

The Business of Caring



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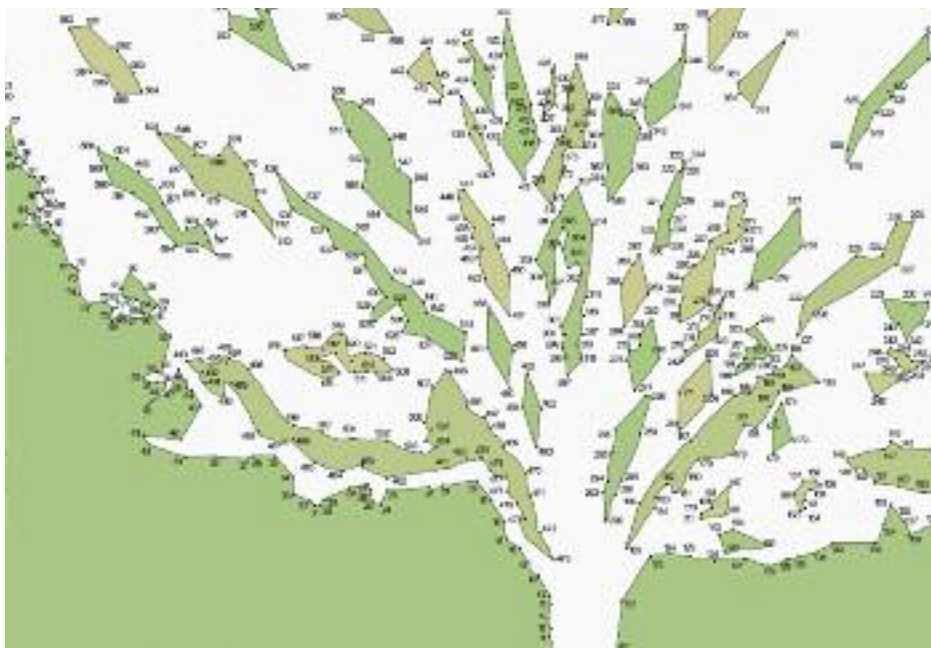


The American Organization of Nurse Executives

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Cultivating a Mutual Respect for Data



Granted, the average financial analyst might have to Google “sepsis” to participate in discussions about reducing sepsis mortality rates. By the same token, the typical clinical leader may glaze over at the mention of productivity measures. However, if you can get these two talking about how to improve these two different data points, it could be the start of a beautiful friendship. A mutual respect for data—and how data guide decision making—is one of the common grounds between finance and clinicians. → →

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ABOUT THIS NEWSLETTER

Beginning with this issue, *The Business of Caring* will be aimed at finance leaders as well as clinical leaders. In the past, the newsletter focused mostly on helping nursing leaders navigate the business side of health care. Now, we will also include articles on how finance leaders can collaborate with clinical leaders to improve quality and reduce costs.

The Business of Caring

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Driving out unnecessary costs and improving quality requires two critical skill sets. The first is an in-depth understanding of how patient care is delivered—and how to improve it. Clinicians, of course, are the go-to source for this type of information. A second skill set—sophisticated data analysis and reporting—resides in abundance in the finance departments of hospitals and health systems.

“Clinicians are experts in what they do. They understand the clinical implications,” says Kari Cornicelli, CPA, FHFMA, CFO and vice president at Sharp Grossmont Hospital in San Diego. “In finance, our expertise is in running and analyzing data and in understanding the financial side. But we may not understand the implications on operations. We may have our own set of assumptions and, unless we work with the clinical side to validate our assumptions, then we can’t come up with the right solutions.”

Rita Turley, MS, RN agrees: “People who understand clinical and financial practice must sit down at the same table and really start to have discussions,” says Turley, a former nurse executive who is now a consultant. “They need to ask, ‘What does it cost to provide care the way it is currently being done? How can it be improved—not only from a quality perspective, but also from a cost perspective?’”

The Benefits of Pairing

Some organizations are formally pairing finance and clinical leaders to manage unit/department budgets, conduct detailed service line analysis, identify beneficial improvement strategies, and analyze the cost-benefit of new technology. “When that happens, the results can be really incredible,” says Turley.

Take, for example, the \$1.9 million saved in nurse traveler costs at 107-bed

“In finance, our expertise is in running and analyzing data and in understanding the financial side. But we may not understand the implications on operations.”

Pioneers Memorial Hospital in Brawley, Calif. “Finance pointed out the level of cost related to registry,” says CFO Daniel R. Heckathorne. “Then our nursing leadership took it upon themselves to get together with human resources and develop an aggressive nurse recruiting program.”

In just over a year, the hospital had hired enough staff nurses to replace all but two of its 20 travelers. Accomplishing this required additional investments in recruitment, nursing salaries, and internal training. “We don’t see these as added costs. We see them as investments,” says Heckathorne, noting that the initiative has also improved continuity of care and staff morale. Even with these added costs, the hospital realized an ROI of about \$550,000.

A collaborative budgeting process was the backbone. “We sit down together when we do budgeting and set targets for how much we could improve over a period of time,” says Heckathorne. Throughout the year, financial analysts meet with nursing leaders to review productivity and budget reports and work together to address any variances.

In another example: Sharp Grossmont has avoided spending thousands of unnecessary dollars by bringing finance and clinical leaders together on a New Technology Committee. The cross-discipline team evaluates the cost-benefit of promising new supplies and equipment, separating facts from sales pitches.

Recently, the committee has looked at cardiac stents, hypothermia equipment, and interventional radiology catheters.

“There is usually a claim of better outcomes,” says Anthony D’Amico, vice president of clinical services at Sharp Grossmont. “But if you dig a little deeper and ask to see the research or the data, it is often not there. Our committee provides a good kind of vetting process to actually validate that there is an outcome benefit.”

In some cases, the additional cost is justified. For instance, the committee recently approved the use of an expensive interventional radiology catheter for treating acute strokes. “We felt the benefit was so great that we waived the incremental cost,” says D’Amico, who manages laboratory, radiology, and other ancillary services.

“It really takes a dynamic team working collaboratively to dive in and analyze and understand all the implications,” says Cornicelli. The committee even includes coders who validate, for instance, whether a financially beneficial coding change related to a new technology can truly be supported by physician documentation—and whether that coding change would generate enough additional reimbursement to cover the more expensive technology.

Two Mindsets; Better Results

By reviewing and digging into data together, clinical and finance leaders can shed some clarity on a variety of problems and opportunities.

