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Framework for Integration of Behavioral and Medical Delivery Systems

Jon Beaty, Christy L. Beaudin

A legacy of policies, medical education, and clinical practice perpetuate a fragmented model of behavioral and medical healthcare delivery, creating barriers to collaboration, coordination, and continuity of care across disciplines and care settings. Today's healthcare consumers interact with a broad spectrum of providers (Figure 1). The dominant model impedes timely and efficient exchange of information critical to effective care delivery. This ultimately places consumers at risk, leading to medical errors, delays and inequities in care, and increased cost. The primary care provider (PCP) and emergency room are the point of entry for most people who experience acute and chronic physical illness, mental illness, and substance use conditions. Inadequate integration of these entry points with behavioral healthcare delivery often prevents patients from being able to access appropriate specialty care for behavioral health services or other related services, such as appropriate medication management and community-based resources.

- Among PCPs experienced in caring for children with special needs, more than half are dissatisfied with the availability of mental health services (Davidson, Silva, Sofis, Ganz, & Palfrey, 2002).
- More than half of PCPs experience problems obtaining appropriate mental health treatment for their patients (Trude & Stoddard, 2003).
- A little over one-third of consumers treated for depression reported that their PCP asked them to continue using antidepressants for at least 6 months (Bull et al., 2002).
- Latino and African American consumers in primary care remain less likely than Whites to obtain appropriate care, such as antidepressant medications or specialty care (Miranda & Cooper, 2004).
- Emergency room physicians assessing people aged 70 years and older recognized as few as 38% of mental status impairments.

Abstract: Today's consumers navigate through medical and behavioral healthcare delivery systems, often interacting with providers who do not necessarily interact with each other. Public and private stakeholders call for increased safety, efficiency, effectiveness, timeliness, and equity in care delivery, with a consumer focus. Integration of healthcare delivery systems is imperative to reduce fragmentation of healthcare delivery and improve collaboration, coordination, and continuity of care. This article discusses general considerations, one organization's strategies, and activities implemented to improve integration, coordination, and collaboration.

Recognition of impaired mental status was unlikely to affect treatment decisions (Hustey, Meldon, Smith, & Lex, 2003).

Antiquated systems for storage and retrieval of medical records built to support the traditional healthcare delivery system also inhibit the flow of information and lag behind other medical technology. Confidentiality restrictions on the exchange of mental health and substance abuse information, more stringent than those for physical healthcare, create additional barriers to continuity and coordination of care (Bazelon Center for Mental Health Law, 2004).

Purchasers, policy makers, and other stakeholders are demanding that healthcare be made more affordable, effective, and consumer-centric. Why? Medical costs continue to rise, and societal concern about public health and consumer safety is intensifying. These demands of stakeholders have led to a growing emphasis on quality improvement initiatives led by public and private organizations, such as the Institute of Medicine (IOM), National Committee for Quality Assurance, and Joint Commission on Accreditation of Healthcare Organizations. This chorus of stakeholders' demands and initiatives creates incentives for healthcare providers to prioritize integration of behavioral and medical healthcare delivery

Key Words

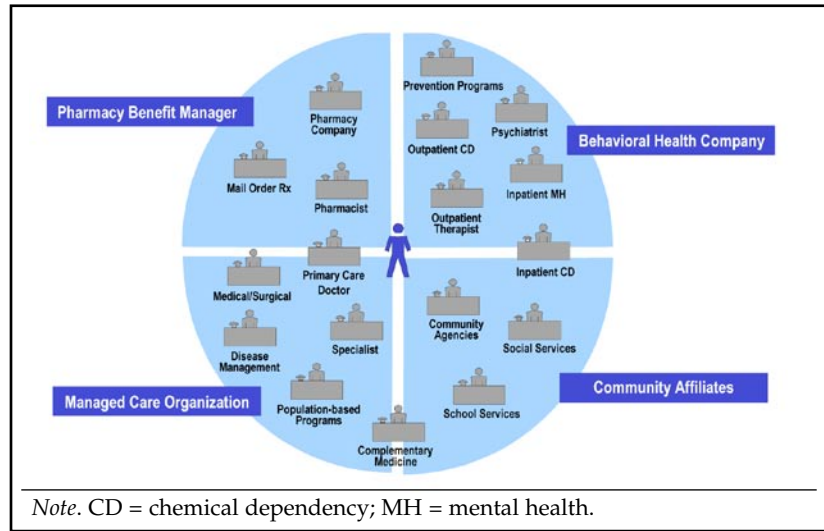
healthcare delivery
mental health services
patient safety
quality improvement

systems. Initiatives that make a difference include

- programs reducing medical errors, with an emphasis on reducing adverse drug events and improving healthcare safety for consumers (IOM, Committee on Quality of Health Care in America, 2000)
- pay-for-performance programs rewarding healthcare providers for quality care and efficiency through higher reimbursements and payments (National Business Group on Health, 2005)
- electronic health records for longitudinal collection of personal health information; immediate electronic access to individual and population-level information by authorized users; provision of knowledge and decision support that enhance the quality, safety, and efficiency of consumer care; and support of efficient processes for healthcare delivery (IOM, Board on Healthcare Services, 2003)
- national standards for performance measurement in the United States and other developed countries for assessing and reporting coherently and efficiently on the performance of healthcare systems (Arah, Klazinga, Delnoij, ten Asbroek, & Custers, 2003; IOM, Board on Healthcare Services, 2006).

IOM envisions a healthcare system in which cooperation across the healthcare continuum occurs routinely among clinicians and institutions. "Healthcare for general, mental and substance-abuse problems and illnesses must be delivered with the understanding of the inherent interactions between the mind/brain and the rest of the body" (IOM, Committee on Crossing the Quality Chasm, 2006, p. 9). A model based on this understanding of behavioral and medical healthcare delivery systems ensures the appropriate exchange of information, integration, continuity, and coordination of care. Care becomes virtually seamless. The expected result is that consumers will receive high-quality care anywhere, anytime. This result would reflect the essence of IOM's six aims for behavioral health and medical care: that it be safe, effective, patient-centered, timely, efficient, and equitable (IOM, Committee on Quality of Health Care in America, 2001).

Figure 1. Consumer Interactions in Today's Healthcare Industry



Identifying Opportunities for Integration and Collaboration

Broad changes in U.S. national policy, healthcare information systems, or payment structures are not necessary for healthcare providers to cross the barriers that interfere with the outcomes they desire for their patients. Whether provided by a single practitioner or a large healthcare delivery system, data sufficient for identifying opportunities to improve integration and collaboration between behavioral and medical healthcare are generated by most healthcare delivery systems through adverse event reports, consumer complaints, consumer surveys, demographic data, epidemiological data, HEDIS (Health Plan Employer Data and Information Set), pharmacy and prescription data, scientific literature, and treatment records. PacifiCare Behavioral Health (PBH) is a national network-model managed behavioral healthcare organization in the United States that uses available data to direct existing and new processes for care that promote integration of behavioral and medical healthcare delivery.

PBH continually reviews current scientific literature and analyzes available data to identify opportunities for improving integration, coordination, and collaboration. Its review process uses human capital and technological resources from across the organization. Efforts occur under the leadership of the senior medical officer and corporate quality improvement department. Contracted health plans, healthcare

practitioners, consumers, and pharmacy benefits management also participate. *Blueprint for Integration and Collaboration of Behavioral and Medical Delivery Systems*, an annually compiled report, summarizes the results from this review and identifies and analyzes initiatives undertaken to improve healthcare integration and collaboration.

Actions for Improving Integration and Collaboration

The examples discussed here demonstrate how a healthcare organization can use available data to identify opportunities and implement consumer-centered interventions. These examples may not be directly transferable to other healthcare delivery settings; however, the concepts used may be adapted in a broad range of settings to empower consumers, facilitate exchange of information, and network consumers and providers using existing technologies. The scope of interventions will vary depending on the size of the organization and available resources.

Comprehensive Medical Evaluation of Older Adults

Adverse event and utilization data revealed that older people were admitted for acute inpatient psychiatric treatment with undetected, high-risk medical conditions; in response, PBH collaborated with contracted health plans and behavioral and medical healthcare providers to implement an improved triage protocol for older people with acute changes in their mental status. The protocol requires a comprehensive medical evaluation for these older adults before PBH certifies admission for inpatient psychiatric care. The protocol decreases the risk of undetected or misdiagnosed medical conditions, allows for effective treatment planning, and contributes to improved treatment outcomes and patient safety.

Inpatient Tool Kit

Analysis of PBH's member satisfaction survey results indicated that consumers hospitalized for psychiatric treatment frequently enter this treatment with insufficient and inaccurate information about standards of care and expected outcomes for this level of care. Analysis of postdischarge follow-up data revealed that many consumers refused

ambulatory psychiatric care. PBH created an inpatient tool kit to inform consumers receiving inpatient psychiatric care about the standard course of treatment for a mental illness, including the importance of timely engagement in outpatient treatment following hospitalization. The tool kit is a bound handbook with information about inpatient care, the importance of engaging in timely postdischarge follow-up and facilitating coordination of care among healthcare providers, and a survey form for the consumer to use to provide feedback to PBH about its treatment process.

