PHARMACY FORECAST 2016–2020

STRATEGIC PLANNING ADVICE

FOR PHARMACY DEPARTMENTS IN HOSPITALS AND HEALTH SYSTEMS

A trends report from the ASHP Research and Education Foundation

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PHARMACY FORECAST
2016-2020

STRATEGIC PLANNING ADVICE FOR PHARMACY DEPARTMENTS IN HOSPITALS AND HEALTH SYSTEMS

William A. Zellmer, Editor
Edward Li, Assistant Editor

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The opinions expressed in this report are those of the authors and do not represent the position of the ASHP Research and Education Foundation.

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Foreword

The ASHP Research and Education Foundation is pleased to publish the fourth edition of the annual *Pharmacy Forecast* report, which complements well the vision the Foundation is working to achieve:

> Patient outcomes improve because of the **leadership** and clinical skills of pharmacists, as vital members of the healthcare team, accountable for safe and effective medication use.

Pharmacy practice leadership in these times of flux in healthcare requires astute strategic planning, which the *Pharmacy Forecast* is designed to support.

The Foundation is grateful to the many pharmacists and others who have contributed to the David A. Zilz Leaders for the Future Fund, which provides the resources for the work of the team responsible for each edition of the report. The Foundation collaborates closely with the staff of ASHP in appointing the advisory committee that establishes the focus of each edition and in selecting and surveying the Forecast Panel that makes the trend predictions that underlie the report.

Pharmacy Forecast has attained a high profile among health-system pharmacists. The number of page visits for the Web versions of the first three editions totals more than 250,000. As of early November 2015, approximately 11,000 individuals had downloaded the 2015 report. In a February 2015 survey of "early downloaders" of the third edition, 78% of those who have a formal strategic planning process for their department said they were likely to use the report in that process. Complementing these data are many anecdotal reports about use of the report in teaching pharmacy students and residents.

We welcome your comments on the new edition. Tell us what you find particularly useful in the report, whether there is anything that falls short of your expectations, and what you would like to see in the next report. We will appreciate learning how you use the report, which will allow us to share success stories with others. We want to continue to enhance this annual series as a vital resource for effective planning by pharmacy practice leaders in hospitals and health systems.

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Introduction:

ALIGNING THE PHARMACY ENTERPRISE WITH THE NEEDS OF PATIENTS AND THE IMPERATIVES OF HEALTH SYSTEMS

WILLIAM A. ZELLMER

Creation of this fourth edition of the annual *Pharmacy Forecast* was guided by the same questions that have been the project's beacons from the beginning: How can health-system pharmacy practice leaders stay on top of their game with all the changes afoot in the healthcare field? How can they know which new developments and trends merit their strategic attention? What new trends that pharmacists are well positioned to see and understand are worth bringing to the awareness of other health-system leaders?

The ASHP Foundation strives to make each edition of *Pharmacy Forecast* an essential tool for pharmacy practice leaders as they pursue answers to these questions. The 2016 report contains a trove of thinking about the pharmacy implications of trends that will have a major impact on hospitals and health systems over the next five years. As such, the report is an essential tool for the environmental scanning phase of strategic planning in health-system pharmacy practice.

THE EMERGING LANDSCAPE IN HEALTH-SYSTEM PHARMACY

This report's eight chapters cover 64 potential trends and offer 42 strategic recommendations for pharmacy practice leaders. Those who read all the chapters will come away with a composite picture of the landscape that health-system pharmacy will be traversing over the next five years. Some of the prominent impressions formed by viewing this landscape include the following:

1. Healthcare payment reform will have far-reaching effects on health-system behavior, including a shift of resources from inpatient care to ambulatory care.
2. Health systems will give renewed attention—well beyond lip service—to classical public health initiatives (i.e., disease prevention and health promotion).
3. Health systems will re-examine long-standing "givens" about their business model and will be far more willing than in the past to outsource certain activities or enter into partnerships for their provision.
4. Health-system executives will have higher expectations for leadership by pharmacists on a broad array of medication-use issues that affect institutional success.
5. Health-system leaders will become more aggressive in challenging pricing for medicines that is out of line with patient benefit.
6. Health-system leaders will increasingly be willing to act on their discomposure over the regulation, pricing, and distribution of specialty medicines.
7. Breakthroughs in therapeutics will cause a major shift in how health systems care for patients with certain diseases.
8. Pharmacists and other health professionals will give more attention to issues related to professional autonomy and ethics.

Many other topics in the 2016 report relate to the current strategic concerns of health-system pharmacists. For example, the need to optimize the deployment of talent in the pharmacy department, the emerging oversupply of pharmacists for entry-level positions in some geographic areas, new tools to measure and improve practitioner and departmental performance, continuing attention to "meaningful-use" requirements in information technology, and the pharmacy implications of the patient empowerment movement.

ENVIRONMENTAL SCANNING IN THE STRATEGIC PLANNING PROCESS

Most pharmacy departments engage in *operational* planning, focused on resolving immediate problems and improving existing services. It is more difficult to conduct authentic *strategic* planning, which considers how external trends will affect activities over the long term.

A common barrier to strategic planning is lack of time and resources for conducting an environmental scan of relevant issues. Here is where the *Pharmacy Forecast* project enters the picture, by filtering the background signals and amplifying those that are likely to have a major bearing on pharmacy practice within the next several years. Through the *Pharmacy Forecast* report, practice leaders have ready access to the insights of a group of trend-watchers; those insights can be used to supplement the wisdom that resides within the pharmacy department to move toward authentic strategic planning.

HOW *PHARMACY FORECAST* REPORTS ARE CREATED

The methodology used to prepare *Pharmacy Forecast* reports is based on research summarized in the book, *The Wisdom of Crowds*, by James Surowiecki (Anchor Books, 2005). The predictions of "wise crowds" are generally more accurate than those of individual experts. By definition, wise crowds are composed of independent, decentralized individuals who have a diversity of opinion and whose private judgments can be aggregated.

The wise crowd in the case of *Pharmacy Forecast* reports is an appointed Forecast Panel consisting of pharmacists who are believed to have (1) expertise in health-system pharmacy practice, (2) knowledge of trends and new developments in this area, and (3) demonstrated ability to think analytically about the future of pharmacy practice in hospitals and health systems. Forecast Panelists (FPs), nominated by the leaders of the five ASHP sections, are appointed anew each year.

FPs complete a questionnaire that is developed under the guidance of an advisory committee. The questionnaire is pilot tested with several health-system pharmacists and refined before launch. The survey asks about the likelihood of certain developments occurring over the next five years. FPs are asked to respond in terms of what they see unfolding in the geographic region in which they work, which encourages reliance on firsthand knowledge, observations, and experience rather than conjecture about the situation nationwide. FPs are asked to give their top-of-mind responses and not to do any extra reading or research to decide how to respond.

Experts are recruited to write a brief chapter for each domain of the report. Those chapters present the survey results, the authors' assessments of the FPs' predictions, and the authors' strategic recommendations for pharmacy practice leaders. By design, each chapter is relatively brief, to encourage attentive reading.

THE 2016 FORECAST

The following eight topic areas (domains) were selected for the most recent survey: (1) healthcare delivery and financing, (2) population health management, (3) drug development and therapeutics, (4) pharmaceutical marketplace, (5) data and technology, (6) pharmacy work force, (7) patient empowerment, and (8) ethics.

The composition of the 159-member Forecast Panel was balanced across the census regions of the United States. The Web-based survey was launched on July 21, 2015, and closed on August 3, 2015, after two reminders to nonrespondents. The response rate was 84%.

HOW TO USE *PHARMACY FORECAST* REPORTS

As a formal or informal leader in pharmacy practice, you should first scan the report to get a sense of its content and then schedule more thorough review to assess the implications of the report for your activities. You will find it helpful to start by reviewing a chapter's survey questions and the FPs' responses. Look at the distribution of responses to a question and consider whether there is a clear consensus in one direction or another. Think about how the panel's response to a particular question compares with your own sense of what is

happening in your practice, at your institution, and in your region. Is your department tuned in to this issue? If not, should it be?

After reviewing the survey results, read what the chapter authors have to say about the FPs' predictions. Reflect on the strategic recommendations in the chapter in relation to your own department's situation and plans.

Pharmacy Forecast 2016–2020 can be assigned as required reading for staff members who participate in the pharmacy department's planning process. Staff members, residents, or students can be asked to make a presentation to the department on the report or on individual chapters.

Consider sharing the report with the executive and clinical leaders in your institution, and invite their perspectives on the survey findings and the strategic recommendations. Factor those perspectives into the department's planning process.

Consult both the current report and the last three years' editions. For all four reports, FPs were asked to think ahead five years in their predictions, so the previous editions (which cover different issues) complement the current report.

CONCLUSION

Effective strategic planning requires environmental scanning, not only of the immediate surroundings but also of the horizon. *Pharmacy Forecast 2016–2020*, along with the previous editions, will help your pharmacy department with this essential part of looking and planning ahead.

ACKNOWLEDGMENTS

The members of the advisory committee (listed on the inside front cover) were instrumental in shaping the Forecast Panel survey. Colleen Bush expertly guided all facets of the survey. The foundational contribution of the health-system pharmacists who served as Forecast Panelists is gratefully acknowledged. Also acknowledged is the support of the following individuals in various key facets of the project: Stephen J. Allen, Vicki Basalyga, Stephanie Brown, Daniel J. Cobaugh, Justine Coffey, Bethany Coulter, Michael Dejos, Erica Diamantides, Bill Fogle, Johnna Hershey, Lynn Hoffman, Mick Hunt, Patricia C. Kienle, Rohit Moghe, Jennifer Malinowski, Barbara Nussbaum, Antoniette Parris, Douglas J. Scheckelhoff, Erika Lutz Thomas, Kasey Thompson, Allie D. Woods, and David Zilz.