Finding errors and solutions. Unity Health System in Rochester, NY, is already

seeing reductions in supply expenses just six months after putting together finance-clinical teams to review operating budgets for major departments/cost centers. One financial analyst meets monthly with a small group of clinical managers. The managers are expected to come to the meetings with specific questions or problems they want to discuss with the analysts related to the various budget reports they receive.

“The financial analysts have gotten very creative in helping managers figure out how to dig into the data and how to challenge some of our charges,” says Jane McCormack, MSN, RN, senior director for nursing and patient care. For instance, the financial analysts have pulled material managers into the meetings to explain why certain supply charges were appearing on unit budgets. “The analysts are in a much better position to pin down where some of these expenses are coming from, and we actually found some errors that were easy to hide in some of our bigger departments.”

McCormack and her managers rely heavily on finance’s data analysis skills. “For example, we were struggling with a labor benchmark in our walk-in care center. The area was not meeting its step-variable rate because of volume increases. So we had to look at different methodologies. I wasn’t necessarily proposing that we add incremental FTEs to the budget as much as I was saying, ‘The benchmarking methodology is not working.’ Our financial analyst came up with a perfect solution that has helped us benchmark the walk-in center’s budget-to-actual activity. I would not have had the time to do all the math and

run the year-to-date numbers to identify this new approach.”

As Turley points out, finance is trained in variance analysis, which means they can help clinical leaders “manage the peak and valleys of work.” “Work peaks at certain times and valleys at other times,” says Turley, adding that many hospitals are struggling to improve patient flow and remove delays/breakdowns in care delivery processes. “The peaks and valleys could be related to staffing, the processing of labs and medications, or other issues. With the tools they have, finance can help identify ways to level those peaks and valleys. The data analysis really takes the emotion out of the equation.”

Validating assumptions. Clinicians, in turn, can help finance understand and validate data. “You’ve got to have the clinician that’s going to ask the ‘what if’ questions, or say ‘this doesn’t look right,’” says Cornicelli. “Clinicians can be astute in asking for additional data that will help us further clarify the findings.”

For instance, Angela Coladonato, RN, MSN, NEA, BC, is currently challenging her finance department’s perspective on nursing salaries. As CNO of Pennsylvania-based Chester County Hospital, Coladonato must compete against other suburban Philadelphia hospitals to recruit and retain staff nurses. “Finance needs to understand that we need to remain competitive with our salaries,” she says. “They may look at salary data from different U.S. regions and think our salaries are competitive. But we really have to look at what’s happening within 15 to 20 miles around us. If you look around this area, salaries continue to go up.”

Financial analysts need two key skills, says Cornicelli: the ability to ask the

“Our financial analyst came up with a perfect solution that has helped us benchmark the walk-in center’s budget-to-actual activity.”

right operational questions and a comprehensive understanding of any revenue implications on the inpatient and outpatient side.

These two skills proved crucial when the New Technology Committee at Sharp Grossmont evaluated the cost-benefit of offering a new procedure. The vendor insisted that the procedure could be coded as an inpatient procedure, which promised a healthy reimbursement scenario. However, when finance did a little more digging, they learned that the procedure had to be coded as an outpatient procedure, which completely changed the reimbursement and the ROI.

“Financial analysts can build a spreadsheet, but to really understand what is happening behind those numbers, you need to validate the reality,” says D’Amico. “Sometimes the pro forma is built on assumptions that just don’t stand up to the test of reality. So it’s important for financial analysts ask the right questions and to probe, test, and pick out weak spots in the assumptions.”

Identifying priorities. “I think finance also adds value by helping our clinicians find out where to spend their time,” says Mike McNeely, director of finance at Memorial Regional Medical Center in Mechanicsville, Va. “How do we focus the energy and the limited time and resources we have so we get the biggest reward out of our efforts?”

As detailed in the case study on page 8, Memorial Regional is teaming up clinicians, physicians, and finance leaders to lead clinical improvement efforts. McNeely relies on sophisticated data reporting capabilities to slice and dice variable cost data into specific buckets, such as nursing costs, lab costs, etc. “You have to go down to the charge level detail to determine what is driving the costs of those services: Is it the operating time, is

“Sometimes the pro forma is built on assumptions that just don’t stand up to the test of reality. So it’s important for financial analysts to ask the right questions and to probe, test, and pick out weak spots in the assumptions.”

it the pharmaceutical regimen, is it the location, or the length of stay?

Once leaders find the cost drivers, they can focus and channel their energy toward making the greatest impact in the least amount of time, he says.

Expanding perspectives. Finance folks tend to be really black and white, says Turley. In contrast, clinicians tend to generalize to worst case scenarios—for example, defending budgets based on the possibility of high census numbers. But together, finance and clinicians can expand each other’s perspectives.

By walking them through the data, finance can help clinicians with their worst-case scenario thinking. “If you are always thinking of the worst-case scenario, and you are staffing your unit like that, then you are being somewhat wasteful,” says Turley.

On the flipside, Heckathorne encourages his financial analysts to learn the business of clinical care delivery—from a reasonable point of view. “We don’t need to prep for surgery, but we need to learn the processes of care, the standards of care, and how care is delivered.”

For instance, when Pioneer’s emergency department (ED) was 40 percent over budget in October due to flu-related complaints, Heckathorne encouraged his finance staff to consider how this ED uptick would impact the budgets of other hospital areas. “If the ED is 40 percent over, then the lab is going to be over and patent registration is going to be going nuts,” says Heckathorne. I told my staff,

‘Think about it—a certain number of those ED patients will be admitted, which will put pressure on nursing, pharmacy, lab, respiratory therapy, and many other departments.’ We’ve got to know what indicators drive our business. Then we can understand why, for example, there is so much overtime and be supportive of our clinicians.”

These types of reality checks are common occurrences during the monthly meetings between clinical leaders and financial analysts at Unity Health System. “It is an opportunity for the managers to give detailed explanations of why they are not meeting their benchmarks or targets,” says McCormack.

“For example, we’re famous on the clinical side for saying labor can be driven by acuity,” she says. “But ‘acuity’ is just a word to a financial analyst, who sees that we are still \$60,000 over in RN labor. These meetings give us an opportunity to describe exactly who drove the acuity up. It might have been driven up by one patient who needed one-on-one nursing care, which threw the unit’s labor expenses over immediately.”

Understanding what drives the data can help leaders identify long-term, lasting improvement solutions—versus short-term fixes. “We need to look for sustainable change versus immediate results,” says Turley. “There are definitely some ways to get immediate results by fixing those things that are blatantly broken. But we also need to think about the sustainability of our work and how to improve care over the course of time.” ☞

Care Models and the Bottom Line

Patient care and budgets are affected by the care model your nurses choose.

