

How sourcing excellence can lower hospital costs

Better procurement practices can help hospitals achieve rapid supply cost reductions of 20 percent or more and keep future cost escalations under control. Scott Lichtenberger, MD; Everett Neal; and Drew Ungerman **Around the world,** existing models of health care are becoming economically unsustainable. New ways must be found to control costs especially in hospitals, which account for almost half of all spending in most health systems.

Better procurement practices are a particularly effective way to lower hospital costs rapidly.1 Supplies are second only to labor as a source of hospital spending, and the price of many materials has risen steeply in recent years-in many countries, at rates that are outpacing labor cost increases. Our calculations indicate that in most countries, annual growth in hospital spending is exceeding budget and revenue increases, largely because of the escalation in nonlabor costs (Exhibit 1). We have found, however, that better procurement practices can lower supply costs dramatically, especially when the sourcing effort is expanded to cover a range of nontraditional items, including capital equipment, capital construction projects (new hospital construction or major renovations), and high-preference clinical supplies (drugs, cardiac stents, and other things physicians typically hold strong opinions about).

The idea of tackling high-preference clinical items may surprise many hospital CEOs, who must daily balance the need to maintain staff satisfaction (especially among physicians) against the need to improve quality and increase efficiency. Often, these objectives are viewed as competing with each other, but this need not be the case. A sophisticated procurement approach allows hospitals to lower costs while improving quality and maintaining or even increasing staff satisfaction. And because this approach requires cross-functional teams staffed by both clinicians and procurement experts, it can open the door to greater clinical collaboration on other operational improvements. In this article, we outline an evolutionary approach to better procurement that can be used by both individual hospitals and large hospital systems. The approach, called sourcing excellence, has three phases; procurement groups move from one phase to the next as they develop their skills and capabilities. The groups do not need to reach the final phase of evolution to achieve strong results—even those in the first phase are often able to lower supply costs by about 10 percent. But those groups that do reach the third phase frequently produce supply cost reductions in excess of 20 percent and "bend the trend" by lowering future cost escalations.

Phases of evolution

Hospitals that have been successful in keeping their supply costs close in line with their budgets and revenues built their sourcing skills and capabilities over time as the materials handled by their procurement groups expanded (Exhibit 2). This type of evolution takes hard work, careful planning, and tenacity if the full potential of sourcing excellence is to be achieved.

Basic-indirects phase

A central procurement group is a prerequisite for sourcing excellence. If a hospital already has such a group, its members concentrate during this phase on enhancing their basic skills and developing the infrastructure they will need to expand their efforts. A hospital that lacks a central procurement group must set one up and help it develop its skills and infrastructure.

To enhance its skills, the procurement group begins by improving its sourcing of "basic indirects," which range from office supplies to landscaping services, and of low-preference clinical items, such as syringes and bandages (Exhibit 3). Its focus during this phase is on quantifying relatively simple purchasing

¹Hospital costs can also be lowered by reducing both the demand for and supply of hospital services, as explained in the article "Supply and demand strategies for lowering spending on hospitals," on p.6.



Exhibit 2

The evolution toward sourcing excellence occurs in three phases.

	Phase 1 Basic indirects	Phase 2 Clinical preference	Phase 3 Strategic alliances
Key activities	 Follow systematic process to identify and capture savings Develop performance- management system Communicate benefits to broader organization Add new talent to sourcing 	 Collaborate with clinicians to capture opportunities requiring behavioral changes Expand scope to include nonprice elements (eg, total cost of ownership) Refine performance management Upgrade IT infrastructure 	 Apply innovative approaches (eg, joint ventures, performance- based contracts) Build advantaged supplier partnerships across categories Proactively participate in the M&A dialogue Explore sourcing business-line extensions to improve top-line growth
Common levers	 Demand management Vendor consolidation Price negotiation (where permissible) 	 Utilization management Strategy for using third-party contracting services (eg, group purchasing organizations) Sourcing high-preference clinical categories 	 Supply chain alliances Generic/global sourcing Product distribution strategy

Exhibit 3 **Procurement groups can handle a wide range of materials.**

Basic indirects	 Computer hardware (desktop, laptop, printer), computer software, telecom Office supplies, office equipment, furniture Facility maintenance services (heating/cooling, plumbing, electrical), spare parts
Low-preference clinical	 Wound care (gauze, bandages, tape) Exam gloves (latex, vinyl, nitrile) Textiles (disposable gowns, shoe covers, scrubs, sheets, blankets, towels) Sharps (needles, syringes, IV¹ start kits)
High-preference clinical	 Surgical packs (standard, custom procedure packs) Cardiovascular implants (AICD,² pacemaker, stent) Orthopedic implants (hip, knee, spine, trauma)
Nontraditional areas	
Benefits	 Life, long-term disability, retirement, prescription drug, dental, vision, health
Capital equipment	 Imaging equipment, patient beds, operating room table, pharmacy automation equipment
Capital construction	 Site preparation, mechanical (HVAC³), electrical, plumbing, information technology, elevators

Traditional areas

¹ Intravenous.