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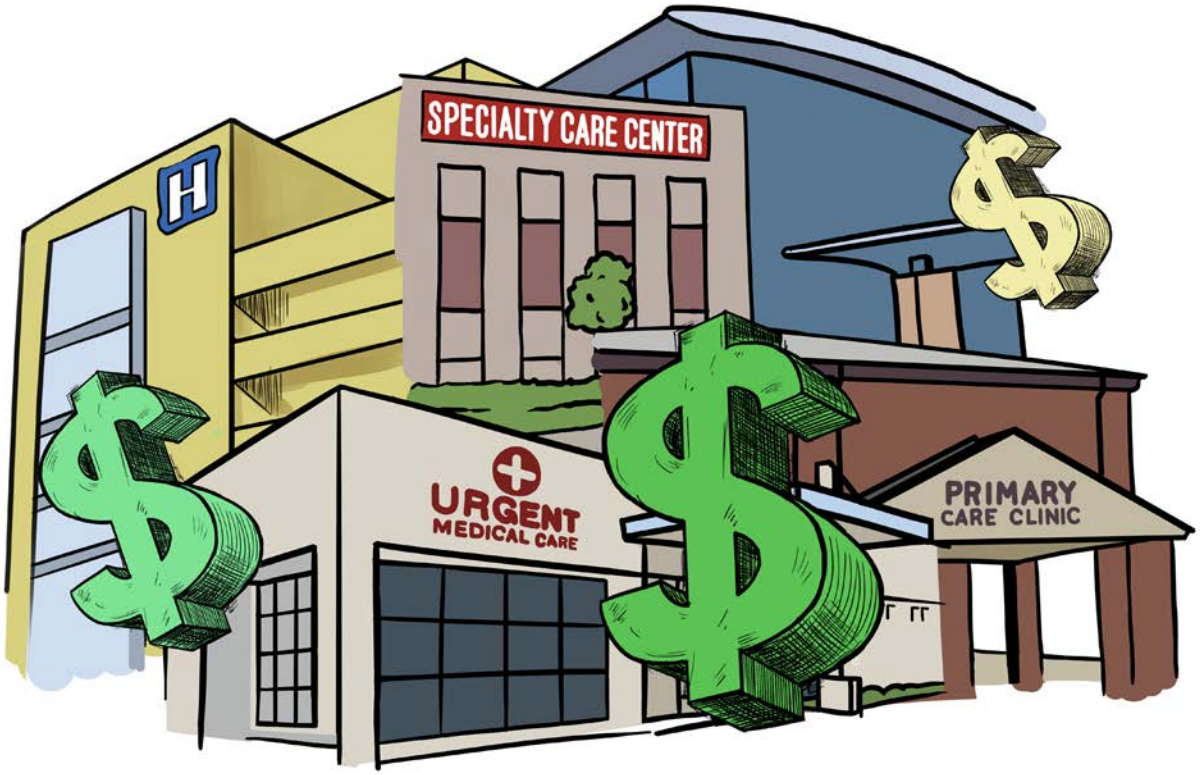


Healthcare Delivery and Financing:

STAYING AHEAD OF INTENSE COMPETITION

SCOTT J. KNOER

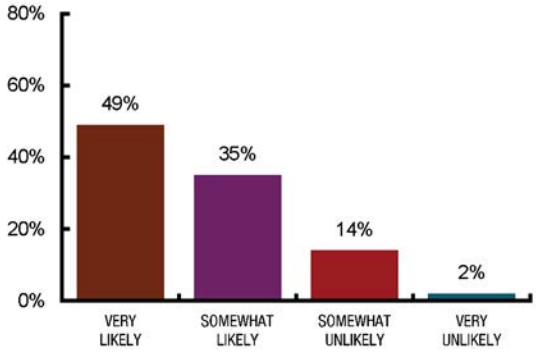
MANAGING RISK IN TURBULENT TIMES

Since the start of the pay-for-performance movement[1] and passage of the Patient Protection and Affordable Care Act (ACA),[2] there has been intense pressure on healthcare organizations to improve quality while reducing costs. The stress created by this pressure has been exacerbated by proliferation of expensive specialty medications,[3] egregious price increases for some sole-source drug products,[4] and the escalation of generic drug prices. In response to this environment, many healthcare organizations are pursuing mergers and acquisitions in an attempt to create economies of scale without the cost of new construction. Another tactic is to partner with outside entities such as chain pharmacies.

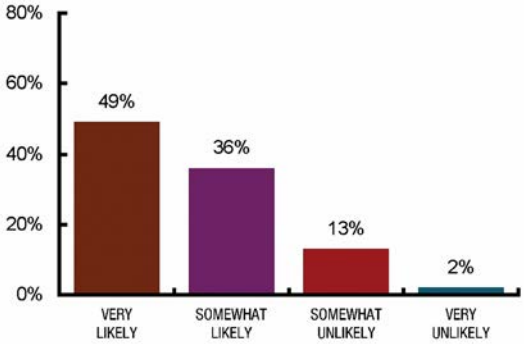
The pharmacy enterprise in health systems can help their organizations succeed by **standardizing processes**, **implementing best practices** that improve patient health, **managing the formulary prudently**, and **applying business acumen** throughout the medication-use process. The need for a **comprehensive medication strategy** is evidenced by 85% of Forecast Panelists (FPs) predicting that executives in at least 75% of health systems will **consult regularly with their pharmacy leaders** to reduce medication therapy costs across the continuum of care (survey item 2).

How likely is it that the following will occur, by the year 2020, in the geographic region where you work?

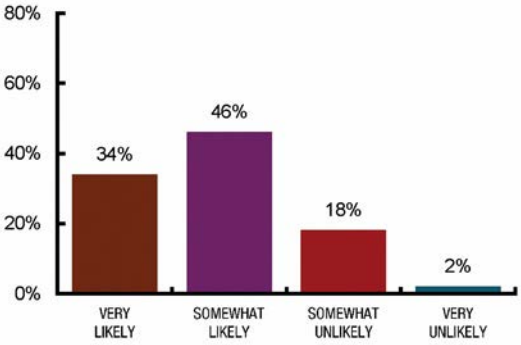
1 More than 90% of health systems will **have strong financial incentives** to keep their patients healthy and not in need of high-cost health care services, particularly inpatient care.



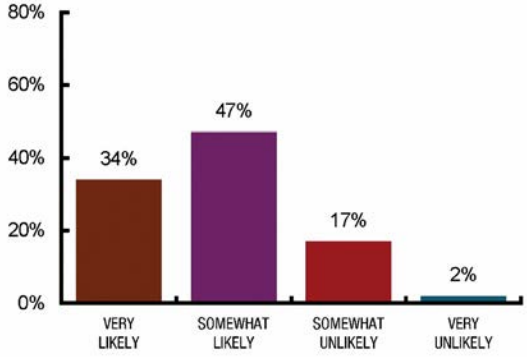
2 In at least 75% of health systems, executive leaders will consult regularly with their pharmacy leaders on opportunities for reducing medication therapy costs **across the continuum of care**.



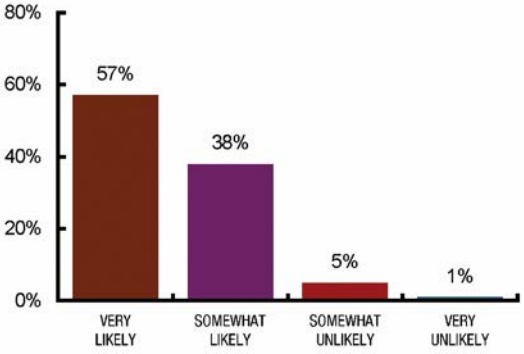
3 At least 50% of health systems will **partner with low-cost providers** for some activities that traditionally have been conducted directly by the health system (e.g., chemotherapy infusion, diagnostic imaging, clinical laboratory).



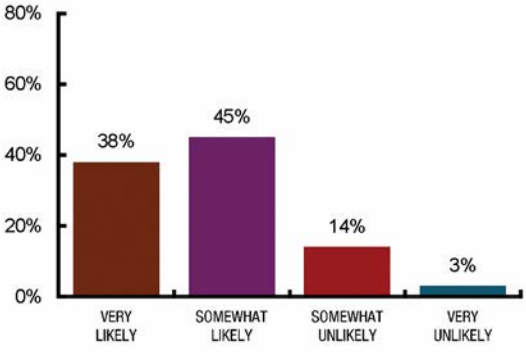
4 More than 75% of health systems will attempt to improve their competitiveness by **reducing the price of care** for specific high-cost disease states.



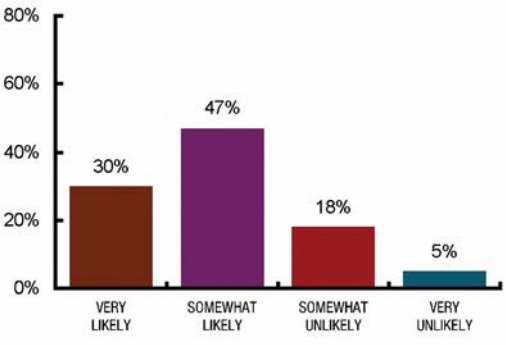
5 At least 50% of health systems will **assertively focus** on improving areas of care in which they experience a **high degree of variability** vis-à-vis best practices.



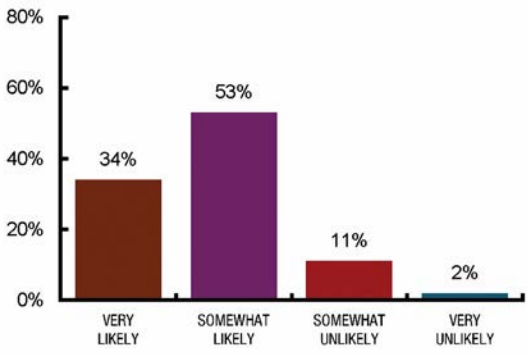
6 At least 25% of health systems will have a **rigorous program** to ensure that cost-reduction efforts **do not compromise the quality of care**.



7 At least 50% of health systems will plan to **enhance their capacity to respond** to emerging public health challenges (e.g., Ebola infections, multidrug resistant infections, zoonoses).



8 At least 50% of health systems that qualify for the **340B program** will experience declines of 25% or more in savings achieved through the program.



KEEPING PATIENTS HEALTHY

The 84% affirmative FP response that nearly all health systems will have **strong financial incentives to keep their patients healthy** and not in need of high-cost healthcare services, particularly inpatient care (item 1), reinforces the importance of keeping "at-risk" populations healthy. A major implication of this prediction is that **health-system pharmacy must embrace ambulatory care**. The FP prediction that health systems will enhance their **capacity to respond to public health challenges** (item 7) also speaks to keeping patients healthy.

Inpatient care is reimbursed through bundled payment, whereas outpatient care is still predominantly fee-for-service. To succeed in **global payment models**, pharmacy practice leaders must replicate their cost effective inpatient tactics in outpatient clinics. Only by increasing pharmacy's presence in the patient-centered medical home will health systems successfully manage chronic disease.