I'm a finance officer in a mid-sized hospital. Our nurses are adopting a new model of patient care, and they tell me that this new model is going to improve patient satisfaction and efficiency. Can you help me understand what a care model is? How is this different than a nurse staffing model?

Sanford: A nursing care model determines the roles of nurses and other caregivers, and the way they all work together in providing care to patients. Care models have evolved over time, along with changes in society, technologies, and human knowledge.

Caregivers in a care model often include nursing assistants, technicians, and licensed practical nurses (LPNs). Some models differentiate practice between RNs with bachelor's or graduate degrees from those with associate education, and may include clinical nurse specialists (CNSs) and clinical nurse leaders (CNLs) who have master's or doctorate degrees.

When you have a care model in place, you can then develop a staffing model. The care model defines the *roles* of the nursing team members, while staffing models address a nursing unit's expected census and patient acuities with the projected number of each type of team member needed *and in what ratio*. For example, a care model may call for a ratio of one LPN and two nursing assistants for each RN; the staffing model would then determine the actual number of those caregivers needed to provide care to the number of patients expected.

Many of these new care models not only improve patient care ... but they also create staffing and budget efficiencies.

You may be familiar with some of the older care models, such as team nursing, in which nurses and nurse extenders worked as a team with very specific job responsibilities for a group of inpatients. Another model you might be aware of is primary nursing, in which individual nurses are responsible for planning and overseeing care for a group of patients.

Today, research is being used to develop new models that define new roles for nurses, leverage the use of technology, and engage patients in their own care across the continuum. The Robert Wood Johnson Foundation is currently showcasing 24 different care models, which range from hospital-based care to comprehensive community models in which nurses play a major role in health and wellness of community members. (For more, visit www.innovativecare-models.com.)

Other models are also based on research and differentiated practice. For example, in the synergy model developed by the American Academy of Critical-Care Nurses (AACN), the needs of patients or units must be matched to individual nursing competencies related to education level, certifications, and/or experience. In this model, a postoperative patient on a surgical unit who has diabetes, for instance, would be cared for by a nurse with special training or certification in diabetic care to prevent diabetes-related complications during recovery. New information technologies are being developed that help organizations match patients with the nurses who are most competent to care for them.

Another new AACN model has led to development of a new nursing role—a clinical nurse leader. CNLs are masters-prepared generalists who integrate care for a distinct group of patients, using evidence-based practices. They ensure that all care the patient receives,

whether from nurses, nurse extenders, physical therapists, social workers, respiratory therapists, dietitians, and others, is coordinated and part of a patient care plan. They also mentor less experienced team members. CNLs are different from advanced registered nurse practitioners (ARNPs) and CNSs who may be used in other care models.

Not yet widely used but on the horizon are *virtual* nursing care models, in which nursing specialists can be connected to medical/surgical and other units via technology, including cameras. Some of these are already in use in home health settings and intensive care units.

Many of these new care models not only improve patient care by combining the best technologies and clinical practices, but they also create staffing and budget efficiencies. As a result, they are often tied to decreased length of stay, decreased hospital readmissions, and improved patient care quality, safety, and satisfaction. So if your nurses believe that the care model they're proposing will improve patient satisfaction or efficiency, they may be talking about one of these models.

As your organization explores new care models, try to identify how each one will suit the needs of your organization, your staff, and your patients, and whether it will bring about improvements in quality and the financial bottom line. ☞



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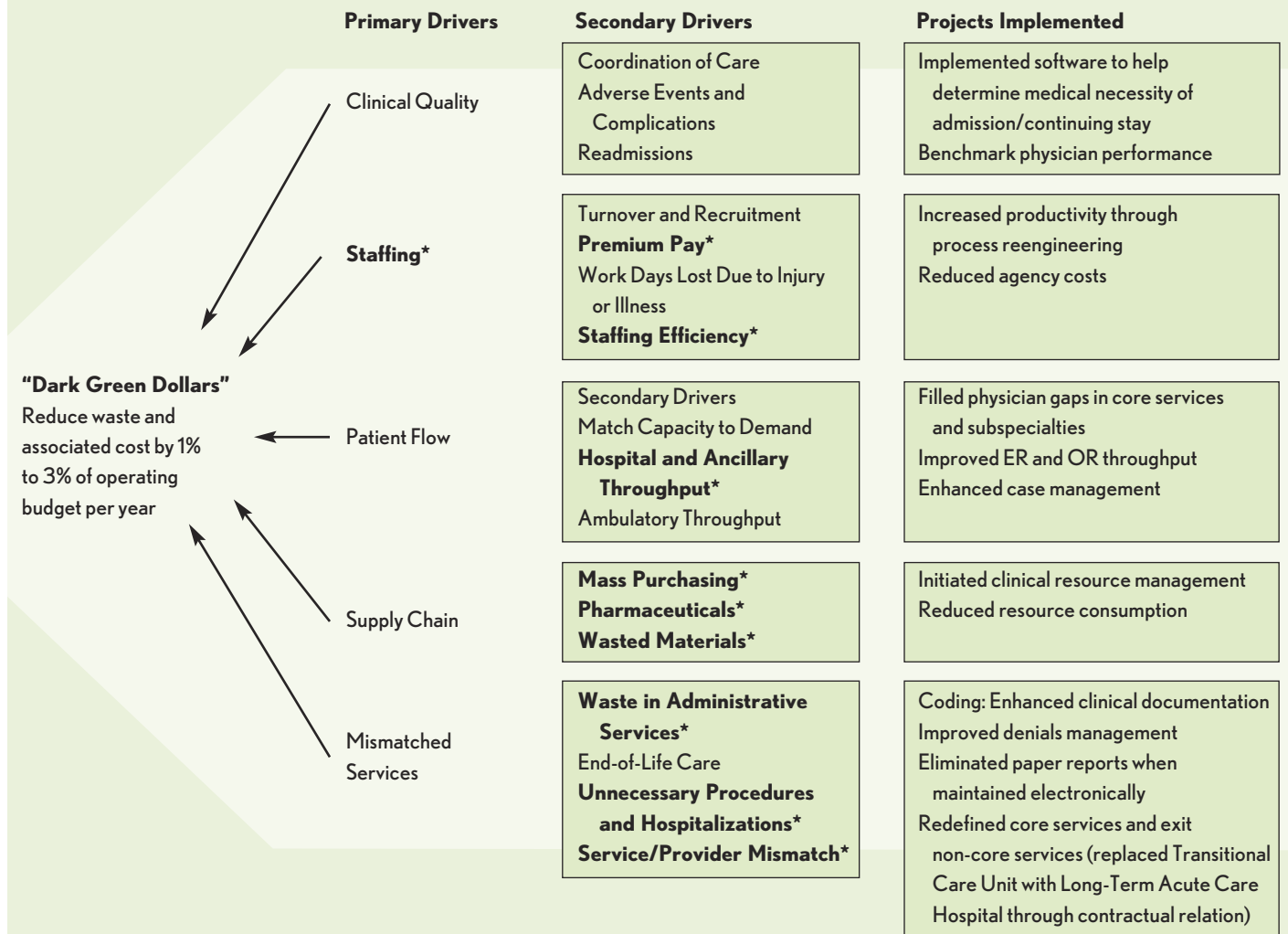
Finding the “Dark Green” Dollars