 $^{\rm 2}\,{\rm Automatic}$ implanted cardioverter-defibrillator.

³ Heating, ventilation, and air conditioning.

variables, such as the volume of each item needed and the price it must pay for each item. At some hospitals, even this type of basic information may not be readily available, and so the procurement group may have to put considerable effort into tracking down what is currently being ordered and identifying potential substitute products.

As it deepens its understanding of spend data, patterns, and prices, the group becomes able to establish a more structured sourcing process and a base-level performance-management system. These tools will eventually allow the group to adopt repeatable, rigorous methods, which will prove invaluable as it begins to engage the broader organization.

It is crucial during this phase that the group develops collaborative partnerships with physicians, other health professionals, and administrators to make decisions about basic indirects and low-preference clinical items. Without cross-functional teams, the procurement group will be unable to use demand management and vendor consolidation to

Managing pharmaceutical costs

In almost all hospitals, pharmaceuticals constitute a relatively large and growing portion of nonlabor costs. But because physicians usually have strong preferences about what they prescribe, many procurement groups find it challenging to control pharmaceutical spending. Our experience suggests that the best results are achieved when members of the procurement group establish a joint team with physicians and pharmacists. That team should use different approaches for three very different categories of drugs: on-patent products with little substitutability, on-patent products with significant competition and substitutability, and off-patent generics.

On-patent drugs with little substitutability

The joint team has the least room to negotiate in this category, especially for new drugs that are clear therapeutic advances. However, it may be able to obtain some savings by developing a thorough understanding of a given drug's benefits and risks and the health economics of its use. In some cases, the team may be able to restrict a drug's use only to the patients most likely to benefit.

More often, though, it is payors or national organizations that make this determination. In the United Kingdom, for example, a health technology advisory council, the National Institute for Health and Clinical Excellence (NICE), ruled that donepezil (Aricept) was not appropriate for all patients with Alzheimer's disease; payors in that country then decided that donepezil's use would be covered only for patients in the advanced stages of disease.



On-patent drugs with competition/ substitutability

When therapeutic substitutes are available for a given medication, especially when they are in the same drug class, the joint team has more room to maneuver. It can identify the most effective drug within each class (based on benefits, safety, and cost) and then limit the formulary to that medication. In addition, the team can determine whether there are therapeutic substitutes from other drug classes; if so, it can draft step-therapy and usage guidelines that substantially lower costs without compromising care quality.

For example, angiotensin receptor blockers (ARBs) are a cardiovascular drug class used to treat hypertension and congestive heart failure; until recently, all ARBs were patent-protected. Before the first generic ARB was launched, the joint team could have consolidated volume by limiting the formulary to one ARB, a move likely to create strong competition—and hence a willingness to lower prices—among the drugs' manufacturers. In addition, it could have worked with physicians to identify the clinical settings in which medications from a similar off-patent drug class (angiotensin-converting enzyme inhibitors) could be used instead of ARBs. Release of the first generic ARB strengthened the joint team's ability to consolidate volume by making that drug the sole ARB in the formulary.

Off-patent generics

For drug classes in which generic equivalents are widely available, the biggest savings lever is to implement a system that automatically substitutes a molecularly equivalent generic for branded products. However, the joint team can obtain additional savings by introducing greater competition into the negotiation process. Generic drugs are being manufactured by an increasing number of companies, some of which are located in lower-cost countries such as India. By sourcing generic drugs directly from these companies, the team can further reduce pharmaceutical costs.



influence the volume and price of supplies purchased. Establishing cross-functional teams early on also lays the groundwork for discussions to come about high-preference clinical items.

Purchasing groups in the first phase of evolution may sometimes be able to obtain help from outside firms. In some countries, niche software companies and group purchasing organizations (entities that pool purchasers to enable them to obtain better discounts) can provide hospitals with spend analysis and performance-management tools. These tools permit hospitals with inadequate internal data systems to get a clearer picture of what they are buying, what they are paying, and where the opportunities for improvement exist. The information also helps the hospitals better understand the types of data systems and tools they will need if they want to advance to the next phase of sourcing excellence.