In the pilot phase of this intervention, PBH provided the inpatient tool kit to 15 high-volume inpatient psychiatric facilities in its network. The facilities provided the tool kit to PBH members shortly after admission to the hospital. PBH is still analyzing the impact of the tool kit on consumer satisfaction and continuity of care; however, initial analysis indicated positive responses to the tool kit from facilities and consumers, and their input was solicited to improve the intervention. One potential area of improvement for the future is performance improvement in the HEDIS behavioral health measure for ambulatory follow-up within 7 days after hospitalization.

Physician Consultation Service

Analysis of input received through physician participation in PBH's quality improvement program led to identification of an opportunity to assist medical practitioners in addressing the behavioral health conditions presented by their patients. PCPs prescribe two-thirds of medications for mental illnesses; psychiatrists and other medical specialists prescribe only one-third (Office of the Surgeon General, 1999). Many individuals with mental illness and substance abuse problems receive no treatment beyond what PCPs provide. To assist PCPs, their medical staff, and other medical providers, PBH established Physician Consultation Service (PCS). PCS provides a direct toll-free telephone line so that physicians and their medical staff can contact licensed behavioral health specialists employed by PBH; the specialists are available during regular business hours. Consultation by e-mail is also offered; responses are provided no later than the next business day. For inquiries on medication or complex conditions, such as comorbid mental

and physical illness, PBH's physician medical directors respond. Consultation is free, and assistance is available to medical practices regardless of whether patients' benefits are managed by PBH.

Attention-Deficit/Hyperactivity Disorder Tool Kit

Launched in 2006, the HEDIS measure for follow-up care for attention-deficit/hyperactivity disorder (ADHD) examines whether children (6–12 years old) for whom ADHD medication has been prescribed receive systematic follow-up office visits and continuity of care. Treatment for children with ADHD often involves pediatricians, psychiatrists, mental health therapists, teachers, school counselors, parents, and others. Coordination reduces confusion and supports a successful outcome for the child. PBH collaborated with a large health plan and developed a tool kit for caregivers of children with ADHD. The tool kit includes an informational brochure about treatment for ADHD (with an emphasis on coordination and continuity of care) and worksheets designed to assist the caregiver in tracking medications and healthcare office visits. Using pharmacy data provided by a pharmacy benefits manager, PBH identifies children with a new prescription for ADHD medication and then mails the tool kit to the children's caregivers within 2 months of the new prescription. For healthcare providers, PBH and the health plan adopted a clinical practice guideline, with input from ADHD treatment professionals. PBH and the health plan distribute the guideline for use by behavioral and medical healthcare providers.

Communication Tools

Both coordination of consumer care and consumer-focused communication between PCPs and behavioral health practitioners are associated with more consumers receiving effective treatment for depression (Liu et al., 2003). PBH uses two interventions to facilitate coordination between behavioral and medical healthcare providers: a wallet card and a healthcare coordination form.

The wallet card is mailed directly to consumers, complete with instructions on how to fill out the card. Consumers write contact information for their primary medical and behavioral health providers, major health

problems, medications with dosages, allergies, and emergency contact information on the card and keep it on hand for healthcare visits. The wallet cards facilitate information sharing with healthcare providers. Free replacement cards are available by request; consumers need only call a toll-free number or send an e-mail.

The healthcare coordination form is mailed directly to behavioral health practitioners, who received a treatment authorization. Behavioral health practitioners record basic information about the consumer's diagnosis and treatment plan; the form includes fields for obtaining the consumer's written consent to release confidential information to designated practitioners. It serves as a gateway because this simple tool establishes rapport at the outset of treatment between medical and behavioral health practitioners, who can easily fax or mail the form to the PCP and other practitioners treating the consumer.

Population-Based Care Management

Literature review, case review, utilization, and epidemiological data reveal a continuum of illness severity for people with behavioral health conditions. The severity of a person's health condition is a primary indicator of the type, frequency, and strength of intervention with the highest probability of being effective. PBH's population-based care management model matches persons needing behavioral healthcare to specific care protocols according to symptom severity. Using several metrics, PBH continuously monitors the effectiveness of the care management model in facilitating coordination and continuity of care and looks for additional opportunities for improvement. The model matches individuals to the following care protocols, which include procedures for facilitating coordination and continuity of care:

Routine Treatment. PBH monitors consumers' experiences of routine behavioral healthcare using its proprietary ALERT system. At specific intervals throughout treatment, consumers complete self-administered questionnaires. The consumer's behavioral health practitioner faxes or mails the completed form to PBH. Algorithms are used to assess treatment progress. These data are used to provide immediate notification to a practitioner and a PBH care manager if the consumer's responses indicate a high risk of treatment failure, suicide

risk, risk of harm to others, or substance abuse. For substance abuse, the ALERT system facilitates referral for appropriate treatment.

Intensive Clinical Monitoring. Consumers receive intensive clinical monitoring (ICM) after a PBH care manager or the ALERT system has identified them as being in acute distress that places them at risk of treatment failure, self-harm, or harm to others. A care manager arranges face-to-face services with a behavioral health professional within 24 hours for those who need urgent care, and immediately if emergency care is needed. For consumers already receiving care, a care manager facilitates referral to other needed healthcare services and collaborates with their healthcare providers to coordinate care with the goal of stabilization. For consumers receiving hospital-based behavioral healthcare, a care manager coordinates care among the facility, the attending psychiatrist, the PCP, and any outpatient providers to facilitate appropriate discharge planning.

Extended Clinical Monitoring. Consumers receive extended clinical monitoring (ECM) if utilization patterns indicate chronic psychiatric conditions, complex multiple diagnoses, or other complicating factors that can lead to psychiatric disability. ECM includes frequent telephone outreach by a PBH care manager to behavioral health practitioners and other treating practitioners to facilitate continuity and coordination of care. As appropriate, the care manager coordinates treatment between behavioral and medical healthcare providers and facilitates linkages to other healthcare providers and community-based psychosocial services.

Assertive Case Management. PBH offers assertive case management (ACM) to consumers whose utilization patterns indicate overreliance on inpatient psychiatric care, resulting from nonadherence to outpatient treatment. These consumers often suffer from severe and persistent mental illness or are children and adolescents who are severely disturbed emotionally, engaged in receiving healthcare, but challenged with navigating through a complex healthcare delivery system. The ACM case manager uses telephone contact to ensure that healthcare providers receive the information needed to deliver effective care, that consumers understand their part in the treatment plan, and that

additional support (as needed) is secured from family, friends, and community-based services. A case management plan, developed by the case manager in collaboration with the consumer, healthcare providers, and family members, as appropriate, delineates a strategy in the form of goals and objectives for improving coordination and continuity of care. Guided by the case management plan, the case manager facilitates integration of healthcare services and support systems in a network that meets the consumer's needs efficiently and effectively.

Conclusion

Existing healthcare delivery systems are faced with a choice to act, react, or become obsolete in response to purchasers' demands for accountable, consumer-centric systems of healthcare delivery. Quality improvement professionals are in a position to provide leadership in this area for their organizations by targeted data analysis, identification of opportunities, and promotion of change. Their actions will advance collaborative efforts to deliver safe, efficient, and effective healthcare.

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q&a: John J. Byrnes on a Financial Model for Quality Programs

Joann Genovich-Richards



q You believe that finance has to be an internal strategic partner for healthcare quality. How do you implement a comprehensive healthcare quality program that yields demonstrable results?

a In considering different approaches, we find plenty of questions and few easy answers. Yet in the simplest terms I believe that the most effective way to integrate quality and patient safety is by emulating the planning, reporting, and accountability that occur naturally in finance. Although finance department members should never be charged with driving a quality program, it's a fool's errand to start one without them. They have much to offer in data gathering, reporting, and analysis. Their language is also the language of a hospital's executive offices and its board of directors. Chief financial officers and controllers can be invaluable resources and vital allies for embryonic quality programs seeking firm footing. Before even enlisting the aid of the finance department, however, all involved must have a realistic understanding of what an effective quality program requires of an organization. Unlike finance, quality is still very much an emerging professional discipline. No one can go to school to become a quality specialist. The knowledge of what works comes from "in the trenches" experience. The tactics must be practical, repeatable, and operations-driven. Quality must also be embedded in the DNA of an organization from the top down, with clinical and administrative leadership providing sustained and meaningful support. Any hint that quality may be an "initiative of the moment" will doom any program. An organization must be prepared to obtain buy-in at all levels and provide the resources necessary over the long term. This means investing in the people, tools, and time required to help a quality program take shape

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and live as an extension of an organization. Like finance, successful quality programs require a disciplined environment built on measurement, reporting, and accountability. And as with finance, that environment must be hard-wired into daily operations by turning "should-do" care options into functionally unavoidable "must-do" requirements with real consequences at every level. In many cases, hard-wiring can mean exactly that, down to the level of working with information technology (IT) to establish screens in the patient care database for daily flags and reminders. At my organization, we know pneumococcal vaccinations should be given to every patient older than 65 who has pneumonia. But we also know that if we simply leave it to staff members to remember, the rate

is about 60%. After we hard-wired the flag into the screens in nursing documentation, the rate went up to more than 90%.