Coined by the Institute for Healthcare Improvement (IHI), the term “dark green dollars” refers to actual, hard savings on the bottom line, resulting from quality improvement projects. In contrast, theoretical, “light green” savings cannot be tracked to the bottom line.

A recent IHI white paper shares some step-by-step advice for how to identify and calculate dark green savings, leading to a 1 percent to 3 percent savings in operating costs per year.

Focus on Waste Reduction

Projects implemented in a one-year effort in a private, not-for-profit community teaching hospital*



*Areas in which the organization achieved the greatest savings are highlighted in bold with an asterick.

IHI’s new way of thinking about “dark green dollars” is to express the improvement in terms of waste reduction—that is, to identify inefficiencies in the system and remove them. IHI helped this hospital—and other organizations—use the driver diagram shown in this exhibit to set priorities and select areas of focus for waste reduction. This hospital identified ways to drive out \$8 million in operating expenses during a one-year effort.

Calculating Labor-related Savings

The following formula breaks down the ratio of total wages per admission into separate components so hospitals can identify different potential sources of waste.

Formula:

Total wages per admission = (Average wage per hour) × (Worked hours per patient day) × (Patient days per admission)

Components of labor costs:

- > Average wage per hour
 - Costs associated with recruiting and training new nurses to fill vacant positions
 - Increased cost associated with contract labor, such as nurses from a temporary agency, because of vacancies for full-time staff
 - Premium pay associated with overtime or last-minute scheduling of nurses due to inadequate planning
 - Overtime pay associated with failure to complete the day's surgery schedule on time
- > Worked hours per patient day
 - Inappropriate staff time in the intensive care unit because a patient is unable to be discharged to a lower-acuity unit due to problems with the discharge of patients from these units
 - Hours in excess of budget hours because of the uneven workload between days of the week due to scheduling of surgery cases without regard to the impact on downstream resources
 - Hours in excess of budget because of failure to predict demand a day or two ahead and match staffing appropriately
- > Patient days per admission
 - Excess patient days resulting from delays in discharge because of poor coordination of the processes associated with discharge
 - Excess patient days resulting from a lack of setting and executing daily goals for the patient and the care team to accelerate the recovery of patients
 - Excess patient days associated with an adverse event or complication

Source: Nolan, T. and Bisognano, M., "Finding the Balance Between Quality and Cost," *hfm* magazine, April 2006.

Calculating Savings on Medications

Medication costs are a substantial expense during a patient's hospital stay. The following equation breaks down the different components of total medication costs per admission to highlight the potential waste.

Formula:

Total medication costs per admission = (Average cost per dose) × (Number of doses per admission)

Components of medication costs per admission:

- > Average cost per dose
 - Excess cost of brand medications when generics are available
 - Excess cost associated with failure to make a timely switch from expensive administration routes to less expensive ones (for example, switching from IV to oral administration of antibiotics for patients with pneumonia)
 - Excess cost associated with overuse of expensive medications when less expensive ones are available
- > Number of doses per admission
 - Excess cost associated with failure to stop medications appropriately (for example, continuing prophylactic use of antibiotics for longer than 24 hours after surgery)
 - The cost associated with treating adverse events (for example, the use of medications to reverse oversedation)

Source: Nolan, T. and Bisognano, M., "Finding the Balance Between Quality and Cost," *hfm* magazine, April 2006.

Partner with Finance

Financial staff are very familiar with equations that break down the equations of a profit and loss statement. The operations team and improvement teams can work with financial staff to establish priorities for waste reduction projects that will achieve cost savings, while also maintaining or improving quality.

Source: This section is excerpted with permission from: Martin, L.A., et al., *Increasing Efficiency and Enhancing Value in Health Care: Ways to Achieve Savings in Operating Costs per Year*. IHI Innovation Series white paper, Cambridge, Mass.: Institute for Healthcare Improvement, 2009. The full paper is available on www.IHI.org.

Quantifying the Financial Implications of Quality Improvements

“Improving safety is a table stake,” says HFMA president and CEO Richard L. Clarke, DHA, FHFMA, referring to what he believes should be a fundamental mission of any healthcare organization. Leadership decisions about whether to invest in quality and safety improvements should be based on the needs of the patient—not solely on financial analysis, he says.

Yet, as shown by these two case studies, financial analysis plays an important role in clinical improvement projects. Integrating sound financial information and analytics processes into quality improvement efforts can help organizations achieve potential cost savings—and help leaders determine how to mitigate the impact of any lost revenue or cost increases.

Case Study 1: Meeting Dual Targets at Memorial Regional Medical Center

Every clinical quality improvement initiative across the Bon Secours Health System, Inc. has two target goals: a quality target and a financial target, says Jill Kennedy, RN, vice president of patient care services and CNO at Bon Secours’ Memorial Regional Medical Center. “We have to meet both of these targets for it to ‘count’ toward our Clinical Transformation goal.”

Clinical Transformation is the systemwide initiative launched in 2006 to improve clinical outcomes, reduce variation, and reduce costs.

These dual quality-finance targets are supported by a unique oversight structure—a triad of clinical, physician, and finance leaders—at both the system and hospital levels. “You need all three of these expertises to truly identify and address the issues,” says Kennedy, who serves as the systemwide clinical leader.

Success to date is admirable. Take the impact of just one hospital in the health system: In FY09, Memorial Regional Medical Center, in Mechanicsville, Va., saved \$1,247,000. More than \$85,000 of the savings came from slashing hospital-acquired infection (HAI) rates. For example, hospital-acquired sepsis rates declined 1.58 percent (from 3.55 percent to 1.97 percent). Other major savings were achieved by decreasing falls and decubitus ulcers.