PRICE REDUCTIONS RESULTING FROM COMPETITION

Eighty-one percent of FPs predicted that more than 75% of health systems will attempt to improve their competitiveness by **reducing the price of care** for high-cost disease states (item 4). This prediction will touch pharmacy in areas such as **outpatient infusions**, a historically high-margin service that has been targeted by competitors such as retail pharmacy chains.[5]

The increased use of expensive specialty medications has amplified payer scrutiny of administration site and billing rate for infusion therapy, which is being **commodified** in the way that lab tests and radiology services were previously. Disruptive innovators are offering low-cost, convenient alternatives to health-system pharmacy's current business models.

In the laboratory domain, there is the potential for multiple rapid clinical tests at a significantly reduced cost.[6] Competition for lab services has driven down reimbursement for this previously high-margin, hospital-based service. Although innovative competition threatens historic pricing models, it can also present opportunity. For example, instantaneous clinical blood values can enable immediate adjustment of dosage by ambulatory care pharmacists.

REDUCING VARIABILITY

Ninety-five percent of FPs agreed that at least half of health systems will assertively focus on improving areas of care in which they experience a **high degree of variability** vis-à-vis best practices (item 5). As such efforts expand, motivated in part by cost-reduction objectives, health systems will be under pressure to ensure that quality does not decline. In fact, 83% of FPs predicted that at least a quarter of health systems will have a rigorous program to ensure that cost-reduction efforts **do not compromise quality** (item 6). Pharmacy has significant opportunity to influence quality through active involvement with care-path development and through standardization of formularies, operations, and clinical services across the health system.

PARTNERSHIPS AND OUTSOURCING

Pharmacy chains have entered the business of primary care, including models such as the CVS Minute Clinic. In partnering with health systems, chain drugstores are seeking to increase their core business and expand their specialty pharmacy capture rate. Eighty percent of FPs predicted that at least half of health systems will **partner with low-cost providers** for some activities that traditionally have been conducted directly by the health system (item 3). Pharmacy practice leaders must keep in mind that relinquishing patients in today's fee-for-service outpatient revenue model will negatively affect their **ability to control costs and improve quality** in tomorrow's global payment models.

340B DRUG PRICING PROGRAM

Eighty-seven percent of FPs predicted that at least half of health systems that qualify for the 340B program will experience **declines of 25% or more in savings** achieved through the program (item 8). The proposed changes in the recent HRSA omnibus guidance[7] involve more restrictive patient and prescription eligibility, putting organizational cost savings at risk. The significance of major changes to this program cannot be overstated as some larger institu-

tions save more than $100 million annually related to 340B.

STRATEGIC RECOMMENDATIONS FOR PRACTICE LEADERS

1. Move assertively to **expand pharmacist services in ambulatory-care clinics**, showing system leaders how this will contribute to imperatives in population health, quality improvement, and cost reduction.
2. Drive **operational and clinical efficiencies** across the pharmacy enterprise. Ensure pharmacy involvement in care-path development. Consider centralizing services to reduce costs across multi-hospital systems.[8]
3. Pursue **bilateral prescription data sharing partnerships** with outside pharmacies to improve safety, decrease unnecessary phone calls, and allow caregivers to view medication histories generated by third-party payers. Do not enter into agreements that relinquish your retail and specialty prescription business or give competitors access to your patient data without reciprocity on their part.
4. Proactively **reduce charges for hospital outpatient infusions**. Further, shift all appropriate infusions to your system's lower-cost operational units such as home health.
5. Proactively communicate to the C-suite **the impact of exorbitant prices** for both innovative and older medicines. Collaborate with groups that advocate for reasonable pharmaceutical prices.
6. Communicate the impact of any regulatory changes that restrict your organization's **ability to use 340B** for contract pharmacies, referrals, and discharge prescriptions. **Ensure integrity and compliance** of your health system's participation in 340B through active auditing. Encourage your health system to join others in advocating against further restrictions in the 340B program.

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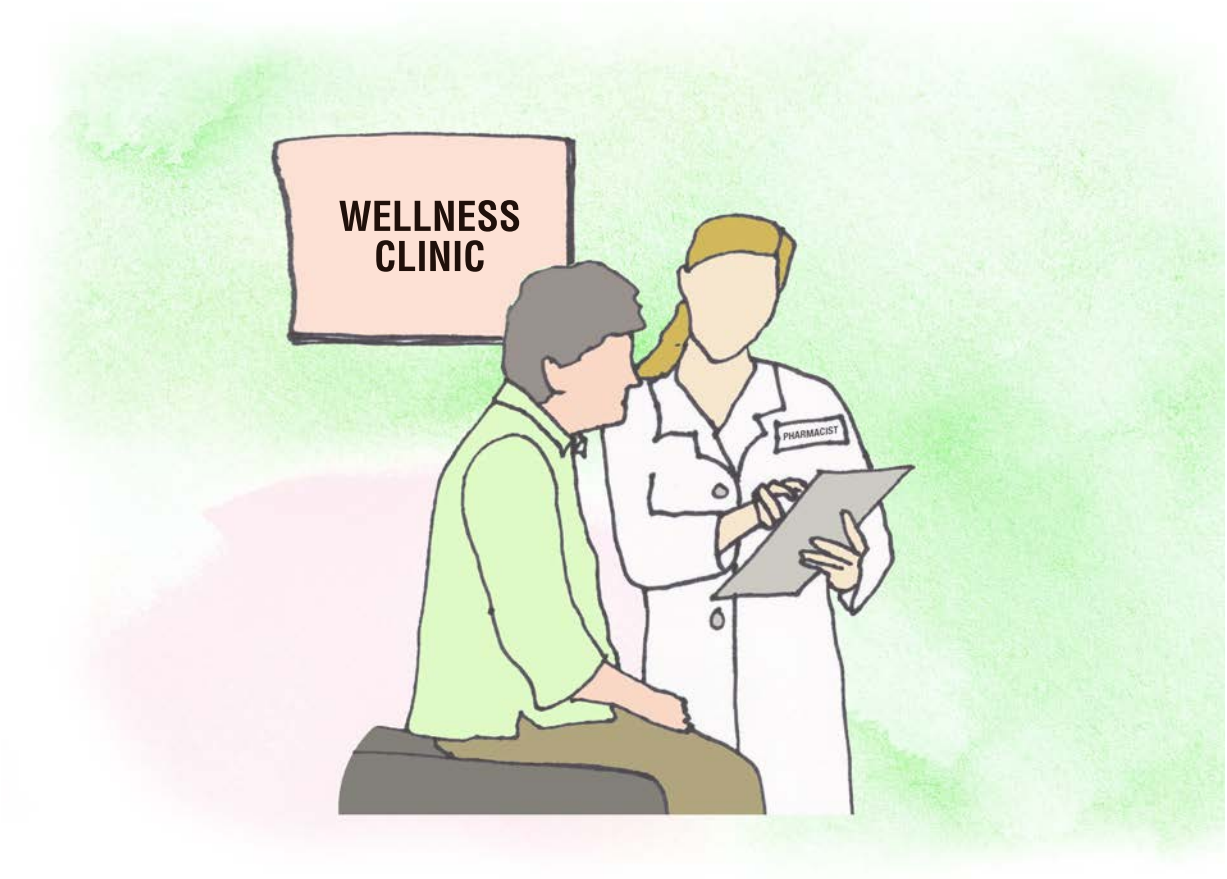


Population Health Management:

ALIGNING INCENTIVES TO TRANSFORM CARE DELIVERY

RITA SHANE AND CYNTHIA LITT DECULUS

PAYMENT REFORM IS DRIVING POPULATION HEALTH MANAGEMENT

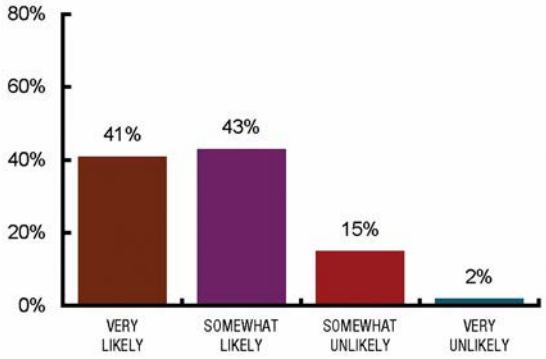
For purposes of this report, "**population health management**" is defined as the explicit efforts of health systems to improve the health status of the population of patients they serve (not simply to provide sickness care); a concomitant goal is to reduce the cost of caring for the population they serve.

Payment reform—as reflected in risk-sharing/savings-sharing between payers and providers, bundled payments, and performance incentives—is driving health-system commitment to population health. It is not surprising that 84% of Forecast Panelists (FPs) predicted that at least 75% of health systems will have risk-sharing/savings-sharing agreements with payers within the next five years (survey item 1).

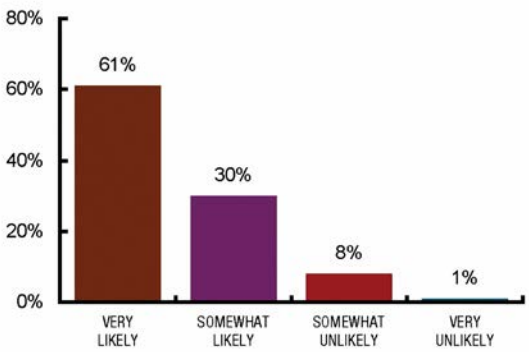
New payment models are pressing health systems to **lower the cost of care**. Outpatient programs such as cancer centers, which have traditionally generated margin, are becoming a target for cost savings. To succeed in population health management, providers will need discipline in deploying evidence-based strategies for managing utilization of

How likely is it that the following will occur, by the year 2020, in the geographic region where you work?

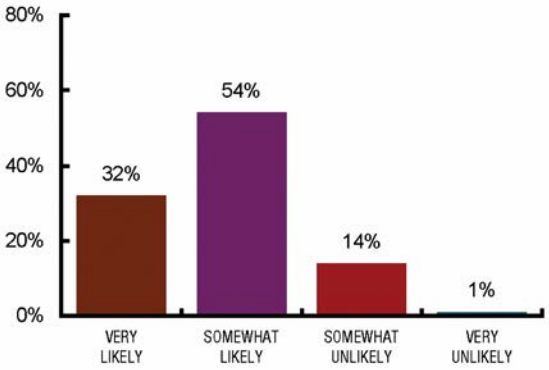
1 At least 75% of health systems will have **risk-sharing/ savings-sharing agreements** with payers, which incentivize reduced per-patient costs and improved population health.



