

Strategic approach for improving the medication-use process in health systems: The high-performance pharmacy practice framework

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Purpose. A strategic approach to improving the medication-use process in health systems by using a framework for setting priorities on the basis of feasibility, the potential for financial return, and the effect on quality and safety is described.

Summary. A panel consisting of leaders in health-system pharmacy identified seven dimensions of high-performance pharmacy (HPP) framework: medication preparation and delivery, patient care services, medication safety, medication-use policy, financial performance, human resources, and education. Performance elements, which are specific policies, procedures, activities, and practices that indicate high performance and result in a financial or clinical return

on investment of resources, within each dimension were identified. References, practice standards, and policies related to each performance element were also identified. By consensus, the panel assigned qualitative metric scores for each of the 69 performance elements that represent the panel's assessment of the resources necessary to achieve full implementation of the element and the potential financial and quality and safety returns if the element has not yet been implemented. It is noted that a pharmacy department's actual outlay of resources and expected financial return will differ depending on the size of the health system, the size of pharmacy staff, and the extent of previous implementation efforts.

The framework can also be used to rejustify existing services and programs and identify opportunities for improvement.

Conclusion. The HPP framework characterizes pharmacy performance elements on the basis of feasibility, financial return, and effect on quality and safety. The framework provides pharmacists with a means to establish priorities in improving the medication-use system.

Index terms: Administration; Careers; Decision making; Drug use; Economics; Methodology; Pharmaceutical services; Pharmacists, hospital; Pharmacy, institutional, hospital; Quality assurance; Standards

Am J Health-Syst Pharm. 2007; 64:1699-710

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The assistance of Kavish Choudhary, Pharm.D., M.S., Tom Kirschling, Pharm.D., M.S., Paul Krogh, Pharm.D., M.S., Jack Temple, Pharm.D., M.S., and Jennifer Tryon, Pharm.D., M.S., who were graduate students and administrative pharmacy residents at the University of Wisconsin Hospitals and Clinics (UWHC) at the time the high-performance pharmacy framework was developed, and of Carla J. Brink, M.S., ASHP Advantage Project Manager, who assisted with manuscript development, is acknowledged.

Supported by educational grants from McKesson Corporation to UWHC for program development and to ASHP Advantage for manuscript development. Mr. Vermeulen and Mr. Rough were coinvestigators on the grant to the University of Wisconsin Hospital and Clinics; Mr. Thielke, Dr. Shane, Dr. Ivey, Mr. Woodward, and Mr. Zilz are current or former members of the McKesson Health Systems Pharmacy Executive Alliance (EA); Mr. Pierpaoli participated as a McKesson representative; and Mr. Borr serves as the EA's executive liaison.

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DOI 10.2146/ajhp060558

For the past three decades, literature documentation and empirical evidence have shown that the performance of the pharmacy department can be a vital element in the success of a health system and the health of its patients.^{1,2} The high cost of medications and drug-related technology, combined with the potential effect of medications and pharmacy services on patient care outcomes and patient safety, makes it imperative that pharmacy departments perform at the highest level possible.

The project described in this article is the result of the continuing efforts of the Health Systems Pharmacy Executive Alliance^a (EA) to delineate the components of high-performance pharmacy (HPP) practice, which is defined as “one that aspires to maximize its contributions to the clinical outcomes of patients and the financial position of the health system by functioning at the highest levels of effectiveness and efficiency.”³ While there are scores of articles, standards, and regulations related to different aspects of practice with accompanying tools for assessing a pharmacy department’s practices compared with best-practice benchmarks,⁴⁻⁶ the sheer volume of information in such resources can be overwhelming. Therefore, the EA attempted to compile this information, not into an operational benchmark against which pharmacy departments can be compared, but rather, into a tool that pharmacy departments can use to assess current performance, make plans for improvement, and identify relevant references and standards.