q What specific aspects of the finance model could quality programs adopt?

a If quality looks at finance, there is much to admire and even more to just downright steal. Finance is a science grounded in centuries of practice and offers a structure that can be placed almost directly on top of a quality implementation plan. The reporting vocabulary of finance is understood, accepted, and respected by CEOs, other administrators, and board members, all of whom are vital to the long-term success of any quality program. That fact alone gives the concept of emulating finance a major point in its favor. Even more important is how well the financial process model lends itself to the quality process, starting with fundamental planning and goals. If you've got financial goals and a financial strategic plan, then logic would dictate that you have parallel quality goals and a quality strategic plan. Yet most healthcare organizations still don't. This shift in board- and executive-level thinking requires putting quality at the top of the 5-year plan instead of at the bottom. Within the plan should be specific goals that clearly demand progressive benchmarks in superior quality and safety, just as finance demands solvent operations that generate a required profit margin and healthy growth rate. Similarly, hospital boards should move to establish quality governance committees similar to finance committees, with time at meetings for presentation of relevant updates. As part of the reporting commitment, the quality department must be called upon to generate monthly "qualitials"—quality data equivalent to monthly financial statements. Measurements, milestones, and accountabilities must be set with a clear understanding of expectations and consequences. In support of these commitments, any organization that has an annual financial budget should have a comparable budget for quality. Just as finance requires and expects a minimum level of IT infrastructure investment, for instance, so should quality. Of course, any discussion of resources inevitably comes down to people.

An effective quality department could require a dedicated staff of 20 or more—a number that makes many gulp and say "there's no way my CEO will go for that." But if quality is just important as other aspects of an organization, it's fair to ask how many full-time equivalents (FTEs) are in finance. It's fair to ask how many FTEs are in IT, marketing, or nursing education. If the scales are unbalanced, the issue deserves serious conversation, because every CEO knows that the number of FTEs deployed equals the amount of work that gets done. If CEOs aren't willing to devote adequate resources to quality, they may just be paying it lip service. I am fortunate to work in an organization that has made a significant commitment to quality, with department heads prepared to put skin in the game. In early leadership meetings when the budget dollars for quality were not all there yet, everyone around the table offered up available FTEs. If a position was open in their department, the FTE was transferred to quality. That's the kind of team-driven resource allocation everyone talks about but doesn't really want to do. Today, there's enough literature demonstrating that if you do quality projects right, 9 out of 10 times you're going to build efficiencies into this system that save money. For example, by decreasing common complications, the organization also benefits through a decrease in the cost of care. No good reasons are left for finance and quality not to come together for the common good.

q What is the role of leadership in a quality program modeled on finance?

a If a program is going to succeed, it must be directed from the corner office. The success of a hospital's quality and safety performance must be as important to the CEO as the success of a hospital's financial performance. In most organizations, this remains the exception and not the rule. CEOs get fired only for poor financial performance or for crossing swords with medical staff. Ideally, top management would be held as accountable for our quality performance as they are for finances. In fairness, the reason they haven't is because most organizations can't measure how they really perform on quality. This

shortcoming means that quality departments need a database like the finance department. The good news is that tapping the financial database as a starting point for quality clinical data can be a highly effective place to start. There's a myth in quality circles that the administrative data are no good. In my experience, however, when quality departments take a hard look at the audit trails, the reconciliations and the validation that are done inside cost accounting systems, they realize that administrative data are often more accurate than chart review. The reason is simple: finance departments want every penny they can collect, so finance is where the data accountability lies. If quality is going to deliver as finance does, you've got to have as much data as finance has. The combination of financial data and medical records offer two gold mines of information that must be used to engage leadership. Unfortunately, at most healthcare organizations the corollary is that the clinical side hates finance, and finance hates the clinical side. Finance and clinical leaders must get rid of this baggage and become functional partners. Quality leaders need to access and understand the financial database, and controllers must understand what quality and safety mean to an organization as a whole. Only then can the CEO and others on the administrative side become as literate in quality and safety as they need to be, which means as literate as they are today in the world of finance. The CEO and the board of directors should view quality program data as an organizational budget—a “dashboard”—of critical measures, capable of showing strengths and weaknesses versus local, regional, and national peers. Quality data, particularly if broadly distributed internally or shared with the general public, can stimulate the highly competitive nature of CEOs. If they see their organization performing at a lower level than their peers, chances are they will act faster to improve that standing. That motivation also drives their willingness to serve as ambassadors for quality, both down the organizational chart and up to the board of directors. Board members' understanding of quality metrics is critical, because the board is ultimately empowered to hold the CEO and management as a whole accountable for the results. Of course, the challenge is that although most

boards already understand finance, they don't understand quality. Once again, the parallels to finance can break down barriers. Quality department presentations must clearly show how an organization's quality index is equivalent to an organization's operating margin or days' cash in hand.

q How will accountability for performance be managed?

a With board and executive participation in hand, the question becomes how to convert that commitment into results. That responsibility must be borne equally by directors at the clinical, medical, and quality levels, all working in parallel. These directors must drive a quality program down to the most granular level of an organization. Together they are finally responsible for the financial and quality budgets in their areas. Change ultimately comes down to influence, persuasion, and gentle peer pressure. It makes good sense, then, to rely heavily on a hospital's medical directors. They interact with all of their specialty's peers and have relevant academic discussions. Medical directors also talk best practices peer to peer, moving the physicians to what the evidence shows is the best way to do things. They are already recognized opinion leaders and are uniquely able to bring quality processes down to the bedside. Directors on quality teams must also understand the reality of quality budgets and the role that measured results will have on their day-to-day work and on their careers over the long term. Pride again can play a beneficial role in the process. When performance is being published in the public domain for all to see, there's not a doctor in the world who wants to be at the bottom of the list. No one even wants to be in the middle.

q Could you describe the quality program's operations and reporting in more detail?

a Once you have leadership support, an accountability structure, and access to data, you can assemble a quality budget with specific targets, milestones, and deliverables. Clinical veterans may bristle, but

they must understand that you cannot improve what you cannot measure. At Spectrum Health, the quality budgets for our 30 high-volume conditions include quarterly goals for the measures that need to be improved. Quality budgets and dashboards should include multiple levels of detail; Joint Commission on Accreditation of Healthcare Organizations (JCAHO) Core Measures provide excellent starting points. For instance, acute myocardial infarction (AMI) metrics would track percentage compliance and targets for aspirin at arrival, PCI (percutaneous coronary intervention) within 120 minutes, beta blocker at discharge, and other key measures in a large-format spreadsheet. To facilitate a quick read, percentages are assigned star ratings (0–5) with red, yellow, and green color codes. No unreasonably tight deadlines (6 months or less) are set, but deadlines must exist, and the message should be clear: your team has to deliver. It's ultimately the same discipline we've always had with dollars and cents. A quality budget is effectively the monthly income statement for a quality program. Finance has a 5-year capital plan. Organizations need a 5-year strategic quality plan that details organizational commitments toward achieving national best practices in targeted areas. The result of all of this planning and analysis should be fundamental measures established throughout the organization, just as finance has established measures such as gross revenue, margin, and net. The measures must be updated and disseminated monthly to underline their importance and cultural durability. At Spectrum Health, we are establishing three primary numbers that we use to know whether we've crossed the finish line. First is our hospital quality score, which totals the percent of measures that hit our targets. It's a clear metric that has been embedded in goals and incentive compensation plans down to the director level. Second is our safety index, which measures our implementation of national patient safety

benchmarks. Third is a measure of our compliance with the JCAHO standards, targeted at 100% at all times. With this combination, we have clinical quality, patient and medication safety, and accreditation standards all covered. Of course, although these clinical measurements are important, quality departments must recognize that the best numbers still have patients—people—at their core. As a result, a quality program works best when established in tandem with a comprehensive patient satisfaction program focused on measuring and improving the complete care experience.

q What recommendations would you give to healthcare quality professionals trying to implement these approaches?

a Although no quality program will ever be easy or quick to implement, they are no longer optional for healthcare providers of all sizes. Organizations should be aware of the rapidly evolving national agenda regarding quality, as well as the benchmarks that are becoming the de facto standard. A quality program is no longer just the nice thing to do that's on everyone's wish list. It's a growing expectation and assumption among patients, businesses, insurance carriers, and other key healthcare constituencies. By applying many of the same processes and reporting tools used in finance, quality programs can establish a common ground for all parties in an organization. It's a road map that's transferable, repeatable, and perhaps most important, grounded in objective data. It's time for healthcare providers to get beyond quality theory and into quality practice on a broad and consistent basis. Emulating finance does work, and as my CPA friends like to say, that's really the bottom line.