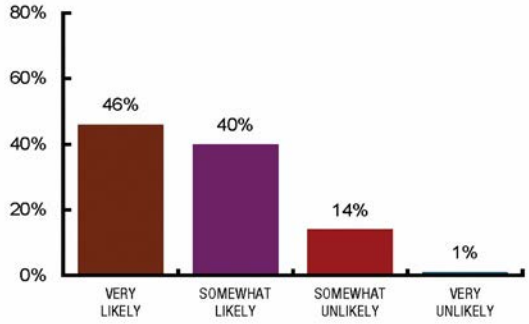
2 At least 50% of health systems will actively encourage their population of patients to participate in an **annual wellness assessment**.



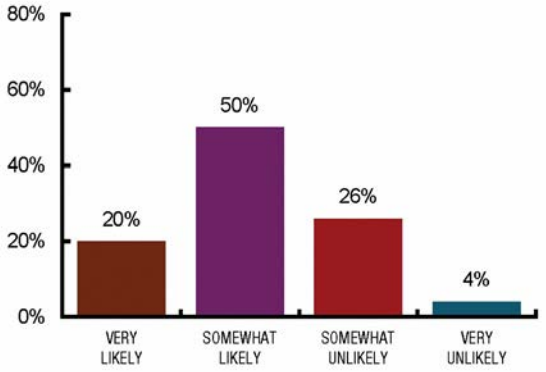
3 At least 75% of health systems will have a formal program for **rigorously coordinating post-acute-care services**.



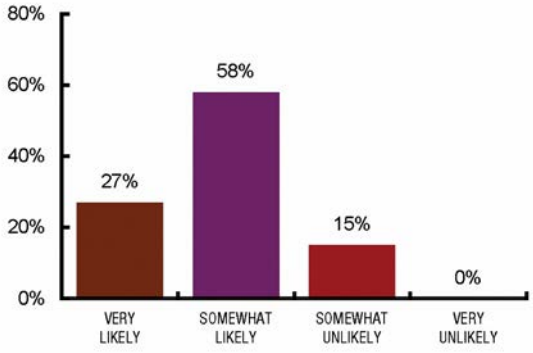
4 At least 50% of health systems will actively apply electronic communication tools (e.g., EHR patient-portal email alerts, smartphone texts) in **home-based patient care programs** as an essential component of their population health management efforts.



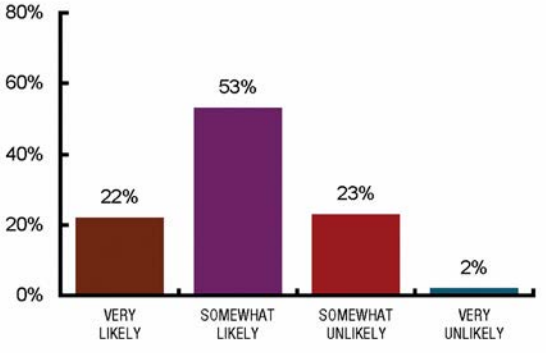
5 At least 25% of health systems will explicitly integrate **behavioral/mental health services** with primary medical care.



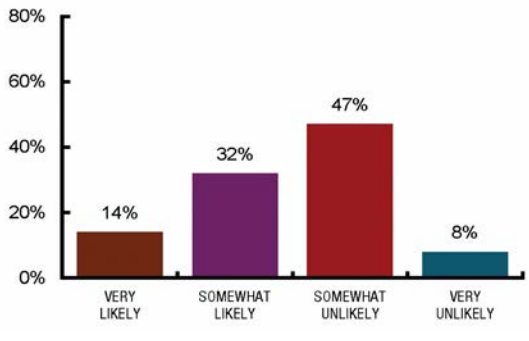
6 At least 75% of health systems will always consider **medication-use issues** in strategic planning for population health management.



7 At least 50% of health systems will actively include pharmacists in their **community-wide programs** focused on improving the health status of the population.



8 The governing boards and executives of at least 10% of health systems will actively work, through local political processes, to **improve the healthfulness of the environment** (e.g., clean air, clean water, neighborhood walkability) in their communities as a component of their commitment to population health.



diagnostics, procedures, and treatments and in preventing avoidable hospital readmissions. Staffing levels in all departments are likely to be scrutinized as part of an overall cost-management strategy.

EFFECTIVE MEDICATION MANAGEMENT AS AN ESSENTIAL STRATEGY

Because of the costs associated with overuse of medications and growth in the use of expensive specialty drug products, **effective medication management** will be an essential element of population health. FPs predicted that at least 75% of health systems will consider medication-use issues in strategic planning for population health (item 6).

PREVENTIVE CARE

The imperative to keep populations healthy is stimulating health-system interest in preventive care and wellness visits.[1] A large majority of FPs predicted that most health systems will actively encourage patients to participate in **annual wellness assessments** (item 2). Wellness assessments allow stratification of patient populations based on acuity of illness to better target the services that individuals need. Since acuity drives risk-adjusted coding, which in turn drives reimbursement, a growing number of health systems are incentivizing patients to participate in wellness assessments. It is becoming more common for pharmacists in clinic settings to participate in wellness visits for Medicare and high-risk patients.

Eighty-six percent of FPs predicted that at least half of health systems will use **electronic communication tools** in home-based patient care programs as an essential part of their population health management efforts (item 4). Electronic communication can be used to enhance patient education, provide health-related reminders, and encourage compliance and positive behavioral changes to promote wellness. For example, a mobile health diabetes management program using automated text messages demonstrated improved control of A1C levels, increased monitoring of blood glucose levels, increased adherence, and reduced costs.[2]

IMPROVING POST-ACUTE CARE

Health systems have a renewed interest in assuring the quality of care provided in lower-cost post-acute care settings such as skilled nursing facilities (SNFs), home care, and long-term care. Eighty-six percent of FPs predicted that at least 75% of health systems will have a formal program for **rigorously coordinating post-acute-care services** (item 3). Accurate, complete handoffs during the post-acute period are essential in reducing adverse events and readmissions. A recent study by the Office of the Inspector General demonstrated that one-third of patients in SNFs experienced harm, which included medication errors and infections caused in part by hurried, unplanned transfers from hospitals.[3]

INTEGRATING BEHAVIORAL HEALTH AND PRIMARY CARE

Evidence demonstrates that **integrating behavioral/mental health services with primary care** will improve health outcomes and lower costs.[4] Seventy percent of FPs said it is at least somewhat likely that one-fourth of health systems will explicitly integrate behavioral/mental health services with primary care (item 5). However, only 20% of FPs said that this is "very likely," which may be attributable to limited reimbursement for mental health services. Under new payment models, providers will have an incentive to manage both chronic medical and behavioral health conditions. Ambulatory care pharmacists with behavioral health knowledge and skills will play a growing role in pharmacotherapy management.

ENGAGEMENT IN COMMUNITY HEALTH

Three-fourths of FPs said that most health systems will actively include pharmacists in their **community-wide programs** that are focused on improving the health status of the population (item 7). Pharmacist participation in outreach programs of this nature could enhance the image of pharmacy as a health profession concerned and knowledgeable about community health.

To support sustainable, healthy communities, one might expect that high-profile leaders of health systems will become active

in local initiatives to improve the healthfulness of the environment (e.g., quality of air, water, and food). However, most FPs did not think this is likely to happen in even a few health systems over the next five years (item 8). Nevertheless, because the environment has such a profound effect on human health, perhaps the leaders of larger health systems will move in this direction.

STRATEGIC RECOMMENDATIONS FOR PRACTICE LEADERS

1. Develop expertise within the pharmacy enterprise in **risk-sharing/savings-sharing contracting**. Identify how pharmacy can contribute to the health system's population health program under various payment models; **give special attention to formulary management**. Share the results of such analyses with leaders of the contracting department.
2. Ensure that annual wellness visits include a **pharmacist-conducted medication evaluation**. Initiate an annual medication evaluation program for employees, including periodic follow-up with those who have multiple chronic conditions.
3. Implement telephone and electronic **post-discharge follow-up evaluations of patients** whose medication regimens will have a bearing on the success of post-acute care. Measure and report to executive and clinical leaders the number of adverse drug events and readmissions prevented.
4. Enhance training in **behavioral health medication use** for the pharmacy staff, including students and residents. Establish a pharmacy-based collaborative drug therapy management program with primary care physicians, psychiatrists, and other mental health practitioners.
5. Assign pharmacists to **panels of high-risk patients** associated with specific physicians, disease states, or payers. Have pharmacists serve as "panel managers" with specific clinical, outcome, and utilization goals.
6. Deploy students, residents, and other pharmacists to provide **medication-use education** at SNFs, assisted living facilities, and community centers.

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Drug Development and Therapeutics:

CHANGING PRACTICES IN RESPONSE TO NEW TECHNOLOGY

PAMELA K. PHELPS AND JAMES M. HOFFMAN

TRENDS IN THE PHARMACEUTICAL PIPELINE

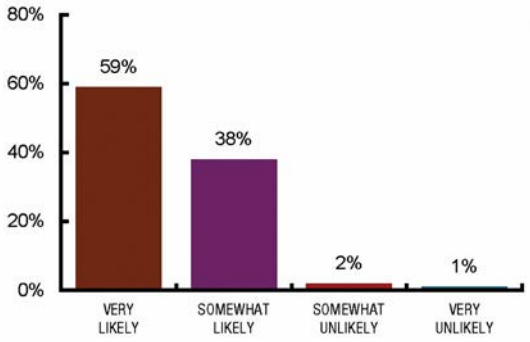
FDA approval of new pharmaceuticals reached an all-time high in 2014 with 41 new agents.[1] Many (22%) are designated as "**breakthrough therapies**" by the FDA because preliminary clinical evidence indicates that these drug products may substantially improve at least one clinically significant endpoint compared to other available therapies.[2] Approval of "novel new drugs" has increased each year since 2011, transforming the therapeutic landscape for chronic diseases (e.g., hyperlipidemia) and providing innovative options for patients with rare diseases.[1]

ONCOLOGY PIPELINE BRINGS NEW CHALLENGES

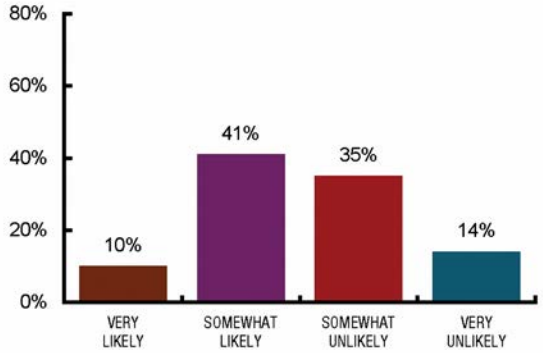
Many new pharmaceuticals are developed for **oncology indications** (22% of 2014 approvals),[1] causing **economic concerns** among providers and payers. Nearly all (97%) Forecast Panelists (FPs) thought it was at least somewhat likely that at least half of cancer chemotherapy will be driven by **treatment pathways** (survey item 1). Payer-driven protocols cause providers to be concerned about how to operationalize these pathways into daily

How likely is it that the following will occur, by the year 2020, in the geographic region where you work?