As phase I of the ongoing HPP project, members of the EA published an article addressing the leadership skills necessary for developing a HPP practice.³ Leadership within the pharmacy department is necessary to create and sustain the vision and impetus for meaningful changes in the department. It starts with the pharmacy

director and management team, and, through them, all members of the department are empowered to serve a leadership role in their respective practice areas. Further, the position of the pharmacy department and its leader within the health system and the lines of communication up to the health-system’s administrative team are critical for a pharmacy department to meet its full potential.

The second phase of the HPP project was to identify and describe the components of HPP practice and the medication-use system and to develop a conceptual framework by which departments can assess their level of performance and identify priority areas for improvement. The project coinvestigators coordinated this phase of the project and worked closely with other members of the expert panel as the framework structure was developed and as its metrics were assessed. This resulted in a framework that reflects the general consensus and the collective expertise of more than 270 years of experience in health-system pharmacy, 85% of which has been in leadership positions. The framework, including complete descriptions of all of its elements, is available online.⁷

This article represents the next phase of the project, which is to describe how the framework can be used in a strategic approach for improving the medication-use process in health systems. The framework is meant to be used in discussions and deliberations on a department’s strategic plan, and it is based on the premise that all departments desire to provide the highest level of pharmacy services to their patients. It should be customized as necessary for individual institutions on the basis of their respective priorities and existing level of services. The framework can also be used to validate and support pharmacy departments whose operations, programs, and services already reflect HPP practice. In addition, reviewing the topics in

the framework can enable pharmacists and health-system decision-makers to reflect on the many roles and responsibilities of health-system pharmacists, providing a justifiable sense of pride and satisfaction in the profession and accomplishments in their own institutions.

Development of the framework

Identification of dimensions and performance elements. The work on the structure of the framework began with an informal process to identify programs, services, and organizational characteristics that define HPP. These were then categorized into the following dimensions: (1) medication preparation and delivery, (2) patient care service, (3) medication safety, (4) medication-use policy, (5) financial performance, (6) human resources, and (7) education. A deliberate decision was made to create a separate dimension for medication safety, even though safety is an integral element of all of the dimensions.

Two additional dimensions of HPP practice were initially identified: leadership and the structures and processes required by regulatory agencies and legal statutes. Since the leadership dimension was previously addressed,³ it was not included in the framework. In addition, while elements of structure and process required by regulatory agencies and statutes are minimal standards for the legal operation of a health-system pharmacy, they were identified but not included in the framework because they are updated on an ongoing basis, vary by jurisdiction, and are not optional.

Next, an exhaustive literature search was conducted to develop a complete list of performance elements within each dimension. Performance elements are specific structures, policies, procedures, activities, and practices that serve as indicators of high performance and result in a financial or clinical return on invest-

ment of resources. A total of 69 performance elements were identified for the seven dimensions, some of which overlapped within and among various dimensions. Each performance element was then framed with the following structure:

- Brief, general description of the best-practice activities that it represents,
- References, including key articles from peer-reviewed sources that describe the element or illustrate the way in which it has been implemented in a high-performance fashion,
- Supporting practice standards and policies directly related to the element that have been developed, endorsed, or promulgated by external organizations, and
- General legal and regulatory requirements related to the element.

Development of qualitative metrics. Once the structure of the framework was developed, the project team focused on identifying the means by which individual performance elements could be evaluated and prioritized on the basis of their feasibility and potential value. While the initial goal was to establish quantitative metrics of performance, early in the development process it became apparent that most elements lacked sufficient empirical evidence to support such measurement. Recognizing the possibility that the elements may be mistakenly held as quantitative benchmarks of performance despite the lack of empirical support for such use, the panel chose to frame the metrics in a qualitative manner using a consensus-based approach for development. The goal was to develop metrics that were more than the usual yes or no measures of performance.

As shown in Table 1, three qualitative measures were developed. Feasibility is the estimated level of resources (sweat equity) necessary to fully implement a particular element; it is represented graphically as one

Table 1.