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Effective Outpatient Department Protocols—Appointment Reminder Phone Calls

Kelley Jaeger-Jackson, Heather Kendall

At pre-renal transplant clinics the mean no-show rate for initial appointments is 17.5% (see **Table 1**), with individual clinics recording a no-show rate of up to 50%. For each patient appointment, time is spent scheduling the initial appointment, preparing the paperwork, obtaining insurance authorization and documentation, and registering the patient. The entire scheduling process must be repeated for every no-show patient. In addition, the appointment time generally cannot be used for other patients waiting for appointments, and the department loses dedicated time when clinic employees cannot be used by other areas. The patient who does not show up for an appointment is placed at the end of the 4-week waiting period, which lengthens the time to transplant listing.

In order to manage resources effectively and maximize departmental efficiency, the no-show rate for the clinic had to be reduced. The clinic financial coordinators spend 30–45 minutes at a minimum per no-show patient in the preadmission and rescheduling process. At an average hourly rate of \$19.50 (not including benefits), this is a cost of \$9.75–\$14.63 for financial coordinators' time per no-show patient. With the mean no-show rate at 17.5% and an average of 10 initial patient appointments scheduled per week, the weekly no-show rate is two patient visits. This results in an additional \$19.50–\$29.26 lost per week on time spent rescheduling. Nurse coordinators spend on average an extra 30 minutes preparing charts for every no-show patient. At an average hourly rate of \$44, nurse coordinators' time accounts for another \$44 lost on no-show patients per week (for two patient no-shows per week). The total amount lost by the clinic on no-show patients ranges from \$3,302–\$3,810 annually. These are true lost revenues because the number of staff members scheduled is based on clinic volume.

Abstract: Patient reminder telephone calls for initial clinic visits can reduce the no-show rate. Results of a project that implemented an initial clinic appointment reminder protocol using existing resources showed a reduction in no-show rates and an increase in annual cost savings.

Boyle (2004) has shown improved patient appointment show rates through patient appointment reminder telephone calls. Boyle has also shown that reminder telephone calls prior to appointments improve appropriate patient care treatment and follow-up as well as clinic and office revenues. Medication utilization rates were improved, as were the physician's or healthcare provider's access to the patient's medical regimen.

Gariti et al. (1995) suggest that substance-dependent patients who received preevaluation telephone reminder calls not only had improved clinic show rates at their initial intake evaluations but also exhibited higher retention rates at 1 week and 1 month post-treatment than those who did not receive appointment reminder telephone calls. With these findings in mind and with no formal process in place in the pre-renal transplant clinic to remind first-time patients of their appointments, staff members initiated the project. The goal was to reduce the no-show rates of the first-time patient to the pre-renal transplant clinic.

The project began with an analysis of the 2005 no-show rates, as well as an analysis of how many reminder telephone calls were actually being placed. In addition, the process of how, when, and by whom the calls were made was examined. A protocol and a consistent appointment telephone reminder system was then put into place. The protocol included scripting and a time frame for placing the appointment reminder call. Finally, the process would be evaluated to determine the effect of reminder calls on

Key Words

ambulatory care
appointment reminder calls

the clinic show rates. In order to compare similar groups, the project compared the 5-week period before the implementation of the new protocol to the 5-week period immediately following implementation. A specific staff member was assigned to make all the preappointment reminder calls in order to minimize variation of individual style on the effectiveness of the reminder calls.

Solution Description

The solution was modeled after the evidence-based practice demonstrated in the meta-analysis performed by Macharia, Leon, Rowe, Stepheson, and Haynes (1992). Macharia et al. demonstrated that preappointment reminder calls not only significantly affected no-show rates but also significantly improved patient outcomes. The new pre-renal transplant clinic protocol established a process that included calling patients to remind them of their appointments 48 hours before their first appointment. Patients with a Monday appointment were called on the preceding Friday. The reminder calls were scripted to promote consistency of information given to patients (see **Figure 1**). The staff member placing the call also asked the patient about his or her intent to keep the appointment. If the patient indicated that he or she would not be able to keep the appointment, the staff member rescheduled the patient at the time of the reminder call. The implementation date of the new protocol was October 3, 2005, and the date of evaluation was October 31, 2005. The objectives were practical and simple and did not negatively affect the clinic staff member’s use of time. The time spent on reminder calls was less than 2 minutes per call, with an average of 10 calls per week; the total amount of time per week placing reminder calls was 20 minutes. The staff member making the calls is paid an hourly rate of \$17, so the cost of preappointment reminder calls amounts to \$5.67 per week and \$294.67 annually. This solution was implemented without overextending existing resources.

Research Support

Twelve research articles were reviewed (see **Table 2**), of which one was a meta-analysis

Table 1. Pre-Renal Transplant Clinic Appointments: Scheduled Versus No-Shows Before Implementation of Reminder Calls

Week of	Patients Scheduled	Patients No-Show	No-Show (%)
01-03-05	9	4	44
01-17-05	5	0	0
01-24-05	4	0	0
01-31-05	8	0	0
02-07-05	2	0	0
02-14-05	9	2	22
02-28-05	7	2	29
03-07-05	2	0	0
03-14-05	9	0	0
03-21-05	3	1	33
03-28-05	15	6	40
04-04-05	3	0	0
04-11-05	11	3	27
04-25-05	11	0	0
05-02-05	3	0	0
05-09-05	9	1	11
05-16-05	4	3	75
05-23-05	10	3	30
06-06-05	10	2	20
06-13-05	4	1	25
06-20-05	10	3	30
06-27-05	5	0	0
07-04-05	7	0	0
07-11-05	5	2	40
07-18-05	10	2	20
07-25-05	3	0	0
08-01-05	9	2	22
08-08-05	4	0	0
Total % no-show, all weeks			17.5
Weeks used for comparison of project			
08-15-05	7	0	0
08-22-05	No new patients	No new patients	No new patients
08-29-05	10	5	50
09-05-05	No new patients	No new patients	No new patients
09-12-05	10	4	40
09-19-05	3	0	0
09-26-05	10	2	20
Total % no-show, 5-week period			22

of numerous research articles related to the topic of appointment reminder methods. All of the research articles provided overwhelming support for some type of preappointment reminders to improve no-show

Figure 1. Protocol for Reminder Call Process

PREAPPOINTMENT REMINDER CALL PROCESS		Review Date: October 2008 Revised Date:
		Page 1
PURPOSE:	To outline the process for preappointment reminder calls.	
LEVEL:	Interdependent	
SUPPORTIVE DATA:	Patients receiving preappointment reminder calls that follow a scripted format are more likely to keep appointments than patients who receive mailed appointment reminders or no reminders at all.	
REMINDER CALLS:	<p>A. Time Frame for Reminder Calls</p> <ol style="list-style-type: none"> 1. Reminder calls will be placed 48 business hours prior to the date of the appointment. <ol style="list-style-type: none"> a. Script for the reminder call when the patient/caregiver answers: "Hello Mr./Mrs./Ms. _____ (or first name if patient desires), my name is _____. I am calling to remind you of your appointment on _____ at the kidney transplant clinic at _____ Hospital. The clinic is located in the south wing of the hospital on the first floor. Please follow the signs that say 'Transplant & Heart Specialty Clinics.' May I confirm that you will be able to keep this appointment?" b. If caller reaches an answering machine/voice mail system, the script is: "This is a reminder call for Mr./Mrs./Ms. _____. Your appointment with the kidney transplant clinic is scheduled for _____. Please call 800-123-4567 if you cannot keep your appointment. Thank you, (your name)_____." 	

rates and improve patient compliance with medical regimens.

Implementation

The quality improvement tool used to track the change process was the Plan, Do, Check, Act (PDCA) process using the Focus, Analyze, Develop, and Execute/Evaluate (FADE) process (see **Figure 2**). The FADE model helped the implementation plan remain on track and assisted with determining the practicality of the plan. It also helped assess the adequacy of the policies and procedures put in place to maintain the process. The clinic parent organization has implemented reminder calls and scripting in many areas over the past year to improve show rates and

maintain consistency of message delivery. Therefore, this project meets the organizational goals of the clinic and should be sustainable. The calls were monitored initially for correct use of the script and for the timeliness of the calls being placed. Implementation of this protocol, based on current volume, will save the pre-renal transplant clinic between \$3,007.33 and \$3,515.33 annually. Actual cost savings is dependent on clinic volume.