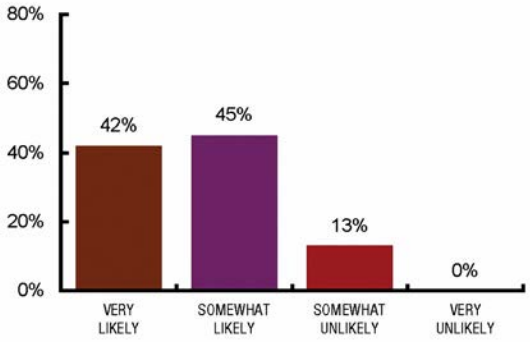
1 At least 50% of cancer chemotherapy treatments will be **guided by pathways** (developed externally or internally) that aim to improve care based on efficacy, toxicity, and cost considerations.



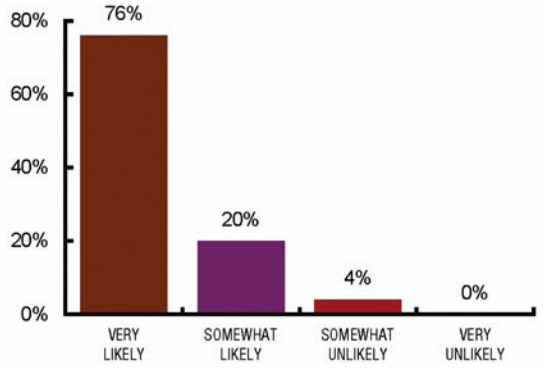
2 Pharmacists in at least 50% of health systems will make treatment recommendations based on **pharmacogenomics** information at the point of care.



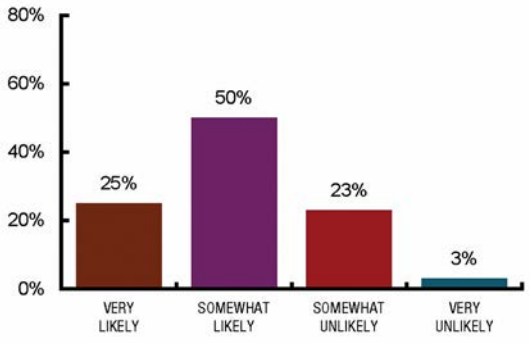
3 **Oral anti-factor Xa inhibitors** (i.e., rivaroxaban, apixaban, edoxaban) will replace at least 25% of the current use of warfarin in the long-term management of thromboembolism and coagulation disorders.



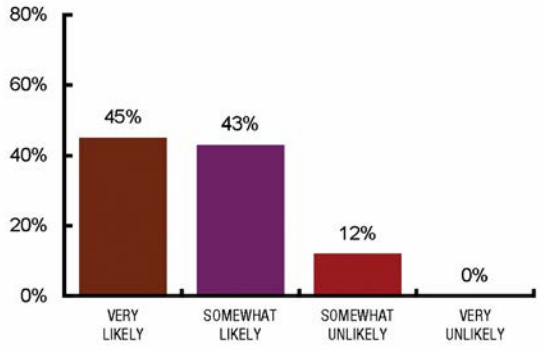
4 At least 90% of health systems will have reviewed at least one **biosimilar** product for formulary addition.



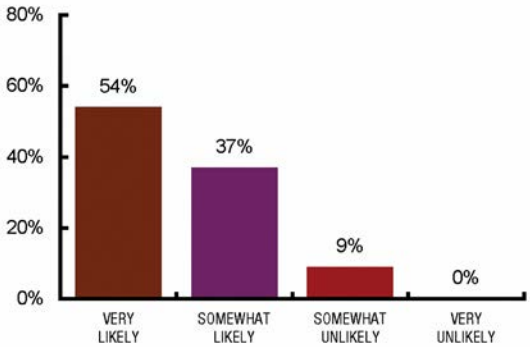
5 At least 50% of health systems will have implemented a pharmacist-managed service to improve **oral antineoplastic** medication adherence, mitigate drug toxicities, and control treatment costs.



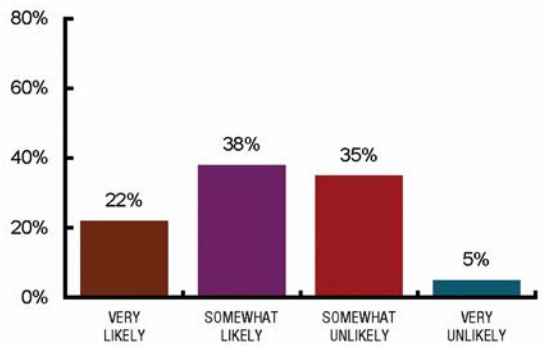
6 The use of **specialty medications** to treat non-malignant autoimmune and rare disorders (i.e., disorders that affect fewer than 200,000 people in the U.S.) will increase by 50%.



7 At least 75% of health systems will experience an increase of at least 25% (above 2015 use) in the use of antiviral therapy for the treatment of **hepatitis C**.



8 **New biologic and specialty products** will replace at least 25% of chronic care medications for the treatment of common disorders (e.g., hyperlipidemia, diabetes).



workflow. Health systems will need to allocate resources toward **implementing best practices** (i.e., through order set development) and **tracking pathway compliance**. Translating pathways into electronic medical record order sets may be challenging, especially if requirements differ among payers.

New oral anti-cancer agents are often designated as specialty medications with limited distribution networks, possibly restricting some health systems' access to these medications. Some health systems have implemented a pharmacist-managed service to improve adherence, monitor patient response, and provide symptom management with these agents.[3] However, only 25% of FPs thought it very likely that at least half of health systems will have implemented this type of model by 2020 (item 5).

PHARMACOGENOMICS EMERGING TRENDS

The drug development pipeline includes many agents utilizing **biomarkers or genetic information** (or both) to tailor treatment, spurred by the fact that the FDA may require such companion diagnostic test in some scenarios.[4] Pharmacists are uniquely positioned to lead the implementation of **pharmacogenomics**, providing opportunities to proactively improve medication use and safety.[5] However, only 51% of FPs indicated that it was very likely or somewhat likely that pharmacists in at least half of health systems will provide treatment recommendations based on pharmacogenomics information at the point of care within the next five years (item 2), possibly because pharmacogenetic testing and associated expertise is concentrated at a regional level. In the previous edition of the *Pharmacy Forecast* report, 79% of FPs predicted that at least one academic medical center in their region would have a formal pharmacy-based pharmacogenetic information/consultation service.

CHANGING ANTICOAGULATION PRACTICES

Novel oral anticoagulants (NOACs) to prevent and treat thromboembolism have recently emerged as alternatives to warfarin. While NOACs are not indicated in some conditions, such as renal failure and the presence of prosthetic heart valves,[6] 87% of FPs thought it at least somewhat likely that oral anti-factor Xa inhibitors will replace at least 25% of current use of warfarin for long-term management of thromboembolism and clotting disorders (item 3). A barrier to NOAC utilization has been the difficulties in reversing these agents, but a reversal product for oral Xa inhibitors was recently approved.[7] As reversal becomes feasible, these agents will likely be used more widely. Pharmacist expertise will be paramount in guiding the dosing and monitoring of NOACs and reversal products.

NEW BIOLOGICS AND SPECIALTY AGENTS

Dollars spent on **specialty medications to treat chronic conditions** such as Crohn's disease, multiple sclerosis, rheumatoid arthritis, and cancer are predicted to jump 67% by the end of 2015.[8] Almost 90% FPs agreed that use of specialty medications to treat nonmalignant autoimmune and rare disorders will increase by 50% over the next five years (item 6). This will be especially important for rare diseases; new medications will treat the disease process for disorders where symptomatic management is the only option currently available.

FPs predicted that new biologic and specialty products will replace at least 25% of chronic care medications for the **treatment of common disorders** over the next five years (item 8). Proprotein convertase subtilisin/kexin type 9 (PCSK9) agents are considered a "game changer" in the treatment of hyperlipidemias, creating the prospect of bringing expensive therapies to a very large patient population. Uncertainties about how to define the appropriate use of these agents will prevail until outcomes are collected and published on the extent to which they reduce cardiovascular morbidity and mortality. Health-system pharmacists will be essential to the development and updating of policies and guidelines within this therapeutic area as data on efficacy and safety emerge.

BIOSIMILARS

With biosimilars now available, nearly all FPs thought it was likely that 90% of health systems will **review biosimilars for formulary**

addition (item 4). Pharmacists will need to be cognizant of the wide variation in state legislation regarding patient/provider notification and product interchange related to biosimilars. Such laws affect the degree to which pharmacists can determine the most appropriate product for patients. Pharmacists are integral in developing policies and guidelines governing the use, therapeutic interchange, and monitoring of biosimilars.

STRATEGIC RECOMMENDATIONS FOR PRACTICE LEADERS

1. Assertively develop an organizational **infrastructure to standardize and optimize antineoplastic use** by leveraging technology to aid with reimbursement, treatment-pathway integration into daily workflow, and oral chemotherapy adherence programs.
2. Incorporate **pharmacogenomics** into pharmacy practice by fostering staff expertise, defining laboratory testing options, and incorporating test results into the electronic health record with clinical decision support.
3. Ensure that pharmacists are positioned to **integrate biosimilars** into the patient-care process. Collaborate with health professional and patient advocacy organizations to influence state legislation that supports the appropriate use of biosimilars.
4. Actively assess the **changing landscape of anticoagulation therapy**. Prepare for the introduction of anti-factor Xa reversal agents and their influence on overall anticoagulant utilization. Consider the strategic implications of novel oral anticoagulants on pharmacist services. **Reconfigure warfarin clinics** to address all anticoagulation needs for patients.
5. Evaluate the implications of **new specialty medications, especially for rare diseases and chronic conditions.** Expand the health system's capacity to manage all specialty medications to promote safe use, optimize outcomes, and foster wise use of resources.