Several criteria make it easy to recognize a procurement group in the first phase of evolution toward sourcing excellence. It usually relies on standard industry contracts and actively manages only a small fraction of the hospital's spending. Nevertheless, the impact the group can achieve is substantial, as the experiences of two very different hospital systems demonstrate.

A regional health system in Western Europe with an annual budget of €1 billion already had an effective central procurement group that had been delivering savings for its hospitals. However, by improving its members' skill sets, the sourcing process used, and the tools employed to support the process, the group was able to deliver an incremental 9 percent savings.

A government-run health system in the Americas with an annual budget of more than \$10 billion began from a different starting point. It had been using an uncoordinated group of contracting agents dispersed among multiple hospitals. To reduce costs, the system set up a central procurement group; that group then established a standard process and supporting tools for sourcing basic indirects and low-preference clinical items. As a result, the system's aggregate supply costs dropped by more than 10 percent.

Clinical-preference phase

A procurement group that has mastered the first phase of sourcing excellence will often find that it has deepened its expertise in basic supply categories enough that it feels ready to take on highpreference items, such as drugs and implants (cardiac stents and artificial joints, for example). Once this occurs, the group can move on to the next phase, in which it develops rigorous sourcing approaches for virtually all clinical supplies. (See the sidebar, "Managing pharmaceutical costs," on p. 22 for an example of a rigorous approach.)

Everyone within the hospital, including physicians, will be expected to follow the new approaches.

However, getting physicians to accept limits on equipment and drugs is no easy task. It requires that members of the procurement group have informed conversations with them about which products are best for specific needs, how much of a product should be used in particular patients, and which patients are most likely to benefit from a given intervention. These conversations are likely to be effective only if the procurement group collaborates regularly with physicians and is viewed as trustworthy by them. (For more information about these collaborations, see the sidebar, "Effectively engaging physicians," on p. 26.)

Developing the expertise required to collaborate with physicians is not a trivial undertaking but can pay off in ways that go beyond cost savings. Many hospitals have found that they can leverage the trust established during these conversations as they seek to implement other operational improvements. In addition, collaboration can preserve or even enhance care quality by ensuring that sourcing decisions account for product nuances. For example, the procurement group can help physicians develop and implement guidelines to ensure that certain drugs are used only with patients for whom the benefits of treatment clearly exceed the risks.

Procurement groups in this phase can do more than simply handle high-preference clinical items, however. For example, they base sourcing decisions on the total cost of ownership (TCO), not merely on volume and price, and they actively manage the nonprice elements included in TCO (the cost of lab tests required to monitor a drug's effects, for example). They also use more sophisticated IT tools and a more sophisticated approach to performance management than do groups in the basic-indirects phase. The most advanced groups in the clinicalpreference phase also play an active role in other nontraditional sourcing areas, including benefits, capital equipment, and capital construction. Among other things, they can help their hospitals avoid purchasing unnecessarily expensive equipment and service contracts. For example, a hospital that already has a 64-slice CT scanner does not need a second one; a less expensive 16-slice scanner would be sufficient. And given that CT utilization is typically low at night, the second machine could be serviced under a daytime contract rather than a more expensive 24/7 plan.

We know of several hospitals that significantly lowered their costs once their procurement groups reached this phase of evolution. For example, the procurement group for a €750 million hospital system in Western Europe established joint teams with physicians so that it could standardize many of the products the system bought and the specifications for those products, using vendor-neutral quantitative parameters. This change alone produced a 7 percent reduction in overall spend.

A \$4 billion regional nonprofit hospital system in the United States achieved even stronger results. The procurement group worked with physicians to address a wide range of products, including pharmaceuticals and imaging equipment. As a result, sourcing costs were lowered by 12 percent. In addition, the group sourced many of the materials required for new construction projects and drove a "design-to-value" process—it facilitated a series of trade-offs between the architect's original design and the project's expected cost. (The trade-offs covered everything from the size of operating rooms to the quality of hallway light fixtures.) The group was able to reduce construction costs by more than 23 percent.



Strategic-alliance phase

In the third phase of evolution, procurement groups develop advanced sourcing techniques and create a portfolio of strategic alliances. Groups in this phase can be identified easily because they actively manage almost all of the hospital system's nonwage spend and, as a result, are typically able to keep growth in supply costs below the inflation index for medical products.

