient and physician? ... But the ultimate question is ... How much can better information technology in health care contribute to the industry's goals of better quality and lower cost?”⁸

All business investment comes from the same place: the business owners. In medical oncology, whether the owners are the practicing physicians or a corporate entity, investment is needed and will produce a positive return in the right practice environment. ASCO has produced an excellent series of three programs on oncology practice management. One of the three deals with organizing for practice growth.⁹ In this presentation, the tools of understanding “investment mentality” are presented. Three of these tools are important to this discussion. First, all growth requires capital. Next, capital properly invested pays for itself and also produces a positive return (or ROI[return on investment]) and finally, if you have the patients, you can find the capital. I contend that the community oncology practice has the patient volume and can support the capital investment required to increase value for these patients.

Senator Frist provides a glimpse into one possible yield on this investment in stating, “We also must give providers incentives to promote innovative clinical redesign, which will improve the overall quality of care and close the gaps.

Government now pays for episodes of care, not quality and outcomes. Federal officials have started to rethink these payment strategies so that we pay for results rather than doctor visits and procedures. Congress has begun to encourage pay-for-performance efforts through legislation, most notably the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (P.L. 108-173). We also should consider paying for care that demonstrably closes quality gaps.”¹⁰

The growth trends in medical oncology revenue that we have seen are unlikely to continue. The margin growth of the last few years, which provided capital for reinvestment, is not likely to persist. Growth in practice expense, particularly that expense represented by personnel and by physician personnel, is likely to continue. Improvement in operational efficiencies—making more efficient use of expensive personnel resources through investment in technology—is likely to be necessary for survival. There are now compelling clinical, operational, and financial pressures to implement a clinical management system. Existing inefficient clinical management systems are very deeply frozen into established clinical culture and “In order for a change in a system to occur and last over time, it is necessary to (1) get the system to ‘unfreeze’ (from existing processes), (2) change, and (3) ‘refreeze,’ making the change part of the system’s standard repertoire. Without unfreezing and refreezing, change is not expected to take place successfully and last over time.”¹¹ The next steps include considering if it is beneficial to make this investment at this time and if it is time, where to make that investment. The practice management tools available from ASCO mentioned in the preceding paragraphs, can help in this decision. In the concluding article, we will address these decisions and describe how to monitor progress as a clinical management system is implemented.

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References

1. W. Edwards Demming, “Transformation of Western Style of Management,” in P.R. Krishnaiah and C.R. Rao (eds). *Handbook of Statistics*, Vol. 7. Elsevier Science Publishers, 1988
2. Antman E.M., Lau J, Kupelnick B, et al: A comparison of results of meta-analysis of randomized controlled trials and recommendations of clinical experts. *J Am. Med. Assoc.* 286:240-248, 1992
3. European Secondary Prevention Study Group. Translation of clinical trials into practice: A European population based study of the use of thrombolysis for acute myocardial infarction. *Lancet* 347:1203-1207, 1996
4. Sawka O, Olivetto I, Coldman A, et al: The association between population based treatment guidelines and adjuvant therapy for node negative breast cancer. British Columbia/Ontario Working Group. *Br J Cancer* 75:1534-1542, 1997
5. Ford L, Kaluzny AD, Sondik E: Diffusion and adoption of state-of-the-art therapy. *Semin Oncol* 17:485-494, 1990
6. Kralj B, Iverson D, Hotz K, Ashbury F: The impact of computerized clinical reminders on physician prescribing behavior: Evidence from community oncology practice. *Am J of Medical Quality* 18:197-203
7. Frist, W H: Overcoming Disparities In U.S. Health Care: A broad view of the causes of health disparities can lead to better, more appropriate solutions PERSPECTIVE: SENATE HEALTH AFFAIRS, Volume 24, Number 2, 2005
8. Molpus, J: Healthcare IT Becomes an Adolescent. *HealthLeaders News*, December 16, 2004
9. Reference to ASCO 2004-2005 Practice Management Series, produced by Oncology Metrics under contract to ASCO
10. Frist, W H: Overcoming Disparities In U.S. Health Care; A broad view of the causes of health disparities can lead to better, more appropriate solutions. PERSPECTIVE: SENATE HEALTH AFFAIRS, Volume 24, Number 2, 2005
11. Lewin K Group: decision and social change, in Newcomb, TM, and Hartley, EL (eds.), *Readings in social psychology*. New York: Holt, Rinehart and Winston, 1947