Rating Scales for the Feasibility, Financial Return, and Quality and Safety Return Metrics Used for Evaluating Performance Elements^a

Metric Rating Scale	Definitions
Feasibility	
X	An uncomplicated element, seldom (if ever) requiring financial investment or addition of staff to implement
XX	A fairly uncomplicated element, requiring the investment of <0.5 FTE in labor, a minor amount of other direct expenses to implement, or both
XXX	A moderately complicated element, requiring the investment of 0.5–1.0 FTE in labor, a moderate amount of other direct expenses to implement, or both
XXXX	A complicated element, requiring >1.0 FTE in labor, a substantial amount of other direct expenses to implement, or both
Financial return	
0	Minimal ROI or cost neutral
\$	Financial ROI <25% of amount invested
\$\$	Financial ROI 25–50% of amount invested
\$\$\$	Financial ROI 51–100% of amount invested
\$\$\$\$	Financial ROI >100% of amount invested
Quality and safety return	
0	No improvement in quality or safety
+	Slight improvement in quality or safety (may be too small of a change to measure)
++	Small improvement in quality or safety
+++	Moderate improvement in quality or safety
++++	Substantial improvement in quality or safety and should be considered a best practice

^aAdapted from reference 7, with permission. FTE = full-time equivalent, ROI = return on investment.

or more X's. A financial return on an investment, represented graphically as a zero or one or more dollar signs, is the expected financial gain or value from successfully implementing each element. A quality and safety return is the expected improvement in quality or safety from successfully implementing each element, and it is illustrated graphically as a zero or one or more plus signs.

For both a financial return and a quality and safety return, a higher number on the metric reflects a greater potential return. For the feasibility metric, however, a higher number reflects a larger investment of resources, resulting in lower feasibility and a greater complexity of

implementation. Also, the feasibility and return on investment ratings for a particular element assume that the element is completely absent within an organization. If an element is already partly established at an institution, the resource investment may be smaller (i.e., the feasibility may be greater), and the financial and quality or safety return on the investment may be smaller since the element already exists to some degree.

Review of the framework to achieve consensus. The expert panel met in January 2005 to review and revise the list of dimensions and performance elements, as well as to begin the process of assigning values for the metrics for each element. The

resulting framework, complete with descriptions of each element, qualitative metric values, and references, is the result of an iterative process performed individually and as a group. While the process was painstaking, it allowed the expert panel to refine the definitions of the performance elements and metric assessments on the basis of both the published literature and real-life situations, ensuring that each element had been implemented by at least one panel member. In this way, all of the elements were evaluated and validated to the best of the panel's ability, resulting in a consensus framework for what an HPP practice should be and what it takes to achieve it.

Presentation of the HPP framework. Table 2 illustrates the framework for HPP in summary format. Under each dimension, performance elements are listed, along with the assigned qualitative metric assessments and selected references. Detailed descriptions of each of these elements, other relevant references and standards, and a description of elements of structure and process required by regulatory agencies and statutes for each dimension are available online.⁷

Using the framework

The unique characteristics of the HPP framework are summarized in the box. There is no one, correct way of using the HPP framework. It is meant to be a guide that may be adapted by individual pharmacy departments on the basis of organizational and departmental objectives and the existing level of strategic-planning initiatives. As previously described, the qualitative metric scores reflect the expert panel's best thinking about the resources necessary to achieve full implementation and the potential financial and quality and safety returns of specific performance elements if no aspects of the elements are yet implemented. A department's actual outlay of resources and the expected return

on an investment will likely differ depending on the size of the health system, the size of the pharmacy staff, and the extent of the implementation to date. Therefore, once a pharmacy department begins using the framework as a guide for achieving HPP practice, the focus should not be on the qualitative metrics but on evaluating current operations and identifying opportunities to enhance the pharmacy program. In addition, the framework is useful for validating existing services and programs.

The following sections provide examples of how the framework can be used in a strategic approach for improving the medication-use process in health systems.

Using the framework for self-assessment and strategic planning

Strategic planning is an integral part of any HPP practice. It is a collaborative process that enables the pharmacy leadership team to work with the pharmacy staff in developing and carrying out the department's vision for pharmacy.³ The HPP framework can be used to articulate that vision to the pharmacy staff and the health-system's administrative team. It can be useful for departments in hospitals of any size, from large academic centers to small community hospitals, whether they already have an effective strategic planning process in place or use a less formal planning process.