Drilling to Find Orthopedic Opportunities

Memorial Regional staff are now working toward their FY10 Clinical Transformation goal of \$1 million saved. A review of cost data related to all-patient-refined diagnosis related groups (APR-DRGs) helped leaders identify orthopedics as one key area to focus on in FY10.

“We have now drilled down into our lumbar fusion, joint replacement, and other orthopedic DRGs,” says Misty Freeman, RN, administrative director of cardiovascular inpatient services. “We know how each physician practices, including how many labs and X-rays each of them orders.

We have looked at how long patients are on IV antibiotics as a potential cost opportunity. And we have compared ourselves with national benchmarks.”

Studying the data has helped the hospital create a roadmap for improving quality and reducing costs in orthopedics. Four months into the hospital’s FY10, two offshoot teams have started to study specific opportunities around the procurement of implants and the use of pharmaceuticals.

The organization’s comprehensive cost accounting system has helped assuage the teams’ hunger for detailed and comparative data, says Michael McNeely, CPA/CHFP, director of finance. “Our reporting capabilities help us slice and dice the variable cost of a particular APR-DRG into different buckets,” says McNeely. “How much of that cost is peri-operative? How much of it is coming from a nursing unit, and what type of nursing unit? How much is coming from lab, imaging, and so forth.”

Vendor partnerships also provide ready access to national benchmark data, which allows the hospital to compare itself to similar facilities.

Calculating the Cost Savings

Asked how they calculate the cost savings related to clinical improvements, McNeely and his clinical colleagues describe two different—but related—processes.

Tracking cost avoidance. Cost savings related to decreases in HAIs, falls, decubitus ulcers, and other harmful events are estimated and reported in a dashboard report, says Monique Lowe,

performance improvement manager. The hospital determines HAI savings in the following way:

- > *Creating an internal benchmark:* “We figured out the average number of ventilated associated pneumonias (VAPs) and other types of infections that occurred per month in FY08,” says Lowe.
- > *Determining the average cost of each type of HAI:* “We figured out our average VAP cost by pulling and reviewing different charts to determine an approximate average cost of treating a VAP.”
- > *Tracking the number of infections prevented:* “In FY08, we had one VAP a month; then, in September 2008 (which is the start of our FY09), we had zero, meaning we saved one infection compared to the FY08 average,” she says.
- > *Calculating the savings:* “We multiplied the average cost of a VAP by the one infection we prevented—and that was our September 2008 savings for VAPs,” says Lowe.

The savings on the bottom line. “One of the acid tests that we have is the average variable cost of an APR-DRG at a point in time, and then we compare that variable cost over time to see if we have improved it,” says McNeely.

This acid test goes hand-in-hand with detailed charge code work, he explains. “We have costing down to the charge code level detail. So if our clinicians omit a particular charge code or substitute it for another type of charge code, then we can identify very quickly how much the variable cost for that charge code is and the related savings.”

“If a code goes away because a patient needed fewer services, there may be savings that gets calculated,” continues McNeely. “Or there may be a change in the mixture of the charge codes for a par-

ticular APR-DRG—for example, a shorter length of stay replaces a more expensive pharmaceutical regimen or vice versa. In that case, one code may cost more than the other. But we typically see that producing overall savings, or not, at the end, when we perform the acid test of the change in the variable costs of the particular APR-DRG under evaluation.”

Advice from the Dugout

Asked for lessons learned, McNeely stresses: “Don’t get lost in the data. There’s no cost accounting system that is going to get this exactly on the nail right,” he says. “You need to learn to live with plus or minus 5 percent, or you will spend all of your time challenging the data and getting everything reconciled to the penny—instead of spending that time addressing the opportunities for improvement.”

Interviewed for this case study: Misty Freeman, RN, is administrative director of cardiovascular inpatient services at Memorial Regional Medical Center in Mechanicsville, Va. (misty_freeman@bshsi.org). Jill Kennedy, RN, is vice president of patient care services and CNO at Memorial Regional (Jill_Kennedy@bshsi.org). Monique Lowe is performance improvement manager at Memorial Regional. Michael McNeely, is director of finance at Memorial Regional, and a member of HFMA’s Virginia chapter (michael_mcneely@bshsi.org).

Case Study 2: Reducing Sepsis Mortality and Costs at CAMC

When staff at Charleston Area Medical Center (CAMC) dug into benchmark mortality data, they found an obvious place to focus their quality improvement efforts: severe sepsis, a complex and life-threatening reaction to infection. Severe sepsis can be difficult to identify and manage, and is recognized as the leading cause of death in noncoronary ICUs (*Surviving Sepsis Campaign*).

In 2005, about 38 percent of CAMC patients who developed severe sepsis died. CAMC’s sepsis mortality rate was better than the national average; however, in this case, being better than average was not good enough for CAMC staff.

“Sepsis was our largest cause of mortality, representing close to 33 percent of our deaths,” says Glenn Crotty, Jr., MD, chief operating officer at CAMC, an academic medical center with three hospital locations in southern West Virginia. Sepsis was also costly to treat and added days to patients’ hospital stays.

A target was set: Lower sepsis-related mortality to 25 percent, and save \$1 million in associated costs. By 2009, CAMC had surpassed these targets, attaining a sepsis mortality rate of 17 percent.

A Standardized Approach

To begin tackling sepsis mortality, CAMC formed a multidisciplinary steering committee that included physicians and staff from the ICU, ED, and pharmacy. One key to success: CAMC’s participation in QUEST, an improvement collaborative, says Crotty. “It was extremely important for us to be able to benchmark against our peers and share information with them regarding best practices.”

Two standardized tools were developed:

- > An early recognition tool that helps clinical staff identify septic patients in the ED and elsewhere
- > A standard order set that spells out one-hour, six-hour, and 24-hour goals for septic patients

“The first thing our team members did was gain an understanding of the data so they could better recognize patients who were potentially septic in the ED,” says Crotty. “Once identified, these ED patients could then be moved to the ICU under the care of an intensivist, which was another positive step.”

Also key: Educating CAMC residents, medical staff, and rural referring physicians on the standardized approach. CAMC's simulation teaching lab—with a mock ICU and other units—helped physicians learn the new approaches. The steering committee also arranged for Emanuel Rivers, MD, MPH, a respected physician/researcher, to give a presentation on goal-directed therapy for sepsis.

CAMC instituted several other improvements to reduce sepsis mortality. For example, rapid response teams are now in place, and a critical care nurse rounds on every floor to help other nurses identify patients who may fit sepsis criteria.