Admittedly, local or regional regulations heavily influence the types of alliances a procurement group can consider. The European Union, for example, requires public-sector organizations to tender all contracts above certain amounts, and thus some of the alliances we describe below may not be possible for procurement groups in EU member countries. However, even groups that are affected by such regulations may be able to find ways to establish alliances to capture savings. In Britain, for example, the National Health Service (NHS) already had well-developed internal procurement capabilities, including strong ties with clinicians, but it put out a tender so that it could further expand its purchasing and logistics efforts. DHL won the tender and was awarded a ten-year contract. The joint initiative has enabled the NHS to capture a range of new savings opportunities, including sourcing directly from low-cost countries.

One of the largest for-profit US hospital systems has experienced what an advanced procurement group can achieve when other types of strategic alliances are permitted. Because the system invested aggressively in its sourcing capabilities, its procurement group was eventually able to expand its efforts into product design. For example, the system recently partnered with a manufacturer to co-develop surgical products. The two sides design a product together; the manufacturer then creates a prototype, which the system's clinicians test. Feedback from the clinicians helps shape the product's final design. The hospital system also allows the manufacturer to use it as a reference with other potential customers and guarantees a minimum purchase volume; the guarantee makes it easier for the company to underwrite the product's manufacturing startup costs. In return for its efforts, the hospital has lowered its cost for the product by more than 25 percent and increased competition in the market, which has enabled it to obtain reduced prices in adjacent categories.

This hospital system also formed an alliance with a leading implant vendor (historically, one of its adversaries in price negotiations) to improve supply chain performance. By sharing data from surgery schedules and inventory levels in individual hospitals to manufacturing production volumes—the partners were able to streamline the supply chain and achieve a double-digit inventory cost reduction for the hospital system.

Group purchasing organizations (GPOs) are another example of strategic alliances. A decade ago, Tenet and HCA, leading for-profit US hospital systems, decided to commercialize their sourcing capabilities by selling supply chain services to other hospitals. The GPOs they created, Broadlane and HealthTrust Purchasing Group, have enjoyed considerable growth since launch. In fact, they have been so successful that many other hospitals have followed suit by creating other GPOs.

One hospital system has even gone as far as eliminating branded medical products in certain basic- and medium-technology categories; instead, it is working directly with manufacturers in lowcost countries to obtain equivalent products. Not every system can or will want to follow this example. But no doubt some will leapfrog ahead by finding even better ways to reduce costs.

Effectively engaging physicians

Four guiding principles can help a procurement group collaborate effectively with physicians when attempting to control costs: placing quality and patient safety first, creating transparency into the case for change, aligning the incentives for change among all involved in the change, and tracking the desired changes.

Quality and patient safety. To speak credibly with physicians, the procurement group must be able to differentiate between clinical product decisions that are evidence-based (for example, those that have been proved to produce better clinical outcomes or improve patient safety) and those based solely on physician preferences. The sourcing strategy should assume that the first set of decisions is inviolate, but that decisions based purely on preference can be modified.

Transparent case for change. The physicians should be given context for why sourcing changes are being considered. In today's economic environment, physicians can easily appreciate that lowering supply costs is preferable to eliminating jobs. Whenever possible, however, the explanations should go beyond cost considerations (as important as they may be). The procurement group could explain, for example, that different practice standards create legal risk for the hospital. It could also communicate why the

changes are reasonable (in our experience, physicians are rational people who respond well to arguments that both hospitals and vendors need robust margins, for example). In addition, the group can ask some physicians to participate in negotiations and ask all physicians to communicate the right messages to vendors in other settings.

Aligned incentives. Physicians should derive some benefit if they are being asked to change their behavior to drive value for the hospital system; however, the nature of those benefits will often vary depending on the clinical category and hospital operating environment. For example, hospitals in highly competitive areas that have few loyal physicians may want to reward the physicians directly (assuming that such rewards are permissible within the health system). In other cases, it may be more appropriate to reward a clinical department for changes its physicians made; this approach can be particularly useful when individual contributions are difficult to track or the rewards are too small to hold meaning for most physicians.

Tracked changes. The procurement group should treat physicians as partners in the effort to control supply costs by providing them with timely, complete information about the key decisions made and savings realized. This approach will help build trust among the physicians.

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Requirements for success

As we have shown, sourcing excellence can produce significant savings. It cannot be achieved, however, unless three organizational enablers are in place: the right management infrastructure, the right high-caliber talent within the procurement group, and the right type of clinician involvement.