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Pharmaceutical Marketplace:

FOLLOWING THE MONEY

HEATHER A. HELSEL AND LEE C. VERMEULEN

INTRODUCTION

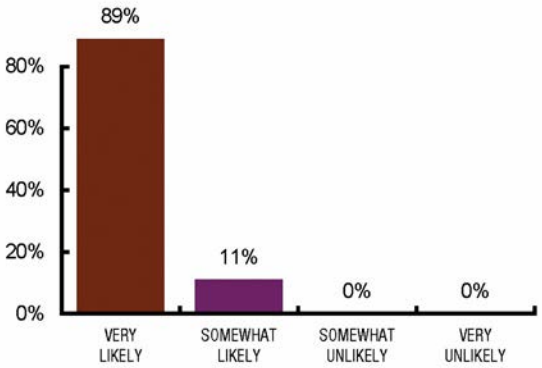
By 2020, technological, competitive, and regulatory factors affecting the pharmaceutical marketplace will pose **enormous financial challenges** to health systems as they work toward providing patients with the best care. All Forecast Panelists (FPs) agreed that health-system **expenditures for all medications** will likely increase by at least 5% annually over the next 5 years (survey item 1). More FPs rated this item "very likely" than any other item in this year's *Pharmacy Forecast*. Price increases have been predicted to range from 12–14% in clinics, 5–7% in hospitals, and 7–9% across all settings.[1] Within the past year, pharmaceutical manufacturers have positioned themselves to control the supply of raw materials, the distribution of high-cost medications, and the price of generics.[2] Therefore, it is imperative for health systems to recognize, plan for, and appropriately react to changes in the pharmaceutical marketplace.

NEW CHALLENGES IN GENERIC DRUG PRICING

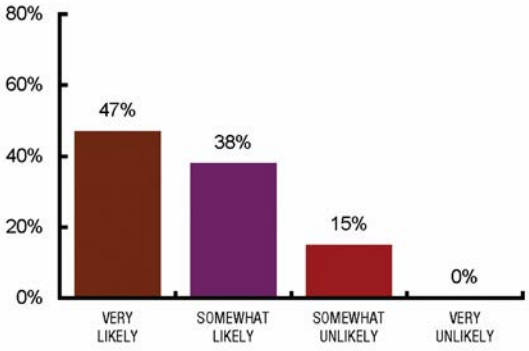
For decades, health systems have focused on mitigating the high cost of branded pharmaceuticals. A more recent phenomenon—market control through the **consolidation**

How likely is it that the following will occur, by the year 2020, in the geographic region where you work?

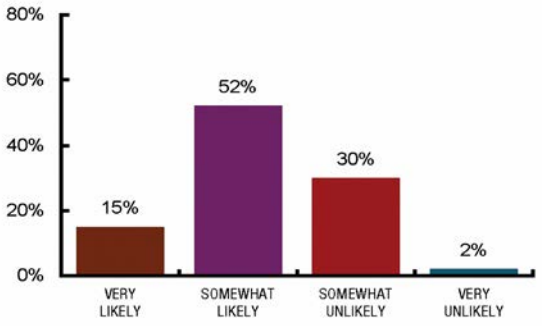
1 Heath-system **expenditures for all medications** will increase by at least 5% annually.



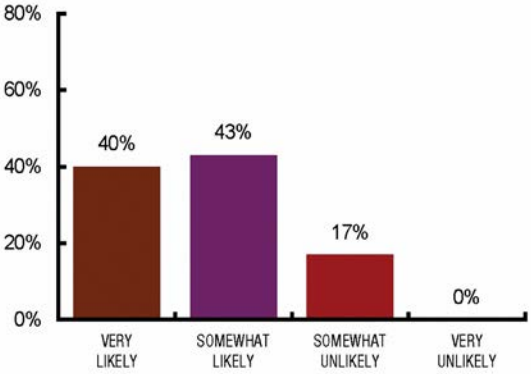
2 **Conversion of multi-source generics to single-source products** will lead to at least a 25% increase in health-system expenditures for generics.



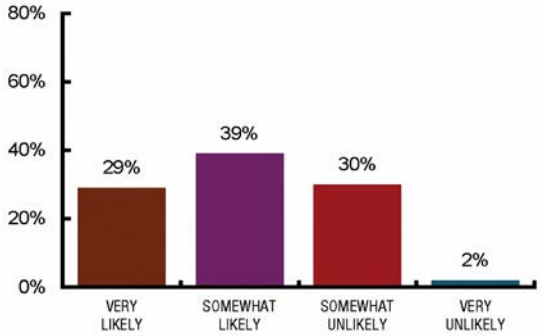
3 There will be at least three examples of **indication-specific pricing** for new chemotherapy products (i.e., for a product indicated for different types of tumors, the price will be based on the success rate in clinical trials for the specific type of tumor being treated).



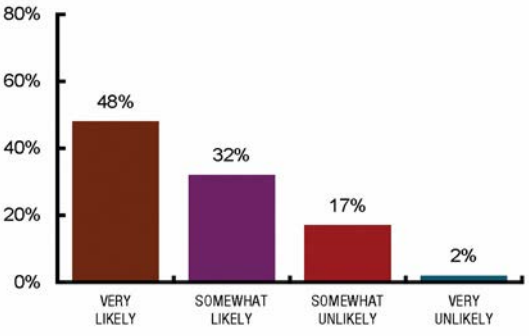
4 At least 50% of high-cost medication therapies will be available only through **specialty distributors**.



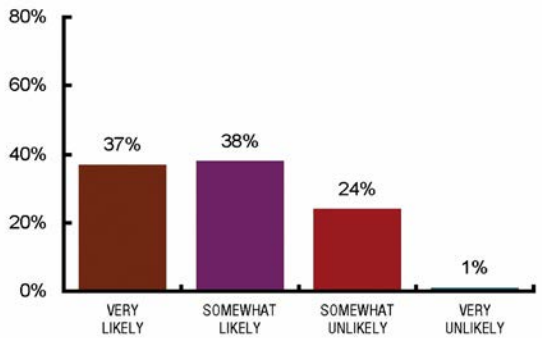
5 Marketing and distribution arrangements for at least 50% of newly approved specialty medications will **prohibit health systems from acquiring the products** directly for distribution to their patients.



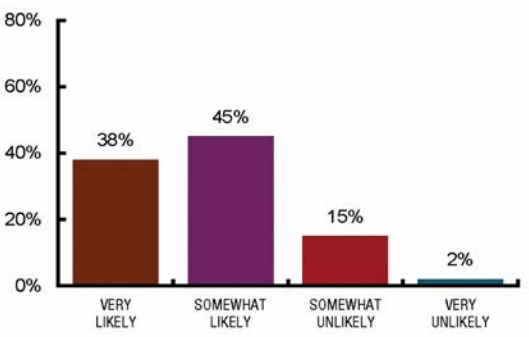
6 When a newly admitted patient is using a specialty medication, 90% of hospitals will use the **patient's own supply** of the medication or (if clinically appropriate) defer administration of the medication.



7 At least 50% of health systems will add resources (e.g., personnel, software) to ensure compliance and manage the administrative burden related to the **Drug Supply Chain Security Act**.



8 In at least 75% of health systems, **shortages of essential medications** will have documentable negative impact on patient outcomes (e.g., because of lowered effectiveness or greater toxicity of alternative products).



of generic manufacturers—now poses a new challenge. Most FPs believe that the conversion of multi-source to single-source generics will lead to at least a 25% increase in health-system expenditures for generics (item 2). There is concern that the **rising prices of generics** will significantly diminish the traditional cost savings realized by Medicaid and Medicare beneficiaries, leading to a U.S. Department of Health and Human Services (HHS) investigation.[3]

FRAGMENTATION OF DISTRIBUTION CHANNELS

Recent expansion of **complicated restricted distribution systems** for high-cost therapies embodies unnecessary costs and has affected access to important therapies. More than 80% of FPs predicted that this practice will continue to increase such that at least 50% of high-cost medications will be made available only through specialty distributors (item 4) (see also items 5 and 6). While these distribution practices challenge providers, they primarily affect the end user: patients with complicated illnesses receiving complex care**.**

When patients are treated by products that are available only through a **restricted distribution** channel, pharmacists and other providers must divert resources toward minimizing care fragmentation. One strategy to combat this challenge is to **incorporate a specialty pharmacy** within hospitals and health systems such that pharmacists can serve as care managers; the overall goal is to ensure continuity of treatment by integrating specialty products into patients' overall treatment plans and by verifying that patients have adequate supplies of these high-cost therapies.[4] Health systems should challenge manufacturers who use these awkward and costly distribution processes**.**

THE REAL CHALLENGE: PROTECTING THE PATIENT

Due to rising concerns about **counterfeit products** entering the supply chain, the Drug Supply Chain Security Act (DSCSA) was signed into law in November 2013.[5] Under this act, an electronic, interoperable system that traces medications throughout the distribution channel will be developed to allow the FDA to detect and remove counterfeit medications from the supply chain. As medication dispensers, health systems have specific responsibilities under the DSCSA. FPs believe these requirements to be onerous; three-fourths of FPs rated it likely that at least 50% of health systems will need to add resources to ensure compliance and manage the administrative burden related to the DSCSA (item 7). ASHP has provided resources to help health-system leaders comply with these new requirements.[6]

Questions are being raised about the value (benefit in relation to cost) of recent medications approved under the FDA's "Fast Track" designation. Specifically, payers have begun to demand **price setting based on outcomes**, especially for antineoplastics.[7] Two-thirds of FPs said that it is at least somewhat likely that there will be **indication-specific pricing** for at least three new chemotherapy products within the next 5 years (item 3). Such demands are already occurring. For example, one payer asked pharmaceutical manufacturers to differentiate prices based on their relative efficacy against specific tumor types. However, some manufacturers have argued that outcomes are too difficult to track. Other companies compromise by offering free therapy during an "introductory" period such that patients experiencing ineffectiveness will not suffer monetary loss. Institutions are beginning to develop interactive tools (e.g., DrugAbacus) that compare medication efficacy, tolerability, and pricing to facilitate prudent prescribing. As U.S. spending on oncology medications and supportive care reaches almost $50 billion annually, alternative pricing models for antineoplastics must be developed.[7]

EYE ON THE PRIZE

Health-system pharmacy leaders are constantly challenged to minimize drug expenditures, ensure adequate medication supply, and maintain safe care-delivery processes. It is imperative to focus on the **underlying goal** of these activities: to **improve patient outcomes**. While drug budgets, inventory turns, and other administrative metrics are affected by increased drug costs, drug shortages (see item 8), limited distribution models, and increasingly complex treatments, the

effect of marketplace phenomena are felt most acutely by patients. Therefore, it is the health system's obligation to mitigate the challenges of the pharmaceutical marketplace in order to continually provide the best patient care.