Evaluation

The plan of evaluation for this project was to compare the no-show rates in the 5 weeks before and after the implementation of the reminder calls. This plan would eliminate variances for seasonality and

Table 2. Annotated Bibliography

Title	Author	Methodology	Major Findings	Major Limitations
Patient reminder calls as a cost-effective way of improving adherence to office visits	Boyle, B. (2004)	A study of 609 patients from New York Presbyterian Hospital and Weill Medical College of Cornell University in New York City were randomly selected to receive or not to receive a telephone reminder call a day before the next scheduled office visit for a variety of healthcare providers (physician, nurse, nutritionist, social worker) or laboratories. During each call, the patient was reminded of the scheduled office visit the next day. In addition, as a part of the reminder call, a brief standardized questionnaire was administered asking if the patient planned to attend the appointment and, if not, the reason or reasons for nonattendance.	Office visit attendance occurred for 321 (83%) of the patients who received a reminder call and for 22 (9.7%) of the patients who did not receive a call ($p < .05$). Of the 609 patients involved, 382 (63%) received and 227 (37%) did not receive an office visit reminder call. There were no significant demographic differences between the study population and the entire clinic population or the call and no-call groups involved in this study. This study is very specific to our project. The cost analysis is excellent comparing Medicare/commercial payers versus Medicaid.	This is an Internet article. We were unable to find the article in a scholarly journal.
Effectiveness of a call/recall system in improving compliance with cervical cancer screening: A randomized controlled trial	Buehler, S. K., Parsons, W. L. (1997)	A random study of 441 women in 2 family medicine clinics (1 urban and 1 rural) who were listed as patients and had not had a Papanicolaou test (Pap test) within the 3 years prior to the start of the study. The 221 women in the intervention group were sent a letter asking them to seek a Pap test and a reminder letter 4 weeks later. The 220 in the control group were sent no letters. Main outcome measures were the number of women who had a Pap test within 2 months and 6 months after the first letter was sent.	Within 2 months, more women in the intervention group than in the control group had been screened (2.8% [5/178] and 1.9% [4/208], respectively). There was also a difference between the overall proportions at 6 months (10.7% [19/178] and 6.3% [13/208], respectively). The age distribution, residence, and timing of the last Pap test did not differ significantly between the 2 groups.	None of the differences was statistically significant.
The effect of reminder calls in reducing non-attendance rates at care of the elderly clinics	Dockery, E., Rajkumar, C., Chapman, C., Bulpitt, C., Nicholl, C. (2001)	Twenty-three did not attend (DNA) patients from 7 clinics at Hammersmith Hospital were contacted to ascertain the reasons for nonattendance (group I). For 7 other clinics, 84 patients were contacted in advance to reconfirm their appointment (group II).	From group II, 12 patients were identified who were unaware of their appointment (14%), 6 of whom agreed to attend; thus six potential DNAs were prevented. Eleven vacant appointments were identified in advance. The unexpected DNA rate was reduced to 5% from a potential 21% as a result of this study. The DNA rate for all patients with dementia (both groups) was 44%, whereas the DNA rate for all patients without this diagnosis was 16% ($p < .001$). Surveys show that up to 50% of nonattenders say they forgot about their appointment. This article is very specific to the topic we are researching; it is pertinent to the patient population we are addressing.	There is a potential for cultural differences because this study was done in the United Kingdom.

continued

Table 2. Annotated Bibliography (continued)

Title	Author	Methodology	Major Findings	Major Limitations
Effects of an appointment reminder call on patient show rates	Gariti, P., Alterman, A., Holub-Beyer, E., Volpicelli, J., Prentice, N., & O'Brien, C. (1995)	A pilot study (N = 80) was conducted to determine whether prospective substance-dependent patients randomly selected to be reminded (TC) of their scheduled intake evaluation the day before their first appointment would have a higher show rate than those not contacted (NC), and if TC subjects administered a satisfaction questionnaire 1–3 days after intake would exhibit higher treatment retention rates at 1 week and 1 month posttreatment entry than NC subjects not exposed to the questionnaire.	The findings suggest that reminding prospective patients of their initial scheduled appointments and following up with phone calls to those who fail to show can improve the rate at which patients will initiate treatment, provided that initial appointments are scheduled in a timely manner (7 days or fewer). Similarly, the combination of the reminder call and the satisfaction questionnaire was associated with higher treatment rates for those whose initial appointments were scheduled in a timely manner. Treatment compliance was also shown to improve.	This study was conducted in a drug abuse clinic, which is a special patient population.
Failure to keep clinic appointments: Implications for residency education and productivity	Hixon, A. L., Chapman, R. W., Nuovo, J. (1999)	A survey questionnaire was developed and pretested; it asked what percentage of patients, on average over the past year, failed to keep their family practice clinic appointments in 468 American Academy of Family Physician (AAFP) clinics across the United States. The questionnaire was sent to the directors of all the residency programs and two follow-up mailings to nonrespondents.	A total of 266 surveys were returned for a national response rate of 60%. The geographic distribution of responding programs was 134 (41%) urban, 88 (27%) suburban, 69 (21%) rural, and 34 (11%) inner city. This closely resembled the distribution of family practice residency programs nationwide as reported in the 1998 AAFP residency guide. This study was done at the University of California at the Davis and San Francisco campuses.	The 266 residency programs reported data on 360 clinics. Ten clinics (2.8%) did not know their patients' failure-to-keep-appointment rate. A total of 218 clinics (60.5%) reported a no-show rate of less than 21%, and 127 clinics (35.3%) reported a no-show rate of 21%–50%. Five clinics (1.4%) reported a no-show rate of higher than 50%. When asked how the no-show rate was determined, 64 (17.7%) stated that the reported rate was an estimate. More than one third of all clinics did not use a patient reminder system for clinic appointments. In a comparison of clinics with high (>20%) and low (<20%) no-show rates, there was no statistically significant difference between the use or nonuse of mailed, telephone, or combined reminder systems. Other limitations include the inability to classify which type of appointments were missed most often (e.g., acute care, follow-up visits, new patient appointments, or prenatal care). Questionnaire definitions may have been unclear, and appointment failure was tracked differently by the clinics.

continued

Table 2. Annotated Bibliography (*continued*)

Title	Author	Methodology	Major Findings	Major Limitations
An overview of interventions to improve compliance with appointment keeping for medical services	Macharia, W. M., Leon, G., Rowe, B. H., Stephenson, B. J., Haynes, B. (1992)	A meta-analysis of studies published in English on interventions to improve compliance with appointment keeping was undertaken. A literature search was conducted of MEDLINE on compact disc for 1966–1990 and PSYCHINFO on compact disc databases for the years 1966–1990. Other sources of relevant articles were reviewed to identify studies not found in the computerized search. If the title or article suggested relevance, the article was reviewed. Only articles in which the primary purpose of monitoring appointment keeping were used. Two independent investigators assessed the relevant studies for adherence to eligibility criteria. These required that studies included adequate information to permit an evaluation of study design, target population, randomization procedure, response rates, and quantified effects of interventions on appointment keeping. The term <i>medical</i> was used to refer to patients with nonpsychosocial illnesses. Odds ratios (ORs) were calculated as the odds of attendance in the group that received the intervention divided by the odds of attendance in the control group. Multiple interventions were reviewed and analyzed.	In clinic settings where kept appointments can be an accurate measure of patient compliance with healthcare interventions, broken appointments can be reduced by mail, telephone, or physician reminders; orienting patients to the clinic; or contracting with patients.	The data analyses were from study populations, interventions, and outcomes using pooled ORs. The methods used to identify studies, evaluate relevance and validity, and analyze results conform with criteria set by others. Stringent criteria for scientific merit of the studies was maintained so that the summarized findings are not distorted by bias and error. This article is relevant to our project and is one of the most comprehensive on all interventions associated with appointment keeping.
Improving outpatient department efficiency: A randomized controlled trial comparing hospital and general-practice telephone reminders	Reti, S. (2003)	Outpatient department appointments for 3 general practitioners (GPs) over a 3-month period, were randomized into 3 groups: "hospital," "GP," and "control." Patients in the hospital and GP groups were reminded of their appointment by telephone 24 hours beforehand, by a hospital waiting-list clerk, or their GP, respectively. Information on appointment awareness and subsequent attendance history was recorded.	A total of 109 patients were included in the study. The 3 study groups had no-show rates of 3% (GP), 8% (hospital), and 27% (control). The combined no-show rate for the groups reminded by telephone was 5%. The combined telephone-reminded group was statistically different from the control group ($p = .004$). There was no statistical difference between the GP group and the hospital group ($p = .764$). This trial is appropriate for a hospital-based out-patient clinic, a similar situation to what we are working with. This article is recent, and seems well conducted.	This study was conducted in New Zealand, not the United States, which may bring cultural bias to the study.

continued

Table 2. Annotated Bibliography (continued)