The Dark Green Savings

The finance representative on the steering committee helped clinical members identify potential savings. "We always include the finance people on these teams," says Crotty. "They allow us to capture the hard, green

dollars—or real dollars saved, not costs avoided. For example, did we use fewer or different (and less costly) resources?"

CAMC has saved \$1 million through the sepsis initiative primarily from reducing LOS. Most sepsis patients at CAMC are Medicare patients, and Medicare pays a fixed rate regardless of LOS.

At CAMC, the average Medicare LOS is 5.2 days; whereas the average sepsis patient has an LOS of >10 days. CAMC was able to reduce sepsis LOS down to <10 days, which translated into a cost savings of \$600 a day. Other cost savings came from reducing ventilator days, reducing ICU days, and reducing the number of medications delivered.

Kip Rice, cost accounting manager, details how savings were calculated.

> Specific patient encounters were identified based on two criteria: A primary

or secondary diagnosis of septic shock (ICD-9-CM code 785.52) or severe sepsis (ICD-9-CM code 995.95), and use of ICU care during admission.

- > A baseline direct variable cost per case was established on a department/procedure level for a given time frame by extracting demographic and financial information for each encounter.
- > Cost information on a department/procedure level was again extracted and calculated after the improvements were made to determine the cost savings.

The following formula was used: $\text{Cost Savings} = \# \text{ of Patients} \times \text{Direct Variable Cost Savings per Case Prior to Change} - \text{Cost after Change}$

Decreased reimbursement from commercial insurers was factored into savings calculations, says Rice. "Historically, commercially insured sepsis patients represent only 9.5 percent of our patient population," he says. "We felt that any decrease in reimbursement would be offset by increased throughput from rural referral centers and by decreasing diversions to competing hospitals."

Keys to Success

In addition to dramatically improving sepsis mortality, CAMC has slashed surgical site infection rates and improved the delivery of medications. One key to CAMC's success is the adoption of Six Sigma and Lean manufacturing approaches—or what Crotty calls an "industrial strength methodology" for improvement. Crotty also recommends getting finance involved early in projects, having physicians champion quality efforts, and developing a control plan to ensure sustained improvement. ☞

Interviewed for this case study: Glenn Crotty, Jr., MD, is COO at Charleston Area Medical Center (CAMC) in southern W. Va. (glenn.crotty@camc.org). Kip Rice, who is a cost accounting manager at CAMC, also contributed to this case study (Kip.Rice@camc.org).

Shorter LOS? Consider the Revenue Impact

By Kyle Herbert, MBA, CMA, CHFP

The LOS statistic is defined as total patient days divided by inpatient cases, and it is a significant driver of hospital net income. In fact, many financial personnel consider it to be the most significant measure of the effectiveness and efficiency of a hospital. The theory is that the less time a patient remains under hospital care, the fewer expenses being consumed.

This belief is driven by the premise that a majority of inpatients are insured through Medicare, which pays a fixed rate regardless of the patient's LOS. The significance of the Medicare reimbursement methodology is that the maintenance of costs is shifted to the healthcare provider.

Analysis can be performed that calculates how much cost savings would occur if a healthcare provider reduced patient days for clinical services. Unfortunately, all payers cannot be viewed equally since each provider may have a unique contract rate. The best practice to determine the monetary impact of decreasing patient days is to separate the governmental and nongovernmental payers. Certain payers, such as Blue Cross or Humana, may pay on a per diem basis. The reduction in days for these nongovernmental payers may not only decrease variable costs, but also net revenue.

Kyle Herbert is a senior reimbursement analyst at Palmetto Health in Columbia, South Carolina (kyle.herbert@palmettohealth.org.) This sidebar is excerpted from the author's lengthy article, "Calculating the Financial Impact of Reducing LOS," which is posted on HFMA's CFO Forum. To learn more about HFMA Forums, visit www.hfma.org/forums.

Standardizing Indirect Staffing Hours

Many questions—and frustrations—arise when clinical and finance leaders try to determine how to count various types of staffing hours, such as manager hours, charge nurse hours, and education and orientation hours. Adopting standardized definitions and classifications for these hours can help.

Direct care constitutes all the hours of care or service *given directly* to patients. In contrast, indirect care is all the hours spent *supporting* patient care or service. On the surface, these budgeting terms seem fairly straightforward. However, in practice, it can get tricky.

For example, both clinical and finance leaders struggle with whether to classify indirect hours as productive (worked) hours, or as paid and worked “other” (nonproductive) hours. Classifying employees as “nonproductive” when they are working and attending education programs to learn how to improve patient outcomes can create frustration among nurses and other clinicians.

Compounding the challenge is the lack of uniform national or international standards by finance, nursing, and software systems (e.g., cost accounting, scheduling and staffing, payroll/time and attendance systems) to define direct and indirect hours. This lack of standardization can impede how unit managers plan the division of work, which can ultimately impact caregiver-to-patient ratios. It also affects how managers allocate hours

and dollars for unit-based preceptors and trainers and plan for “back-fill” staff to cover for employees attending meetings and education programs.

Below are some insights about how hospitals across the country are defining and classifying indirect care hours.

Are Your Indirect Hours Adequate?

To ensure quality care and optimum financial performance, indirect caregiver labor hours should be in the range of 11 percent to 20 percent of a unit’s total budgeted productive (worked) hours of care (Labor Management Institute, 2009 *PSS™ Annual Survey of Hours Report*®).

Here are several diagnostic indicators to tell if a unit’s budgeted indirect care hours are on target or not. The budgeted hours may be inadequate if any of the following are true:

- > Nurses are absent from the bedside to provide nonnursing tasks—at a much higher cost than clerks and nursing assistants.
- > Patients complain that they rarely see their nurses.
- > Staff nurses complain that promised

RN-to-patient ratios are not being honored.

- > Staff nurses complain that they can’t attend meetings, shared governance or unit practice council meetings, in-services, and training sessions because they are transcribing patient orders, transporting patients, and/or hunting and gathering supplies.

Another possible indicator: Elevated orientation and education hours in the face of low turnover percentages. Most human resources departments only report turnover as “new hire, rehire, and voluntary resignations” and ignore “unit erosion,” which are employees permanently transferring to other units. Unit erosion is often the underlying source of elevated orientation and education hours and dollars when official turnover levels reported by HR are low.

How to Count Hours

Standardizing how the hospital counts the following types of labor hours in the budget can help ensure adequate indirect and direct care hours.

Manager hours. Manager hours should be spent supporting staff, monitoring care delivery, and providing leadership. Therefore, managers should be included in the indirect hours of care only. It has been our experience that most organizations classify their managers as indirect caregivers.