The HPP framework can be used to perform a self-assessment, establish short- and long-term goals, and conduct periodic reassessments to ensure that all performance elements are maintained even as priority projects change. Having the entire pharmacy staff review all of the performance elements before annual strategic-planning sessions can serve as a catalyst for improving practice by increasing awareness of the scope of HPP practice. The selected resources provide direction

for implementation, and staff can use this information to get started.

For example, as an initial step, the self-assessment could be accomplished by assessing the extent to which each element is implemented. Brought to the department's strategic planning meetings, these assessments could be reviewed in the context of other departmental and institutional priorities, and goals could be established to address several elements in each dimension each year, with a specific time frame established for achieving progressively higher levels of practice consistent with the framework. Meeting the goals could be incorporated into annual performance evaluations for staff and managers, along with salary incentives.

A less formal approach could also be considered. All pharmacists should consider reading the detailed descriptions of all of the performance elements (available online⁷) because they can serve as useful points of reference of health-system pharmacists' responsibilities. Moreover, the overall picture is important to grasp because it is the integration of performance elements in all dimensions—not the implementation of selected elements—that creates an HPP practice.

Starting within the pharmacy department

Pharmacists who are just beginning a formalized plan to improve practice may want to start with a performance element that is totally within the control of the pharmacy department before moving on to multidisciplinary initiatives. For example, as shown in Table 2, both the pharmacist recruitment and the pharmacist retention elements in the human resources dimension are fairly uncomplicated to implement (feasibility = XX) and provide a moderate improvement in quality or safety (quality and safety return = +++). The pharmacist recruitment performance element provides a relatively

Table 2.

Qualitative Metric Assessments and Selected References for Elements of High Performance Included in the Framework of High-Performance Pharmacy Practice^a

Dimension or Performance Element	Qualitative Metric Scores ^b			Selected References
	Feasibility	Financial Return	Quality and Safety Return	
<i>Medication preparation and delivery</i>				
Unit dose drug distribution system	XXXX	\$\$\$\$	++++	8, 9
Dispensing incorporates machine-readable coding	XXXX	\$\$\$\$	++++	10–14
Pharmacy oversight of medications in all care locations	XXXX	\$\$\$	++++	15
Pharmacy management of all investigational medications	XXXX	\$\$	++++	16–18
Chemotherapy preparation in pharmacy	XXX	\$\$	++++	19
Medication returns managed by pharmacy	XX	\$	++++	...
Reconciliation of controlled substance waste	XX	0	+++	20, 21
Dose standardization	XX	\$\$\$	++++	22–24
Compounding formulations and protocols	X	\$	++	25–27
Management of automated dispensing cabinets	XXX	\$\$	++++	28–31
Appropriate medication label components and quality	XX	\$	++++	32
Safe medication storage	XX	\$	++++	...
Pharmacy control of medication transport to point of dispensing	XXXX	\$\$	++++	21
Integration of distribution and clinical services	XXXX	\$\$\$\$	++++	33
Advanced technician roles	XXXX	\$\$\$\$	+++	34–36
<i>Patient care services</i>				
Pharmacist-performed medication histories and reconciliation	XXXX	\$\$\$\$	++++	37–39
Pharmacist role on the patient care team	XXXX	\$\$\$\$	++++	40–42
Discharge counseling and medication reconciliation	XXXX	\$\$\$\$	++++	43–45
Patient care rounds	XXXX	\$\$\$\$	++++	46, 47
Mechanism to measure effect of pharmacists	XXX	\$\$	+++	48, 49
Integration of documentation	XXXX	\$\$\$	++++	50
Participation on resuscitation teams	XX	\$\$	++++	51
Appropriate antiinfective care services	XXX	\$\$\$\$	++++	52–55
Focus on core quality performance measures	XX	\$\$	++++	56, 57
Standardized medication administration times	X	\$\$	+++	58
Customer satisfaction surveys	X	\$\$\$	++	59, 60
<i>Medication safety</i>				
Machine-readable coding in medication administration	XXXX	\$\$\$\$	++++	61, 62
Clinical decision support-based infusion pump technology	XXXX	\$\$\$\$	++++	63, 64
High-alert medication policy	XX	\$\$\$	++++	65, 66
Safe drug nomenclature	XX	\$	+++	67
Use of order sets	XX	\$\$\$\$	+++	68–70
Computerized prescriber-order entry	XXXX	\$\$	++++	71–75
Pharmacy computer decision support	XXXX	\$\$\$	++++	76–79
Availability of patient information	XX	\$\$\$	++++	...
Pharmacy-maintained medication administration record	XXX	\$\$\$	++++	80
Elimination of color-coded systems	X	\$\$	++++	81–83
Education of allied health professionals on medication safety issues	XXX	\$\$\$\$	++++	39, 84, 85
<i>Medication-use policy</i>				
Effective formulary system	XXX	\$\$\$\$	++++	86, 87
Active pharmacy and therapeutics committee	XXX	\$\$\$\$	++++	88
Drug shortage systems	XX	\$\$	+++	89, 90
Effective industry representative policies	XX	\$\$\$\$	++	91, 92
Nonformulary medication review	XX	\$\$\$\$	++	93
Resource utilization management	XXX	\$\$\$\$	+++	94
Technology assessment services	XX	\$\$\$\$	++	95