Title	Author	Methodology	Major Findings	Major Limitations
Strategies for enhancing appointment keeping in low-income chronically ill patients	Tanner, E., Feldman, R. H. L. (1997)	Subjects consisted of 200 male and female clients with diagnoses of asymptomatic chronic illnesses (predominantly diabetes mellitus and/or hypertension) who attended an ambulatory medical clinic in a large inner-city hospital. All clients attending the clinic during the time in which the study was conducted, who met the criteria of asymptomatic chronic illness, had a history of at least one previous clinic appointment, and were scheduled for follow-up appointments within a 3-month period were included. In addition, all clients were able to identify a family member or significant other who could be reached by telephone. The sample was 71% female, 95% Black, 69% over the age of 50 years, 26% married and 55% divorced or widowed, 63% with 9 years or fewer of formal education, and 87% with an annual family income of less than \$7,000. The 200 participants were randomly assigned to 1 of 4 groups (1 control and 3 experimental groups; 50 subjects in each group). Group A, the control group, received only an exit interview (questionnaire) and no social support intervention. Group B received an exit interview and social support counseling (SSC). Group C received an exit interview, social support counseling, and a postcard reminder (SSC + PC). The postcard was sent to the subject 1 week before the subsequent follow-up appointment to remind and encourage the patient to discuss the follow-up care with a significant other. Group D received an exit interview, social support counseling, postcard reminder, and telephone call to a designated significant other (SSC+PC+TC). The designated significant other was contacted 3–5 days before the next scheduled follow-up appointment and encouraged to discuss the importance of the follow-up medical visit with the subject.	Three months after the social support interventions, appointment keeping was as follows: Group A = 60%, Group B = 84%, Group C = 88%, and Group D = 88%. The percentage of appointment keeping among the total clinic population of approximately 1,000 clients (59%) was virtually identical to the study control group (60%). The three social support intervention groups (B, C, and D) showed significantly greater appointment keeping than Group A, chi square = 16.7, $p < .0001$. No significant differences were found between Groups B, C, and D. Separate analyses of female and male participants showed overall appointment keeping for female participants ($n = 141$) was 86%; for male participants ($n = 59$) it was 68%. Although postcard reminders and telephone calls are techniques typically used in private physicians' offices with middle-income populations, the use of social support interventions can increase appointment keeping among low-income chronically ill clients.	No major limitations. The large amount of supporting literature adds to the validity of this nursing research. The study method looks valid and consistent. This article definitely pertains to the client population we are studying.

Figure 2. Departmental Performance Improvement Reporting Form

Department: Transplant/Pre-Renal Transplant Clinic		Date: 10-04-05																		
<p>Focus: Reduce the number of no-show appointments in the outpatient Pre-Renal Transplant Clinic for first-time (initial appointment) patients.</p> <p>Analyze: The clinic looked at the no-show rate for January–September of 2005. The no-show rate was 17.5%, with individual week no-show rates as high as 75%. It appears that the larger the number of first-time appointments scheduled, the larger the no-show rate.</p> <p>Develop: Process and scripting for appointment reminder calls. This will include specific scripting and requesting acknowledgment of intention to keep appointment. If patient will not be able to keep appointment, reason for not keeping the appointment will be requested.</p> <p>Execute: Actions for correction</p> <table border="1"> <thead> <tr> <th>Actions Planned</th> <th>Date Due</th> <th>Person Responsible</th> </tr> </thead> <tbody> <tr> <td>Collect 2005 year-to-date data for no-show rates.</td> <td>Done 10-01-05</td> <td>Nurse 1</td> </tr> <tr> <td>Research effectiveness of reminder calls versus mailed reminder cards.</td> <td>Done 10-01-05</td> <td>Nurse 2</td> </tr> <tr> <td>Write process for preappointment reminder calls, including scripting and time frame for making the call.</td> <td>Done 10-01-05</td> <td>Nurse 1 and 2</td> </tr> <tr> <td>Implement new process.</td> <td>Started 10-03-05</td> <td>Nurse 1, Nurse 2, and transplant staff</td> </tr> <tr> <td>Collect postimplementation data.</td> <td>10-31-05</td> <td>Nurse 1 and 2</td> </tr> </tbody> </table> <p>Evaluate: The data showed a decrease in the no-show rate from an average of 17.5% preimplementation to a 0% no-show rate for the first 5 weeks postimplementation. This indicates that it would be beneficial to continue the process being utilized to see if it is sustainable over the long run.</p>			Actions Planned	Date Due	Person Responsible	Collect 2005 year-to-date data for no-show rates.	Done 10-01-05	Nurse 1	Research effectiveness of reminder calls versus mailed reminder cards.	Done 10-01-05	Nurse 2	Write process for preappointment reminder calls, including scripting and time frame for making the call.	Done 10-01-05	Nurse 1 and 2	Implement new process.	Started 10-03-05	Nurse 1, Nurse 2, and transplant staff	Collect postimplementation data.	10-31-05	Nurse 1 and 2
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compare like weeks as much as possible. When the data were reviewed, it was noted that in some weeks no new patients were scheduled to be seen; this is noted as “no new patients” on the grid. The outcome data (**Table 3**) showed a 0% no-show rate at the end of the 5 weeks following implementation. Although the time frame is short and the number of patients in the project relatively small, the methodology used—one person making the calls with the same script—is both valid and reliable. Based on prior research reviewed, this project was appropriate, worthwhile, and fiscally responsible (see **Table 4**).

Decision-Making Strategies

The protocol for preappointment telephone reminder calls is easily maintained. The resources necessary are minimal, because existing staff can easily place the reminder calls. The scripting and the implementation of reminder calls align with the goals

Table 3. Pre-Renal Transplant Clinic Appointments: Scheduled Versus No-Shows After Implementation of Reminder Calls

Week of	Patients scheduled	No-Shows	No-Shows (%)
10-03-05	2	0	0
10-10-05	6	0	0
10-17-05	2	0	0
10-24-05	5	0	0
10-31-05	5	0	0

of the organization, and the results were successful. Similar protocols put into place by other outpatient clinics should minimize their no-show rates.

References

Boyle, B. (2004). *Patient reminder calls are a cost-effective way of improving adherence to office visits.* Paper presented at the 15th International AIDS Conference in Bangkok, Thailand, and listed as an Internet conference report. Retrieved September, 29, 2005, from www.hivandhepatitis.com/2004icr/aids2004/dos/0716/071604_q.html.

Table 4. Financial Analysis of Project

Staff	Average Hourly Rate	Time Commitment	Average Number of No-Show Patients	\$ Lost per Week
Financial coordinator	\$19.50	30–45 min	2 per week	\$19.50–\$29.26
Nurse coordinator	\$44.00	30 min	2 per week	\$44.00
			Total Cost per Week	\$63.50–\$73.26
			Annualized Loss	\$3,302–3,810

Staff	Average Hourly Rate	Time Commitment	Number of Reminder Calls Made	Cost per Week
Transplant support representative	\$17.00	20 min	10 reminder calls at an average 2 min per call	\$5.67
			Annualized Cost	\$294.67
			Annualized Loss of No-Show Patients	\$3,302–3,810
			Annualized Cost of Reminder Calls	\$294.67
			Total Savings	\$3,007.33–\$3,515.33

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Authors' Biographies

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Heather Kendall, MSN RN, is a quality coordinator at Kaiser Sacramento Medical Center, Sacramento, CA; in that role she ensures clinical quality. She has worked in critical care for more than 25 years and in the field of cardiovascular medicine for the last 22 years.

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Media Reviews

Lecia A. Albright

The Baby Business

Debora L. Spar, *Harvard Business School Press*, ebrown@hbsp.harvard.edu, 2005, \$26.95, 304 pages, ISBN 1-59139-620-4

Audience: administrators, ethics committees, fertility and reproductive centers and programs, healthcare quality professionals, maternal and child centers

Key Words: consumer advocacy, ethics, public policy, rights of patients

Conceiving children is big business: \$2.7 billion was spent in the infertility treatment market in 2002. In her thought-provoking book *The Baby Business*, Debora Spar delivers a masterful account of the baby trade market. Although Spar skillfully delivers information about policy, clinical practice, and reproductive and genetic science, she does not steer the reader toward a definitive public policy to govern the business of having babies. Instead, the reader is encouraged to think about the reality of this business and the repercussions not only in the United States but worldwide.

The book covers subjects such as infertility therapies, conception legislation, insurance coverage assistance around the world, the causes and conditions of infertility, artificial insemination, male infertility, fertility drugs and hormones, donor eggs, in vitro fertilization and its associated costs, assisted reproductive technology success rates, regulation of fertility clinics, the surrogacy market, the international market for reproductive services, genetics and designing babies, human cloning, adoption, property rights, and, finally, the politics of this business.

The book mixes ethics, business practices, and clinical technology in a fictionlike narrative. I read it cover to cover without putting it down.

Reviewed by Carole S. Guinane, MBA RN

Leading Your Healthcare Organization to Excellence: A Guide to Using the Baldrige Criteria

Patrice L. Spath, *Health Administration Press*, www.ache.org/hap.cfm, 2005, \$65.00, 244 pages, ISBN 1567932339

Audience: executives, healthcare quality professionals

Key Words: Baldrige, organizational behavior, performance improvement change and development

Leading Your Healthcare Organization to Excellence: A Guide to Using the Baldrige Criteria focuses on the Baldrige National Quality Award criteria as a framework for improving organizational performance. The author, Patrice Spath, points out early on in the book that the Baldrige criteria are not just another management fad but a blueprint for achieving sustainable organizational excellence.

Spath's aim is not to help readers win the Baldrige award or to provide hints for completing the award application process but rather to inspire busy executives to use the Baldrige criteria as a model for organizational transformation. Spath presents the Baldrige criteria as useful tools for organizational assessment and improvement. Because the Baldrige criteria are not prescriptive and are built on sound management practices like strategic planning and customer focus, they are useful for improving organizational results. Using the criteria has been encouraged by numerous experts, some from the National Institute of Standards and Technology (NIST), which administers the award. So what makes this book unique?