Education and orientation hours: Many organizations believe that the time employees spend attending educational programs, work as preceptors, or trainers, or are in orientation programs should not be counted towards direct hours of care with the patient.

Indirect Percentage Labor, Education, and Orientation Hours for ICU

Unit Types	Labor %	Education %	Orientation %	Total % Indirect to Total Worked Hours
Critical Care (ICU)	12.6%	3.0 - 4.0	4.0 - 5.1	19.6 - 21.7%

Source: Labor Management Institute, 2009 *PSS™ Annual Survey of Hours Report*®. Reprinted with permission. Detailed ranges for the labor hours by unit type are available in the complete report.

Reporting these hours has followed two strategies:

- > Report these hours as paid and worked “other” (nonproductive) hours because they are the basis of allocated dollars for staff development and the unit-based educators and/or preceptors; the challenge is that “paid and worked “other” (nonproductive)” hours by definition are hours paid but not worked.
- > Report these hours as productive (worked) hours categorized as indirect caregiver hours because the employees are working and paid and excluded in the caregiver-to-patient ratios.

Annual education budgets should be developed based on unit and service line required skills and competencies because specific mandatory education needs vary between departments. Approximately 1 to 4 percent of indirect time should be allocated to education hours (Labor Management Institute, 2009 PSS™ Annual Survey of Hours Report®).

Orientation budgets should reflect historical use of orientation based on turnover with unit erosion and experience level of the new hire (e.g., new graduate, novice, or experienced). Consideration should be given to medical-surgical units that often experience higher orientation demands due to unit erosion. Medical-surgical units tend to become “stepping stone” units for nurses who are waiting for intermediate and critical care unit positions.

Approximately 1 to 5 percent of indirect time should be allocated to orientation hours based upon the unit and service line type. (Labor Management Institute, 2009 PSS™ Annual Survey of Hours Report®).

Back-fill hours. Every manager needs to be able to staff their units to cover times when core staffs are attending education programs and meetings and precepting

Indirect Percentage Labor by Service Line

Service Line Types	Mean Average Labor %
Critical care	13.2%
Intermediate care and specialty units (e.g., oncology)	15.9%
General medical/surgical	11.4%
Women’s and children’s	14.1%
Behavioral health and skilled nursing	18.6%
Perioperative services	15.5%
Emergency department and other units	20.1%

Source: Labor Management Institute, 2009 PSS™ Annual Survey of Hours Report®. Reprinted with permission. Detailed ranges for the labor hours by unit and hospital type are available in the complete report.

orientees. These “back-fill” hours should be scheduled from the part time, per-diem, and/or casual staff to avoid the use of overtime or premium rates for agencies and travelers. See the exhibit on page 11 for mean average percentages of indirect hours based on indirect labor, education, and orientation hours for the intensive care unit.

Charge nurse hours. The assignment of “charge” hours depends on whether the charge person will be taking a patient assignment and is, therefore, included in the nurse-to-patient ratios for staffing purposes.

When charge nurses take patient assignments, their hours should be tracked as direct hours of care or service so the RN-to-patient ratios are calculated correctly and the direct hours per unit of service (e.g., hours per patient day) are accurate.

When charge nurses are responsible for staffing coordination, supporting staff, and monitoring care delivery, we recommend allocating the charge nurse hours to indirect hours of care.

Calculating Positions as Direct Versus Indirect

Many scheduling, staffing, time and attendance/payroll systems do not have the capacity to assign the charge nurse

hours based on actual hours worked in each role and will default their hours in whole-shift increments to either direct care or indirect care under labels such as project day, management day, etc. Thus, managers must choose an “all or nothing” default assignment to one category or the other.

A commonly used formula to define the position(s) as a percentage is to divide the required indirect time into the direct time and multiply by 100 percent:

$$\text{Indirect time} \div \text{Direct time} = 240 \text{ minutes} \div 480 \text{ minutes} \times 100\% = 50\%$$

If the work that unit clerks, supply coordinators, and patient transporters perform does not flex to the volume of patients, and their direct time is the minority of work performed in the unit, then classify them as indirect caregivers.

To ensure quality care and optimum financial performance, indirect caregiver labor hours should be in the range of 11 percent to 20 percent of a unit’s total budgeted productive (worked) hours of care.

If the charge nurse is split 50 percent direct and indirect, defaulting the position to direct care will mean that, at least 50 percent of the time, patient assignments and staffing assignments won't match the volume of patients because charge nurses will be included in caregiver ratios when they are in meetings and providing leadership, thus depriving the unit of nursing coverage for that shift.

For best practices, we recommend clear divisions between direct and indirect hours within the budgeted productive (worked) hours. The exhibit on page 12 identifies the mean average labor hour's percentages of total worked hours by service line type.

Benchmark for Confidence

It is critically important to benchmark your hours of care to several benchmarks so that you can build your confidence in your budget to meet your needs and to be alert to changes in trends. Comparing direct, indirect, and total worked hours of care and watching for changing trends will allow you to benchmark more accurately and confidently budget the necessary labor hours to keep nurses at the bedside and preserve agreed upon nurse-to-patient ratios. It will also help you plan support labor, education, and orientation hours so that adequate dollars are allocated to cover the staff development and dedicated unit expense for permanent positions (e.g., preceptor, unit-based educator). ☞



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(PSS™) *Perspectives of Staffing and Scheduling*® (c.suby@lminstitute.com).

What Terms Stump Your Finance Leaders?

In a recent informal survey, *The Business of Caring* asked about 40 nursing, lab, radiology, and other clinical leaders to identify terms and concepts that tend to “stump” their financial colleagues. Below are some of the terms identified.

Patient Acuity and Census

Terms related to patient acuity and census were mentioned by many clinical leaders surveyed, often in relation to staffing and productivity. Here are some specific comments:

- > Patient acuity as a “workload index” (ie, a patient is not a patient); finance is used to working with “averages,” but on any given day, the “averages” of patients may exceed the average workload.
- > Contact census: the number of patients touched, cared for, and turned over during the course of a day
- > Staffing to “heads on bed,” not to average daily census
- > Midnight census as a driver to earned hours is a poor measurement point; need to refine to include minimum and maximum census activity (ADT data within the 24 hours)
- > Patient care is not widgets and numbers; rather the unexpected or unplanned complications/factors require an adjustment to attempt to summarize the patient type, the care/service levels required, and the resources required.
- > The true time cost of documentation and fulfilling the regulatory requirements in health care
- > Care model and acuity-adjusted hours per patient day
- > Flexing staff, core staffing, and variance of patient care driven by acuity
- > The amount of time the RN spends in the indirect care of the patients

- > Workload involved in admitting, discharging, and transferring patients

Scope and Standards of Practice

Nurse leaders, in particular, noted that finance leaders do not always understand that nurses are required to perform certain tasks/steps (i.e., medication administration, blood administration). According to one respondent: “What I consistently hear is that nursing needs to look at their processes to cut out steps. According to standards and regulations, we have to perform the steps in the procedure. There is not a clear understanding of what we have to perform and the time it takes.”