Continued on next page

Table 2 (continued)

Dimension or Performance Element	Qualitative Metric Scores ^b			Selected References
	Feasibility	Financial Return	Quality and Safety Return	
Forecasting of financial performance	XXX	\$\$\$\$	+++	96
Medication-prescribing tools	XXXX	\$\$\$\$	++++	97, 98
Drug information services	XXX	\$\$\$	+++	99
Communication systems	XXX	\$\$\$	++++	...
Dietary supplement policy	X	\$	+++	100, 101
Medication-use evaluation	XXX	\$\$\$	++++	102
Medication samples	X	0	+	103
<i>Financial performance</i>				
Budgeting of pharmaceuticals	XX	\$\$\$\$	++	104, 105
Financial performance monitoring and reporting	XX	\$\$\$	++	106
Billing and reimbursement monitoring	XXXX	\$\$\$\$	++	107, 108
Asset management	XXX	\$\$\$\$	+++	109, 110
Workload and productivity	XX	\$\$\$	+++	111
Charge capture	XX	\$\$\$\$	+	112
Indigent care medication program	XXXX	\$\$\$\$	++++	110, 113
<i>Human resources</i>				
Pharmacist recruitment	XX	\$\$\$	+++	114–116
Pharmacist orientation guidelines	X	\$\$	+++	117, 118
Employee competency and concurrent evaluation	XX	\$\$	++++	119
Social events and employee morale and recognition	X	\$\$	++	120
Pharmacist retention	XX	\$\$\$\$	+++	121
<i>Education</i>				
Community education seminars	X	\$	++	...
Interdisciplinary inservices	XX	\$\$	+++	122
Residency training program	XXXX	\$\$\$\$	++++	39, 123
Student clerkship training	XXX	\$\$\$\$	++++	...
Pharmacy technician training and certification	XX	\$\$\$\$	++++	124, 125
Pharmacist continuing education	XX	\$\$\$	+++	...

^aAdapted from reference 7, with permission.

^bFeasibility reflects the resources required to implement the performance element, financial return reflects the financial return expected from implementation of the performance element, and quality and safety return reflects the quality and safety benefits expected from implementation of the performance element. See Table 1 for metric rating scales.

high (51–100%) financial return on investment (financial return = \$\$\$), while implementing the pharmacist retention element provides a high (>100%) financial return (financial return = \$\$\$\$).

Another option may be to address the pharmacy technician training and certification element within the education dimension. This performance element, too, is judged to be fairly uncomplicated to implement (feasibility = XX), and, as shown in Table 2, to provide high financial and quality and safety returns on investment (financial return = \$\$\$\$; quality and safety return = ++++).

Achieving success with performance elements like these within the pharmacy department may provide the impetus that the pharmacy staff needs to move on to more complicated elements.