Management infrastructure

Within hospitals, procurement improvements are typically easier to achieve than many other operational efficiencies (reduced staffing levels, for example), but they nonetheless often require challenging trade-offs. The right management infrastructure is therefore critical for sourcing excellence. If a hospital lacks an aligned senior leadership team and proper governance, decisions either drag out or are routinely revisited, slowing progress and, in many cases, making change impossible.

The adjustments necessary to establish the right management infrastructure can vary considerably, depending on the starting point. Consider, for example, the challenges faced by two different systems we discussed earlier: the \$10 billion, government-run health system and the \$4 billion, nonprofit hospital system.

In the first system, elected officials run both the payor and provider functions. High-profile hospital sourcing decisions, such as the type of cardiac stent used, carry implications for both sets of stakeholders, but historically the two groups had not worked closely together. Thus, the system needed to establish clear processes to identify which decisions require joint leadership review and to determine how decisions would be made. Once these processes were set up, the system was able to lower its supply costs substantially.

In contrast, the nonprofit hospital system had originally had a much more fragmented structure—each hospital had been allowed to exercise full autonomy over procurement decisions. To improve its sourcing capabilities, the system established a central procurement group and developed processes that would enable sourcing decisions to be made efficiently. In particular, it made clear to all hospitals that future sourcing decisions would be made without individual facility approval. Only after these steps were taken was the system able to move toward sourcing excellence.

High-caliber talent

To achieve sourcing excellence, a procurement group requires both talented leaders and team members with deep capabilities. Medicalproduct sales organizations are filled with well-educated, skilled individuals. The procurement group should be similarly staffed whenever possible. Individual hospitals (particularly those in public-sector health systems) may not always be able to afford this level of expertise



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throughout their procurement groups, but a hospital system's higher cost base makes the investment worthwhile. In fact, leading hospital systems are exceeding this talent threshold.

A \$2 billion government-run hospital system in Asia, for example, redesigned its procurement group to broaden and deepen its talent pool. The system hired experts with strong health care sourcing experience and also experts from industries that are decades ahead of health care in their procurement capabilities (automotive, aerospace, and electronics manufacturing, for example). In addition, it centralized an increased proportion of its sourcing decisions and improved the team's knowledge of specific clinical product categories.

A \$3 billion US academic medical center also improved its talent pool to reduce its costs. It held the overall size of its procurement group steady but upgraded more than half of the positions from basic order-entry clerks to sourcing managers. This change did require the medical center to replace a number of staff members with more highly qualified personnel. The new managers all have graduate-level degrees; approximately half of them come from more advanced industries.

Clinician involvement

The third crucial element for success—strong clinician involvement—is often easier for individual hospitals than hospital systems to achieve initially. At individual hospitals, procurement groups often have preexisting relationships with physicians and other health professionals, which gives them a base to work from when tackling clinical-preference items. In hospital systems, procurement groups may need to build relationships with clinicians from scratch.

Clinician involvement in procurement can take one or more of three forms. First, a hospital or system can ensure that clinicians (especially physicians) serve as core members of every team investigating any type of clinical supplies, including capital equipment. Second, it can establish a separate team charged with developing and overseeing implementation of the new procurement approach; staff buy-in is often stronger when clinicians serve in key roles on this team. Third, it can elevate sourcing to a leadership-track function and rotate physicianadministrators through procurement positions.

It is not necessary to use all three approaches to achieve strong results. For example, the

academic medical center described earlier used only the first and third levers. Every one of its clinical sourcing teams includes physicians. The medical center has also worked hard to find physician-administrators interested in rotating through the procurement group. For example, the sourcing manager it hired to handle cardiology products is a physician with an MBA.

In contrast, the large for-profit hospital system previously discussed used the first and second levers. Its procurement group includes almost 100 clinicians, who fill one of two roles. Some focus exclusively on supplier negotiations. However, the majority are based in hospitals across the system; their job is to promote adoption of the new procurement approach, monitor compliance with new contracts, and drive standardization within product categories to ensure that the products purchased deliver optimal savings. The need for sourcing excellence will increase as financial pressures on hospitals grow. Better procurement practices can help rein in spending in ways that do not compromise patient care. And they can open the door to greater clinical collaboration and thereby make it easier for hospitals to implement other operational improvements.

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Every hospital and hospital system has to decide for itself how far it wants to go along the evolutionary path toward sourcing excellence. Just reaching the clinical-preference phase can enable a hospital to obtain overall supply cost reductions of 10 percent to 20 percent. The most advanced systems in the strategic-alliance phase are achieving savings of more than 20 percent.