Also, several respondents said finance leaders were often stumped by what type of nurse (e.g., RN versus LPN versus certified nursing assistant) can do what clinical activities.

Other related terms mentioned include:

- > Competency versus credentialing
- > Privileging versus credentialing
- > Licensure versus certification

Miscellaneous Terms

- Respondents also listed these terms:
- > Patient-centered care and holistic care
 - > Cost avoidance
 - > Sedation verses anesthesia
 - > Prescreening verses preassessment
 - > Reflex testing verses diagnostic testing
 - > Waived testing
 - > Core measures ☞

A Tale of Two Ratios: Calculating RN-to-Patient Ratios

Are nurse and finance leaders speaking the same language when they analyze RN-to-patient ratios? Follow this example for how to analyze these ratios.

As nursing and finance work cooperatively to ensure that staffing resources support quality patient care, it is critical that we work from a common language with mutually accepted formulas. Confusion and miscommunication occur when finance and nursing leaders are not using the same glossary of terms and the same formulas. Consider the following real-life tale.

The Source of Frustration

The nurses at a large community hospital believed that the ratio of caregivers to patients—particularly the RN-to-patient ratio—was running higher than promised. Staff were frustrated that there never seemed to be enough nurses at the bedside.

Executive leaders had agreed to a 1:5 RN-to-patient ratio for the medical-surgical units. However, from the nurses' perspective, the actual worked ratio was 1 RN to 6 or 7 patients. When nursing leadership spoke with finance representatives, they were told that the RN-to-patient ratios were on target for 1:5 and needed no adjustments.

We selected a representative medical-surgical unit from the hospital's units. The average daily census was 25.9 patients. To analyze the best data, we selected a two-week pay period that did not include a holiday. We measured the ratios based on 12-hour shifts, as that was the most frequently worked shift by RNs. We planned on the ratios being the same between day and night shifts to

balance shifts more evenly and minimize four-hour "holes."

The Finance View

For their calculations, finance obtained a list of total RN worked hours for the pay period from the payroll system.

Finance's calculations (see the exhibit below) showed an RN-to-patient ratio of 1:5.2.

The Nursing View

Nursing obtained a list of RN worked hours from the daily, direct care staffing sheets, which were based on the variable staffing plan. This list excluded the nurse manager, charge nurses, and the unit-based educator who did not take patient assignments. Nursing's calculations

Two Ways of Calculating RN-to-Patient Ratios

How Finance Calculated the Ratio

1. Calculate the total hours worked by all RNs for each day of the two-week pay period.

Mean average = 119.50 hours

2. Divide the total worked RN hours by 12 hours to determine how many RNs worked 12-hour shifts.

119.50 RN worked hours/day ÷ 12 hours per shift = 9.96 RN shifts in 24 hours

3. Divide the total RNs working 12-hour shifts by two to determine how many RNs are working each day and night shift.

9.96 RN shifts ÷ 2 shifts = 4.97 RNs working each day and night shift

4. Divide the average daily census by the total RNs working each shift to determine the RN-to-patient ratio for each shift.

25.9 patients ÷ 4.97 RNs per shift = 1 RN to 5.2 patients per shift

RN-to-patient ratio: 1:5.2

How Nursing Calculated the Ratio

1. Calculate the total hours worked by direct care RNs for each day of the two-week pay period.

Mean average = 96.0 hours

2. Divide the total worked RN hours by 12 hours to determine how many RNs worked 12-hour shifts.

96.0 RN worked hours/day ÷ 12 hours per shift = 8.0 RN shifts in 24 hours

3. Divide the total RNs working 12-hour shifts by two to determine how many RNs are working each shift.

8.0 RN shifts ÷ 2 shifts = 4.0 RNs working each day and night shift

4. Divide the average daily census by the total RNs working each shift to determine the RN-to-patient ratio for each shift.

25.9 patients ÷ 4.0 RNs = 1 RN to 6.47 patients per shift

RN-to-patient ratio: 1:6.47

How did finance and nursing come up with different RN-to-patient ratios for this medical-surgical unit? Finance included hours worked by all the RNs in the unit, including the manager, charge nurses, and the unit-based educator. Nursing excluded these RNs because they did not take patient assignments.

(see the exhibit on page 14) showed an RN-to-patient ratio of 1:6.47.

Why Was the Outcome Different?

As we reviewed the calculations from each group, it was clear that there was a discrepancy in the definition of terms. Finance asked payroll for “total RN hours,” and the calculations made by finance included all the hours worked by all the RNs in the unit, which included the manager, charge nurses, and the unit-based educator.

As we examined the calculations used in other units in this same hospital, we found a lot of variation in how charge nurses were treated.

- > Some units included the charge nurses in the indirect hours on all shifts and excluded them in the RN-to-patient ratios calculations.
- > Some units included charge nurses as indirect caregivers on the day shift but

made them direct caregivers on the evening and night shifts.

- > Some units included charge nurses as direct caregivers on all shifts but gave them a lesser ratio of patients than the other nurses.

There was a lack of standardization between departments and units within the same service line about who was a direct and indirect caregiver. No one was speaking the same language, which contributed to everyone’s misunderstanding and frustration.

The Solution

As part of the solution, it was agreed that everyone would use the same glossary of terms for direct, indirect, and total worked caregivers. This hospital agreed to use the “Productivity Terms” that appeared in the Fall 2009 *The Business of Caring*, which is available at www.hfma.org/boc.

It was further agreed that all units would count the shift charge nurses as indirect caregivers, which would exclude them from the RN-to-patient ratios. This would standardize practice and reporting of hours for a clearer interpretation of the ratios. It would also free the charge nurses to be resource nurses to the other staff on the team, and better help ensure direct care resources for the patients.

Finance and nursing also agreed to provide charge nurses with more training in basic budget formulas so that these nurse leaders could answer staff questions about ratios and formulas when unit managers were not working, such as on off-shifts and weekends. ☞

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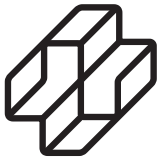
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