Focusing on elements within reach and with a high payoff

Another approach is to first tackle performance elements that are relatively uncomplicated and quick to implement and have high payoff in terms of financial return or improvement in quality or safety or both. Successful implementation of these elements can increase the pharmacy

department’s credibility with the health-system’s administrative team, which can facilitate gaining support for more complicated elements in the future.

To identify relatively simple elements that have a high payoff, one should find performance elements in Table 2 with feasibility values of X or XX, values of \$\$\$ or \$\$\$\$ for a financial return on investment, and +++ or ++++ for a quality and safety return. Focus should be directed on elements that are not implemented in one’s institution or on elements partially implemented with the intent of bringing them to

full implementation to achieve the full payoff.

An example of a performance element that could be considered within easy reach is the use of order sets in the medication-safety dimension. This is a fairly uncomplicated element to implement (feasibility = XX), and it provides a high financial return on investment (financial return = \$\$\$\$) and a moderate return on investment in terms of quality and safety of care (quality and safety return = +++). If this element has been partially implemented, the relatively small amount of effort needed to implement it completely will not yield the expected financial gains but may result in enhanced credibility throughout the health system. It should be noted that while the feasibility score indicates that this element is fairly uncomplicated, this element may be more difficult to implement in institutions where the medical staff does not readily embrace the concept of order sets.

Focusing on performance elements that are within reach and specifically result in a high financial gain can be a useful strategy to save resources that can then be reinvested in further improvements within the department. This can be an especially effective strategy when just starting out. Within the financial-performance dimension, charge capture is a performance element judged to be fairly uncomplicated (feasibility = XX), especially if machine-readable coding facilitates charge documentation in the outpatient diagnostic and procedural areas, yet it offers a high financial return on investment (financial return = \$\$\$\$). By documenting the savings or revenue enhancement related to these efforts, pharmacy leaders can show health-system administrators the pharmacy department's commitment to improving the medication-use process and contributing to the financial viability of the health system, which

ideally will result in support for other initiatives.

Work on individual elements does not occur in a vacuum. For instance, an initial focus on relatively simple elements with a high payoff, such as the use of order sets and the budgeting of pharmaceuticals (feasibility = XX and financial return = \$\$\$\$ for each element) may provide an opportunity to reevaluate and improve related elements in the medication-use policy dimension, such as an active pharmacy and therapeutics (P&T) committee and medication-prescribing tools (such as guidelines and order sets). Both of these elements are complicated to implement, requiring a substantial amount of resources—primarily time (feasibility = XXX for the P&T committee

and XXXX for the medication prescribing tools). But they have a high financial return on investment (financial return = \$\$\$\$) and will likely have a positive effect on the pharmacy department's budget performance and the institution's overall budget performance. Ideally, those "saved" resources, along with the expected high quality and safety return from the active P&T committee and medication prescribing tool performance elements, can demonstrate the value of pharmacy and provide support for resources to further develop the medication-use policies and increase patient care activities.

Seizing a golden opportunity

Another way to gain support for initiatives to improve the medication-

Characteristics of the High-Performance Pharmacy Framework

Provides an overview of best practices across all dimensions of health-system pharmacy practice

- Brings together information from many published sources, including *Best Practices for Hospital & Health-System Pharmacy* that contains the American Society of Health-System Pharmacists's (ASHP's) position and guidance documents, the Institute for Safe Medication Practices's *2004 ISMP Medication Safety Self-assessment for Hospitals*, and the current literature,^{4,5}
- Incorporates minimum practice standards and stretches goals,
- Illustrates the multidisciplinary nature of pharmacy practice in health systems, and
- Demonstrates the scope and complexity of pharmacy practice in health systems without distracting details.

Complements and supports the ASHP Health-System Pharmacy 2015 Initiative⁶

- Includes all aspects of the medication-use process and provides explicit descriptions of the necessary performance elements, and
- Ensures all goals of the 2015 Initiative would be met if departments are carefully reviewed to meet performance elements in the framework.