Core management concepts, on which the Baldrige criteria were built, are discussed in the context of 21st-century healthcare organizations. Spath offers key points for reflection and self-assessments throughout the book, allowing readers to consider the theories in the context of their own organization. Although these points are offered as a "speed-read" option for

executives, they are most useful when considered after one has read the entire book and the related Baldrige criteria. A copy of the *Baldrige Healthcare Criteria for Performance Excellence*, which can be easily downloaded from the Internet (www.quality.nist.gov), is a necessary companion to the book. Case studies are also included, providing brief examples of concept application.

The self-assessment tools and related examples are particularly valuable to the Baldrige novice and to anyone working toward improved organizational efficiency. Winner of the 2006 American College of Healthcare Executives James A. Hamilton Book of the Year Award, *Leading Your Healthcare Organization to Excellence* is recommended reading for executives and healthcare quality professionals who may be frustrated with other management and performance improvement methodologies.

Reviewed by Dale Dunlow-Harvey, MS RN

Applying Quality Methodologies to Improve Health Care: Six Sigma, Lean Thinking, Balanced Scorecard, and More

Dawn Vonderheide-Liem and Bud Pate, HCPro, www.hcpro.com, 2004, \$99.00, 162 pages, ISBN 1578394759

Audience: healthcare administrators, healthcare quality professionals, improvement managers, medical professionals, nursing professionals, organizational performance consultants

Key Words: administration, benchmarking, best practice, change, data management, management, organizational behavior, process improvement, quality tools

Applying Quality Methodologies to Improve Health Care can be used as a reference for understanding various quality terms, such as Six Sigma, Baldrige, and Plan, Do, Study, Act (PDSA). The book is divided into 10 chapters—on total quality management, benchmarking, quality circles, Six Sigma, Lean Thinking, Balanced Scorecard, ISO 9000, the Malcolm Baldrige National Quality Award, rapid cycle testing, and organizational issues. Each chapter provides a definition, explanation, and example of the term being discussed.

This book is a convenient tool for novices as well as experienced quality healthcare

professionals. Because of its clear, understandable definitions, explanations, and examples of best practices, it can be used as a quick reference. It can also be used as a guide to help determine which improvement approach is needed for your organization.

Reviewed by Toni Layer, MHCA RN CPHQ

From Management to Leadership: Practical Strategies for Health Care Leaders (2nd Edition)

Jo Manion, Jossey-Bass, www.josseybass.com, 2005, \$48.00, 367 pages, ISBN 0787979295

Audience: directors, human resources, managers, vice presidents

Key Words: human resources, leadership, management principles

Whether you manage a small team or aspire to lead a large department, this book will offer constructive advice on leadership principles. As a consultant and nationally recognized speaker, Manion offers practical advice on becoming an effective leader.

She begins by distinguishing between management and leadership, the difference being that management focuses on efficiency and leadership focuses on effectiveness. She also asserts that managers are generally interested in maintaining the status quo, while leaders are more concerned with innovation, which is a particularly difficult outcome in healthcare.

Manion dedicates a considerable portion of the book to communication, paying particular attention to common communication problems and barriers to effective communication. The barriers include gender differences, communication styles and preferences, and tribal language (examples of tribes in healthcare include administration, nursing, and physicians). In many of the chapters she intersperses case examples from healthcare. She also includes useful conversation points at the end of each chapter that are applicable to an individual's particular circumstances.

Manion identifies the specific skills a leader should exhibit, such as the ability to effectively facilitate processes and obtain results. She emphasizes the importance of leaders' being able to empower others, which, according to Manion, is a key process that requires

greater understanding. She also explains the key elements of conflict resolution and discusses effective methods for negotiating conflict. In addition, the book focuses on the five phases of change: preparation, movement, team creativity, new reality, and integration. Manion's suggestions for facilitating change are useful for those grappling with this difficult process.

Finally, the book discusses how leaders contribute to the development of others and why this skill should be considered a leadership competency.

This easy-to-read and informative book is useful for anyone who is currently a leader or is considering gaining the competencies to become one. I highly recommend it.

Reviewed by Pamela Scarrow, CPHQ

Health Care Financial Management for Nurses: Merging the Heart with the Dollar

Janne Dunham-Taylor and Joseph Pinczuk, Jones and Bartlett, www.jbpub.com, 2006, \$72.95, 896 pages, ISBN 0763731498

Audience: nursing and other clinical managers and supervisors without a business background

Key Words: administration and management, billing and claims, collaboration, cost containment and management, decision making, organizational behavior change/development, performance improvement

Over the course of 21 chapters, the authors write about financial management for nursing, clinical, and quality management in language clinicians can understand and need to understand. Physicians more often understand the power of combining financial and clinical expertise; other clinicians trail behind. This book takes a systems approach to financial management. The sections on budget principles and budget strategies provide particularly useful how-to's for readers. The section on financial and accounting issues provides a primer on these topics. Although it is a useful resource, managers may require more depth and other sources for a more complete understanding of the attendant issues. References to the Charge Master were missing, which was a disappointment. Developing strategies for refining and maintaining the Charge Master provides an opportunity for collaboration between clinical operations, process improvement, and finance, and a discussion of these strategies would have been a helpful addition. Despite this omission, readers will find value in the references following each chapter.

Reviewed by Daniel H. van Leeuwen, MPH RN CHE CPHQ

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Quality NETWORK

Robert J. Rosati and Daniel van Leeuwen, Quality NETWORK Editors

“Quality NETWORK” offers reviews of selected Web sites relevant to healthcare quality professionals. The editors welcome comments and feedback on the column as well as suggestions for further reviews. To read previous reviews that have appeared in the journal, visit www.nahqplus.org, the exclusive Web site for NAHQ members.

Clinical Trials

www.clinicaltrials.gov

Key Words: clinical trials, consumer, disease, research

The Web site Clinical Trials is filled with information for consumers about clinical trials: the process, purpose, participation requirements, control groups, protocols, sponsors, phases, and risks and benefits. The topics covered educate consumers and help them decide whether to participate in a clinical trial.

The site is updated regularly and includes information on federally and privately funded clinical trials. With approximately 29,500 clinical studies listed on the site, the reader has access to information about trials and sponsorship in the United States and more than 130 countries. In addition, the site lists trial sponsors such as the National Cancer Institute, the National Institutes of Health Clinical Center, and the Food and Drug Administration Cancer Liaison Program. The site is not limited to cancer research, however. Consumers can review listings of clinical trials that are in progress, in the recruitment phase, or closed.

The site is easy to navigate and has aids for finding various topics of interest; pages load quickly. Links to research sites for particular studies give consumers access to additional information. There are no fees for accessing information on the site, nor is membership necessary to view content.

Overall, this is an informative and interesting site, and I have added it to my list of help sites.

Reviewed by Ann Allen, MSN RN CPHQ

College of American Pathologists

www.cap.org

Key Words: accreditation, compliance programs, laboratory, quality improvement and management

The College of American Pathologists (CAP) launched a new Web site on December 11, 2005, that provides better navigation and more graphics. This comprehensive site helps support the organization’s mission, which is to serve and represent the interests of patients, pathologists, and the public by fostering excellence in the practice of pathology and laboratory medicine. Healthcare quality professionals may be most interested in the site’s home page tab for accreditation and laboratory improvement, which allows quick access to valuable information about accreditation and inspection, proficiency testing, quality assurance programs, and anatomic pathology education programs. Although CAP limits membership to physicians in the pathology specialty, nonmember access still permits visitors to use easily downloadable tools and resources. Members also enjoy bookstore discounts, the CAP membership directory, and a complete meeting calendar.

More than 100,000 people visit the CAP site each month to take advantage of the helpful content, which includes reference resources and publications, education programs, a media center, a career center, and general information about CAP. The “contact us” and “site search” tools were easy to use. As a healthcare quality professional accountable for laboratory accreditation, I definitely bookmarked this site!

Reviewed by Deborah A. Dowling, MPM RN CPHQ CMSC

QUALITY NETWORK

Health Level 7

www.hl7.org

Key Word: information systems, standards

Health Level 7 (HL7) is a not-for-profit American National Standards Institute (ANSI)-accredited standards developing organization (SDO). SDOs produce standards for particular healthcare domains; HL7's domain is clinical and administrative. The site is organized by section: about HL7, events, members only, membership, resources, and committees (with a separate section for news). The site has hyperlinks embedded in the text so that users can access the referenced site or article. The site is helpful for those who are interested in the most current HL7 standards and methodology.