STRATEGIC RECOMMENDATIONS FOR PRACTICE LEADERS

1. Position the pharmacy enterprise for ensuring the safe and appropriate care of patients who receive medications through **limited-distribution systems**, serving as their care managers and reducing care fragmentation.
2. Actively collaborate with other health-system leaders to **advocate against the proliferation of limited distribution systems** for high-cost medications. Base this advocacy on the risks that limited distribution poses for patients and on evidence about the capacity of pharmacists in health systems to effectively manage the clinical and administrative facets associated with high-cost medication use.
3. Lead a rigorous system-wide assessment of the organization's **optimum approach to specialty pharmaceuticals**, considering the following options: (a) creating a comprehensive, self-sufficient specialty pharmacy service, (b) establishing such a service in collaboration with a business partner, (c) complete outsourcing of all facets of such a service, and (d) no formal specialty pharmacy service but making a commitment to ensure safe and appropriate care of patients who are using specialty products.[4]
4. In the face of pressure to find solutions to the continual escalation in drug-product expenditures, redouble efforts to ensure that the primary driving force of the pharmacy enterprise is the **patient's best interest** complemented by compliance with evidence-based medication use and minimization of waste.

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Data and Technology:

SUPPORTING QUALITY IMPROVEMENT

KEVIN MARVIN

INTRODUCTION

Health systems are continuing to expand implementation of electronic health records (EHRs) to meet the **meaningful use** Stage 2 objectives established by the Centers for Medicare & Medicaid Services (CMS).[1] Over the next few years, health systems will need to continue to work on efforts to optimize EHRs. Stage 3 criteria, which must be met by 2018, will influence which operational projects are given priority.[2]

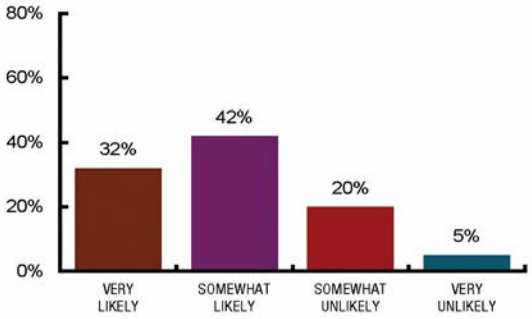
EHR INTEGRATION

CMS Stage 2 meaningful use criteria aim to foster a culture of **care coordination** among providers and with patients; one specific goal is **regional integration of health records**. In this regard, nearly three-fourths of Forecast Panelists (FPs) said that it is at least somewhat likely that half or more of health systems will have implemented an interoperable EHR that integrates healthcare data (including clinical lab results, medication lists, and progress notes) from out-of-network providers and across various settings of care (survey item 1). There have been difficulties with reconciling medications when information is received from multiple sources[3]; although use of multiple sources makes the reconciliation process less efficient, it is more accurate.[4]

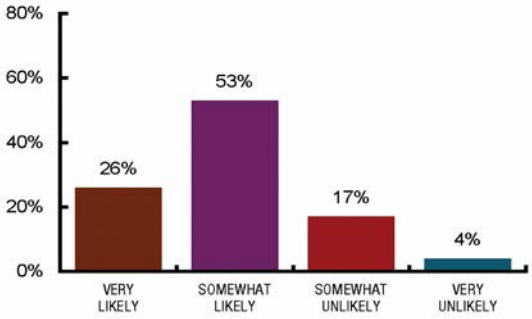
FPs also predicted that **patients** in at least 50% of health systems will have the capacity to **manage and access their health information** and share it with all healthcare providers (item 4).

How likely is it that the following will occur, by the year 2020, in the geographic region where you work?

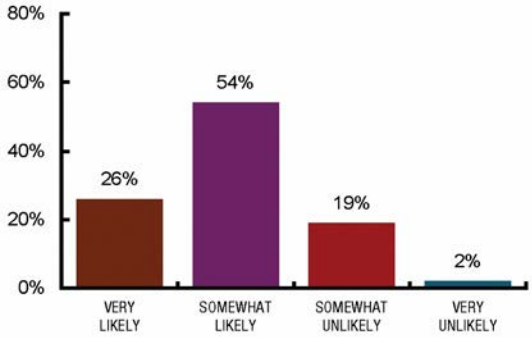
1 At least 50% of health systems will have implemented an **interoperable electronic health record** that integrates healthcare data (including clinical lab results, medication lists, and progress notes) generated from **out-of-network providers and across various settings of care**.



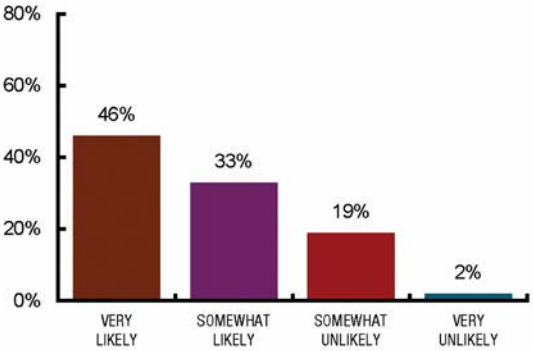
2 At least 25% of hospitals will have **interoperability between the electronic health record and healthcare equipment** (e.g., infusion pumps and ventilators), so that the patient's real-time change in physiologic variables will result in an automatic change in medication infusion or ventilator settings.



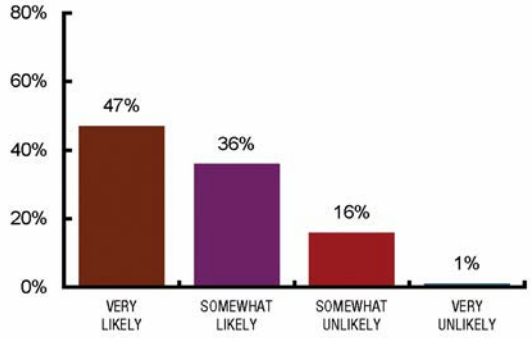
3 At least 25% of health systems will report errors and near misses **stemming from issues with design and use of electronic health records** to federally recognized patient safety organizations.



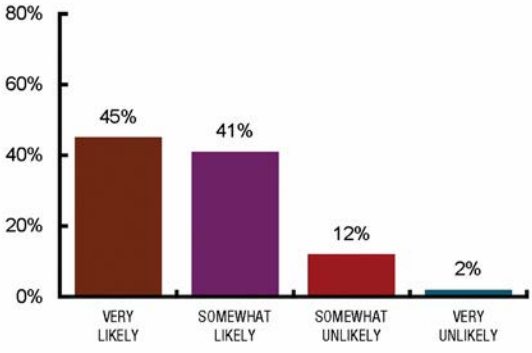
4 Patients in at least 50% of health systems will have the capacity to **manage and access their health information** and share it with all healthcare providers.



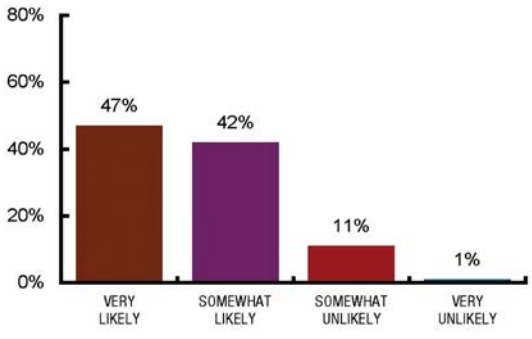
5 At least 75% of health systems will require clinicians to document specific healthcare information **within discrete data fields** to allow for routine data queries and enhanced reporting of quality metrics.



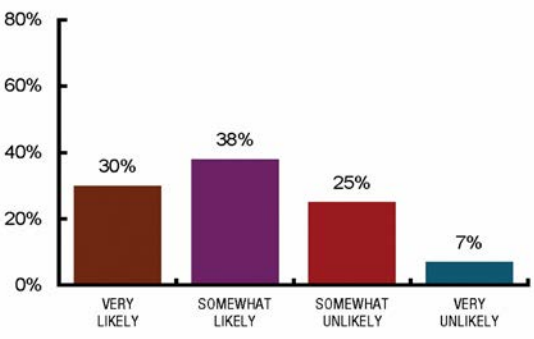
6 At least 50% of health systems will generate **specific, pre-defined quality metrics** in real time for the purpose of quality reporting and refining patient-care protocols.



7 At least 25% of health systems will use a dashboard to report a **clinician's performance** on specific quality indicators in comparison to the aggregate performance of **comparable clinicians within their health system**.



8 At least 50% of health systems will use a dashboard to report **pharmacy department performance** on standardized quality indicators in comparison to pharmacy department performance **in comparable health systems**.



Integration of infusion pumps with EHRs can increase efficiency and accuracy while providing access to the real-time status of i.v. therapy to support remote monitoring and automated decision support. Nearly 80% of FPs predicted that at least 25% of health systems will have **interoperability between the EHR and healthcare equipment** to produce an automatic change in equipment settings based on a change in the patient's physiologic variables (item 2).

Examples of real-time data integration with EHRs include end-tidal respiration, peripheral capillary oxygen saturation, pulse, and other vital signs. Application of this advanced technology will expand pharmacists' opportunities for patient monitoring; it might also promote operational efficiencies to reduce waste and just-in-time i.v. admixture production and delivery. However, if implementation is handled poorly, medical errors or false warnings could result.

In ambulatory care, data from monitoring and treatment devices for diabetes and cardiac conditions are candidates for priority integration with the EHR. Integration of patient-generated data from wearable devices into EHRs is under development.[5]

DOCUMENTATION

Eighty-three percent of FPs predicted that at least 75% of health systems will require clinicians to document specific healthcare information into **discrete data fields** to support data queries and analysis (item 5). In pursuing this issue, priority should be given to diagnosis, treatment indication, and medication reconciliation information. Because it is inefficient for practitioners to record discrete data (versus generating textual notes and transcription), careful thought should be given to the optimal place for this to be done in the routine workflow. Information from discrete data fields will give pharmacy departments opportunities to improve operations and patient care.

MEASURES

Error resulting from EHR design and use is likely to be an issue in the future. Eighty percent of FPs believe that at least 25% of health systems will report errors and near misses stemming from these EHR concerns to patient safety organizations (item 3). Although a nationwide EHR error reporting system is needed, there has been little progress since 2011.[6] Health systems should share EHR-related safety concerns and recommendations with peers and other stakeholders. Most EHR vendors receive such reports and respond to institution-specific issues but they do not uniformly share this information with other clients.