Incorporates qualitative metrics

- Helps pharmacy departments validate decisions about which dimensions and specific performance elements to emphasize first in the planning process,
- Uses symbols rather than numerical scores in the framework to emphasize qualitative focus,
- Acknowledges that neither the literature nor practical experience would support valid quantitative assessments, and
- Goes beyond benchmarks, which tend to measure pharmacy performance in one or two numbers, such as drug cost per patient day.

use process is to identify multidisciplinary processes and issues that are important to the health system and then use the HPP framework to find performance elements that address those issues. For instance, if the health system's strategic plan includes an emphasis on quality and safety, the pharmacy department may begin by looking at the medication-safety dimension. The pharmacy department can further pare it down on the basis of priorities identified in the strategic plan for the department. It may decide, for example, that the primary priorities are machine-readable coding in both dispensing and medication administration and clinical decision support-based infusion-pump technology. While these performance elements are complicated to implement (feasibility = XXXX), getting the necessary funding and multidisciplinary support may be facilitated since the elements are closely aligned with the health-system's strategic plan. They can provide a high financial return on investment (financial return = \$\$\$\$) and a substantial improvement in quality and safety (quality and safety return = ++++). At the same time, the department could address related performance elements in the medication-use policy dimension, like technology assessment services (applying the methods and resources used in making formulary decisions to the evaluation of nonpharmaceutical technologies including diagnostics), which would have little effect on quality and safety (quality and safety return = ++) but are fairly uncomplicated to implement (feasibility = XX) and can provide a high financial return on investment (financial return = \$\$\$\$).

Pharmacy leaders can also demonstrate the pharmacy department's role in supporting regulatory requirements and quality mandates. The Joint Commission on Accreditation of Health Care Organizations's 2007 National Patient Safety Goal

(NPSG) to "accurately and completely reconcile medications across the continuum of care" may be an example of such a golden opportunity for pharmacy.¹²⁶ Since many health systems are grappling to meet this goal, pharmacists can take the lead by reviewing performance elements related to medication reconciliation in the patient care services dimension of the HPP framework. Pharmacist-performed medication histories and reconciliation, as well as discharge counseling and medication reconciliation, are complicated performance elements to implement (feasibility = XXXX) because they are multidisciplinary and will quite likely require additional pharmacy staff. The HPP framework, however, can be used as a guide by identifying useful references, and successful implementation will probably result in a high financial return (financial return = \$\$\$\$) and a safety and quality return on investment (quality and safety return = ++++). Just as important, however, is the credibility (personal "capital") earned by the pharmacy leaders who fulfill the institution's need to meet the Joint Commission's NPSG and demonstrate multidisciplinary leadership. Increased credibility of the pharmacy leaders and individual pharmacists on patient care units may also help pave the way for focusing on other elements in the patient care services dimension that may have been on pharmacy's "back burner" waiting for the right opportunity, as well as elements in the medication-use policy dimension that require close collaboration with other health professionals.

The HPP framework can be used to focus on a performance element that is a priority for a member of the health-system's administrative team. For instance, if a health-system executive's priority is asset management, perhaps the asset management element in the financial performance dimension would be one of the first elements to address. While this

performance element is moderately complicated to implement (feasibility = XXX), it provides a high financial return on investment (financial return = \$\$\$\$) and a moderate improvement in quality and safety (quality and safety return = +++). Documenting processes that the pharmacy department is performing effectively and proactively identifying areas to improve will not only improve the financial performance of the pharmacy department but also provide data that the health-system executive requires to perform his or her role. The perceived importance of the issue may increase the chances of obtaining the necessary resources to fully implement this element.

Similarly, the pharmacy leadership team could look for ways to have a positive effect on the selected performance measures regularly reported to the health-system's board of trustees and to the public. One method of achieving this is to establish goals for pharmacy department inventory turns as described in the asset management performance element and regularly report these to the institution's administrative team.

Additional uses of the framework

While the primary use of the HPP framework is as a guide in the pharmacy department to improve patient care through improved pharmacy performance, the framework also can be used in other ways.