Reviewed by Barbara Corn, MA BSN RN CPHQ

Healthcentral

www.healthcentral.com

Key Words: advocacy, consumer, knowledge management, practice guidelines

Chris Schroeder (former WashingtonPost.com chief executive) launched the Health Central Network (HCN)—an umbrella network of more than 50 disease-specific Web sites—with support from advertisers such as Wal-Mart, L'Oreal, and Johnson & Johnson and an exclusive in-store marketing partnership with Whole Foods. The site offers patients' testimonials on medications and a number of resources, such as local directories of babysitters who are trained to care for children with diabetes, cancer, and other diseases. HCN is equipped to handle transferring medical records, finding a doctor, and scheduling an appointment. According to the Web tool Alexa.com, the speed is slow (72% of sites are faster), the average load time for a page is 3.3 seconds, and 3,040 other sites link to this site. Any phrase that was entered into the search engine yielded a wealth of results, which required time to wade through all of the articles and streaming video to make a selection. The advertising was present but not overwhelming. Along the bottom of the home page are links to the most common search subjects, and during a 2-week period the home page content changed

several times. Healthcentral.com is an intriguing site that is worth exploring and sharing with patients and family members. The site can be a valuable resource for users who want to quickly orient themselves or access information on health conditions.

Reviewed by Daniel van Leeuwen, MPH RN CPHQ CHE

State Snapshots 2005 from the National Healthcare Quality Report

www.qualitytools.ahrq.gov/qualityreport/2005/state/summary/intro.aspx

Key Words: benchmarking, data collection, evidence-based medicine, indicator monitoring, management and analysis

State Snapshots 2005 is the Agency for Healthcare Research and Quality's (AHRQ) open-access Web tool that is perfect for the data-minded user. Based on AHRQ's 2005 National Healthcare Quality Report (NHQR), the tool uses measure domains—effectiveness of care, patient safety and patient-centeredness, and timeliness—to assess the quality of healthcare in the general U.S. population.

Navigating and accessing specific state information on this site is intuitive. On the home page, the user is prompted to choose a state from a national map. When a state is selected, the state's performance across all NHQR quality measures is displayed and compared against data for all other states, referencing the most recent data year and the preceding data year.

The state data available to users include a listing of the state's strongest and weakest measures, state performance in different types of care (e.g., preventive, acute, chronic), state performance across settings of care (e.g., hospital, ambulatory, nursing home, home health), state rankings for selected measures, and a diabetes focus area (e.g., data on disparities, costs, potential savings from quality improvement).

Valuable data tables, including all measures by all states in NHQR, can be downloaded. The site also has a helpful section that discusses how measures were developed, scored, and presented within the performance parameters and how the section focusing on diabetes was constructed.

Reviewed by Carlo Teano, CHCA

The Healthcare Facilities Accreditation Program

www.hfap.org

Key Words: accreditation, CMS, JCAHO, osteopathy

Although users will be redirected to the doctor of osteopathy (DO) Web site when they type in *www.hfap.org*, the Healthcare Facilities Accreditation Program (HFAP) of the American Osteopathic Association is actually a section of the DO Web site where information about its alternative accreditation program is provided. As an alternative to the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) accreditation program, HFAP enables organizations to receive reimbursement for healthcare services from the Centers for Medicare & Medicaid Services.

The Web site contains information regarding resources (e.g., manuals, applications, newsletters), in addition to a listing of hospitals accredited by HFAP, grouped by state. The site also gives users a list of the most frequently occurring delinquencies, and although the list has not been updated since December 2004, users will find an up-to-date list of the top problematic areas (based on their surveys) on subsequent pages.

This Web site is managed by the American Osteopathic Association and is a forum for its members, who are physicians and students. Although information on the accreditation program is limited, the site is fairly easy to use if users are careful not to navigate off the site. Contact information is limited to a nameless e-mail address, which makes it difficult to determine whom users are contacting.

Although the site's concept is interesting, the limited amount of information made it difficult for potential clients to navigate through the alternative accreditation program. The absence of examples for comparison of standards to other accrediting facilities, such as JCAHO, was also a deficiency. Although the site was interesting to visit and required little time to browse, it is not one that I would return to unless I planned to use this program for accreditation.

Reviewed by Ann Allen, MSN RN CPHQ

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Quality Products and Resources

Luc R. Pelletier

This *JHQ* feature provides members with interesting up-to-the-minute resources that will help them navigate through the constant flood of healthcare quality information. Brief descriptions of recently released media are provided, as well as ordering and Internet access information. New product announcements and company contact information are also provided.

Resources

Public View on Shaping the Future of the U.S. Health Care System

On behalf of the Commonwealth Fund's Commission on a High-Performance Health System, Harris Interactive surveyed U.S. adults to determine the public's perspectives on how to improve patient care and the health policy priorities facing the president and Congress. Overall, the representative sample of 1,023 adults, ages 18 and older, revealed strong public support for improved care coordination and access to information.

Common suggestions for improving the quality of care offered by survey participants included the expanded use of information technology, care teams, and improved delivery of preventive services. Patients reported recent experiences of wasteful, inefficient, or unsafe care. In addition, half of middle- and lower-income families reported serious problems paying for care and insurance coverage. Three-quarters of all adults believe that the U.S. healthcare system needs fundamental change or complete rebuilding. According to the participants of the Harris Interactive survey, expanding insurance and controlling costs should be top priorities for federal action.

The full report can be accessed at www.cmwf.org/publications/. For more information, see Schoen, C., How, S. K. H., Weinbaum, I., Craig, J. E., and Davis, K. (2006). Public views on shaping the future of the U.S. health care system. New York: Commonwealth Fund.

Framework for a High Performance Health System for the United States

The United States lags behind other industrialized nations on many dimensions of health system performance despite spending the most money on healthcare. The Commonwealth Fund's Commission on a High Performance Health System (formed in July 2005) seeks to chart a course for a U.S. healthcare system that will provide significantly expanded access to healthcare, higher quality of care, and greater efficiency in healthcare delivery for all Americans, especially those who are most vulnerable. In this consensus statement, the commission defines *high performance* and outlines its vision of a uniquely American high-performance healthcare system. After identifying the most critical sources of the current system's failures, the commission offers a strategic framework for addressing these problems through specific actions.

The full report can be accessed at www.cmwf.org/publications/. For more information, see The Commonwealth Fund Commission on a High Performance Health System. (2006). Framework for a high performance health system for the United States. New York: Commonwealth Fund.

Institute of Medicine Releases Report on Medication Errors

According to a new report issued by the Institute of Medicine of the National Academies, medication errors are among the most common medical errors, harming at least 1.5 million people every year. The extra medical costs of treating drug-related injuries that occur in hospitals can be conservatively estimated at \$3.5 billion a year, and this amount does not take into account lost wages and productivity or additional healthcare costs.

The committee offers recommendations for patients, healthcare organizations, government agencies, and pharmaceutical companies that are aimed at increasing communication and improving interactions between healthcare professionals and patients. The report advocates creating new, consumer-friendly information resources through which patients can

obtain objective and easy-to-understand information on medications. In addition, it calls for all prescriptions to be written electronically by 2010, and it suggests ways to improve the naming, labeling, and packaging of medications to reduce confusion and prevent errors.

The full report can be accessed at www.nap.edu. For more information, see Institute of Medicine, Committee on Identifying and Preventing Medication Errors. (2006). Preventing medication errors (P. Aspden, J. Wolcott, J. L. Bootman, L. R. Cronenwett, Eds.). Washington, DC: National Academies Press.

Information Technology for Chronic Disease Management

Chronic illnesses affect more than 100 million Americans and account for nearly three-quarters of national healthcare spending. Two information technology (IT) tools have the potential to reduce costs and improve outcomes for those with chronic diseases.

Chronic disease management systems (CDMSs) focus specifically on managing chronic disease and preventive care, and the more comprehensive electronic medical record (EMR) documents the entire patient encounter and provides real-time patient information.

IT Tools for Chronic Disease Management: How Do They Measure Up? examines the comparative value of these two systems. This new report finds that CDMSs scored higher in product function and are significantly less expensive than EMRs. EMRs received higher ratings for vendor services and technology. The two systems had similar scores for corporate qualifications.

The full report can be accessed at www.chcf.org/topics/chronicdisease/. For more information, see Jantos, L. D., & Holmes, M. L. (2006). IT tools for chronic disease management: How do they measure up? Oakland, CA: California HealthCare Foundation.

Implementing Brain Injury Clinical Guidelines in Hospitals

Clinical care guidelines help providers practice evidence-based medicine and reduce variability in the quality of care they deliver. Nonetheless, guideline adoption to date has been slow and uneven. What hinders adoption of clinical guidelines? And how do successful hospitals manage to do it?

A new report, *Facilitating Implementation of Evidence-Based Guidelines in Hospital Settings: Learning from Trauma Centers*, supported by the Commonwealth Fund and the Brain Trauma Foundation and written by Artemis March, examines the challenges of translating guidelines for the management of severe brain injury into practice and discusses how some hospital trauma centers have overcome those challenges. Every year, 50,000 people die from traumatic brain injury, and tens of thousands more are neurologically disabled. Treatment costs are estimated as high as \$48 billion per year.

Using case studies and interviews with physicians, nurses, policy makers, and others, the report identifies barriers to compliance with brain injury guidelines, describes how three trauma centers lowered or overcame such barriers, and identifies common threads in their approaches.

For more information, see March, A. (2006). Facilitating implementation of evidence-based guidelines in hospital settings: Learning from trauma centers. New York: Commonwealth Fund.

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