Justification tool. The dimensions and elements of the framework can be used to document the pharmacy department's progress and accomplishments relative to the elements described, identify opportunities, and justify resource requests for new initiatives within the health system. The descriptions of the performance elements can be used to communicate accomplishments and current needs to the health-system's administrative team.

It is believed that health-system pharmacy departments can benefit

from a gap analysis using the framework, which compares actual performance with desired performance. It is also recognized that there may be additional elements that organizations have developed that represent HPP practices that are not reflected in this document. In addition, elements that are currently described will evolve and may be replaced over time with new technologies and innovative pharmacy practices. As part of the professional commitment to continuous quality improvement, periodic review of the element descriptions and evaluation of current practices should be conducted to identify areas that need to be revisited or in which priorities have changed.

Educational tool. The HPP framework also has educational applications. It can serve as an educational tool for health-system administrators who want to learn more about the scope and complexity of HPP practice. Shared with pharmacy school faculty and students, it can provide the profession's future leaders and practitioners with a broad view of health-system pharmacy practice. In addition, specific dimensions, such as the medication safety and medication-use policy dimensions, could be used as the basis for required or elective courses in doctor of pharmacy programs or pharmacy and health administration graduate programs; the performance elements could be the course syllabus topics; and the selected references, standards, and policies could form the core of the reading list.

Likewise, in pharmacy residency programs, the framework can provide residents with a global, comprehensive view of the complexity of HPP practice and the multidisciplinary nature of the medication-use process in health systems. The qualitative metrics can provide a substantive basis for discussion about the decision-making process that the pharmacy management team uses when setting priorities for the de-

partment. Implementing specific performance elements could form the basis of residency projects.

The use of the framework as an educational tool for pharmacists should not be overlooked. Valuable when read on its own, the framework with the complete description of each element can also be used as the basis of educational programs within health systems or within local, state, and national pharmacy associations. Presentations and workshops could focus on specific dimensions that reflect the current initiatives of the health system or association.

Career decision-making tool. Pharmacists at any stage of their career can use the HPP framework as one of many factors in making career-related decisions.

Pharmacists in nonmanagement roles who are evaluating new job opportunities can use the framework as an informal checklist to evaluate the level of pharmacy practice at potential work sites. Knowing the ideals conceptualized in the HPP framework can help pharmacists identify where they want to practice—that is, their willingness to accept performance gaps as a type of “informed consent” along with the challenge to make a positive difference in the organization. All pharmacists serve as informal leaders, and as such they can help implement programs and services if given the opportunity, especially in patient care services and medication-use policy.

The framework could be used in a more formal way by pharmacists who are applying for a pharmacy director position in a health system. Used in conjunction with other sources of information, the framework can help a pharmacy director candidate grasp an overview of the pharmacy department and the medication-use process throughout the health system. It may also help a candidate judge how many resources will be necessary to initiate and maintain HPP practice and assist in his or her resource negotiation.

Then, after a new pharmacy director is selected, the framework can help the director focus on priorities and identify areas of greatest yield.

Overall value of the framework

The framework for HPP practice is an additional tool for pharmacists to use in improving the safety and quality of the medication-use system in health systems. Given the current national emphasis on publicly reported core quality measures promulgated and required by the Center for Medicare and Medicaid Services, the Joint Commission, and others, this framework can provide a structure to focus on activities that represent high quality services. Bringing together the many dimensions of health-system pharmacy practice, the framework emphasizes the need to look beyond the pharmacy department when examining pharmacy's role in improving the medication-use system and offers a mechanism for identifying priorities based on feasibility and return on investment. As such, the framework provides a comprehensive perspective on the quality of pharmacy practice and the medication-use system, and it can serve as a motivating influence to improve practice on an individual and departmental level for years.

Conclusion

The HPP framework characterizes pharmacy performance elements on the basis of feasibility, financial return, and effect on quality and safety. The framework provides pharmacists with a means to establish priorities in improving the medication-use system.

^aThe Executive Alliance is an advisory board composed of pharmacy leaders and experts convened semiannually by McKesson Corporation; it devotes at least half of its meeting time to brainstorming ideas for advancing professional practice.

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