Measurable care improvements are strongly emphasized by health systems. Notably, 86% of FPs agreed that health systems will generate pre-defined quality metrics in real time for quality reporting and refining patient care protocols (item 6). Several CMS meaningful use Stage 1 criteria are easy to implement via order sets, including venous thromboembolism prophylaxis and ischemic stroke treatment. These first measures are diagnosis- and order-based; future measures will include monitoring and clinical decision support.

Eighty-nine percent of FPs believe that at least 25% of health systems will create dashboards to compare a **clinician's performance** on specific quality indicators with the aggregate performance of comparable clinicians within their health system (item 7). This presents an opportunity to refine provider performance dashboards to address medication-related issues.

Sixty-eight percent of FPs think it is likely that at least 50% of health systems will use a dashboard to report **pharmacy department performance** on standardized quality indicators for comparison to pharmacy performance in similar health systems (item 8). New standardized pharmacy measures based on clinical activities that correlate with improved

patient outcomes and decreased costs should be developed. This will enhance the ability of the pharmacy enterprise to be integrated with high-level organizational goals and avoid being perceived primarily as a cost center.

STRATEGIC RECOMMENDATIONS FOR PRACTICE LEADERS

1. Actively participate in the design and implementation of **medication therapy-related quality-of-care measures**. Be proactive in ensuring accurate and efficient collection of such data and their appropriate use.
2. With high priority, engage pharmacy personnel (such as through the formation of a task force) to implement **pharmacy-specific performance indicators**. Define the performance metrics in terms of clinical activities that enhance quality of care, efficiency, and cost management.
3. Collaborate with other health systems to identify and **standardize measures of pharmacy clinical and operational activities** that relate meaningfully to the patient care mission of the pharmacy enterprise.
4. Participate in efforts to identify, implement, and integrate, within the EHR, **real-time data from healthcare devices**. Pursue use of this information to support the pharmacy department's operational and clinical priorities.
5. Raise awareness within your health system about the **unintended consequences** created by design or utilization flaws related to the EHR, and advocate for sharing issues and recommendations with other health systems.

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Pharmacy Work Force:

MARKET FORCES STIMULATE CHANGE IN PHARMACY PRACTICE MODELS

CYNTHIA WILLIAMS

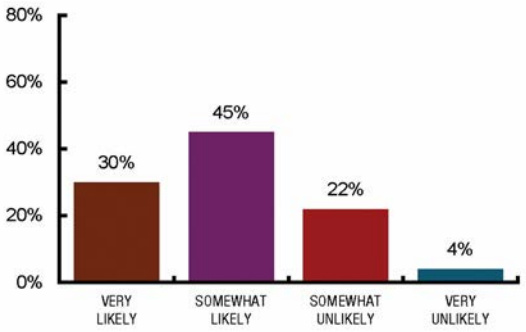
THE SHIFT TO AMBULATORY CARE

As healthcare organizations respond to payment reforms that aim to lower costs and improve patient outcomes, health-system pharmacy practice leaders are challenged to optimize the role of the pharmacy work force in new models of care. One area of challenge is the **shift in emphasis** from inpatient to ambulatory care.[1] Reflecting this change, three-fourths of Forecast Panelists (FPs) agreed that over the next five years, in at least 25% of health systems, patient care pharmacists will have **umbrella responsibilities for both inpatients and outpatients** (survey item 1). Further, 69% agreed that at least 25% of health systems will **reallocate** 10% or more of inpatient pharmacy positions to ambulatory-care positions (item 2).

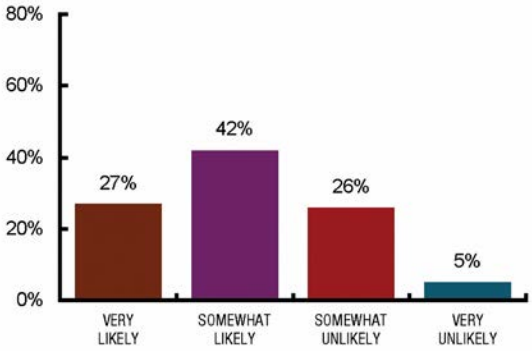
Consistent with anticipated growth in ambulatory care, 65% of FPs predicted a vacancy rate of greater than 10% for **ambulatory-care pharmacy leadership positions** over the next five years (item 5). Pharmacy staff development programs should ensure that there are adequate opportunities for education and training in management of ambulatory care pharmacy practice, transitions of care, and medication management of chronic illnesses.

How likely is it that the following will occur, by the year 2020, in the geographic region where you work?

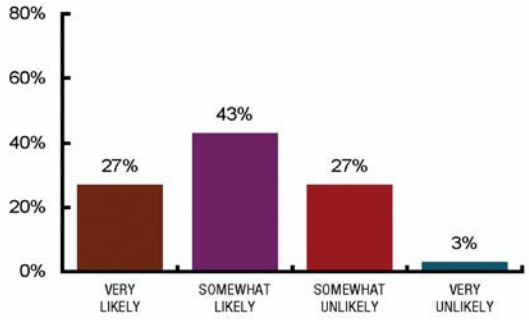
1 In at least 25% of health systems, patient care pharmacists will have umbrella responsibilities, **encompassing both inpatients and outpatients,** for pursuing the best outcomes from drug therapy.



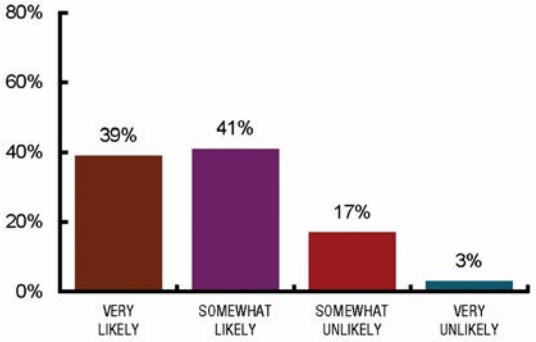
2 At least 25% of health systems will reallocate at least 10% of **inpatient pharmacist positions** to **ambulatory care positions**.



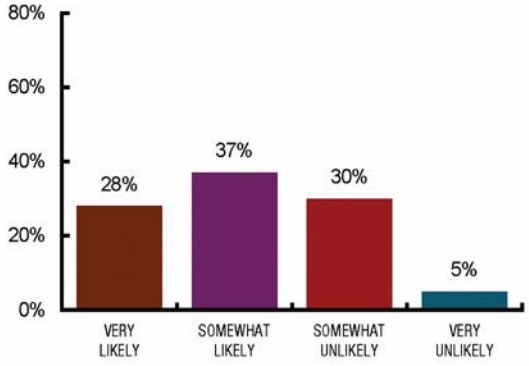
3 At least 50% of health systems will apply a pharmacy team-based approach to medication-use management, with **formalized levels of responsibilities** for technicians, students (differentiated between Introductory and Advanced), residents, and attending pharmacists.



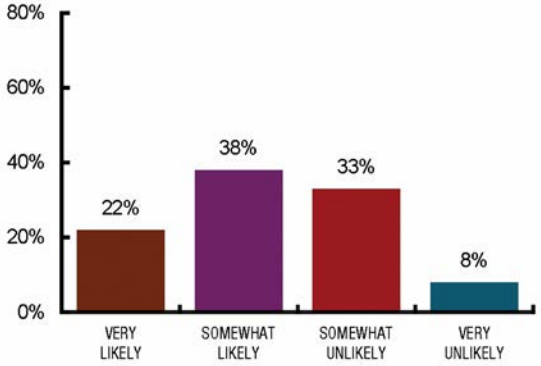
4 At least 25% of health systems will have a **formal plan** for including pharmacists, along with nurse practitioners or physician assistants (or both), in advanced roles that allow primary care physicians to care for more patients.



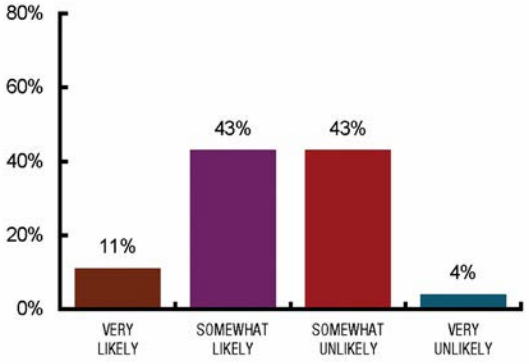
5 The vacancy rate for **ambulatory care pharmacy leadership positions** in health systems will exceed 10%.



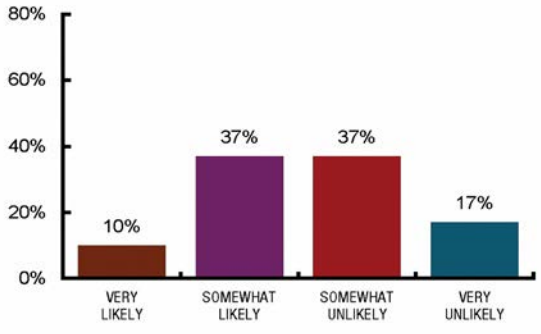
6 The salaries of newly hired **entry-level general-practice pharmacists** in health systems will decline by up to 10%.



7 The salaries of newly hired **entry-level pharmacy technicians** in health systems will increase by at least 25%.



8 In at least 25% of hospitals, **verification of medication orders that conform to treatment protocols** will be checked <u>not</u> by pharmacists but through automation or by non-pharmacists.



PHARMACISTS AS PROVIDERS

Nearly 80% of FPs predicted that at least 25% of health systems will have a formal plan for including pharmacists, along with nurse practitioners and physicians assistants, in **advanced roles** that allow primary-care physicians to care for more patients (item 4). Supporting the high level of agreement with this statement is the shortage of primary-care physicians, proposed federal legislation to grant provider status to pharmacists, and the large number of states that authorize pharmacists to establish collaborative practice agreements with physicians.[2] Recent changes in reimbursement rules related to complex chronic care and transitional care management[3] support the addition of pharmacists to primary-care teams. Many health systems will be establishing a **privileging process** for pharmacists to ensure that those with expanded patient care roles have the necessary competence for those roles.

OPTIMAL APPLICATION OF PRACTITIONER EXPERTISE

Consistent with consensus from the ASHP Pharmacy Practice Model Initiative Summit,[4] many health-system practice leaders have implemented practice patterns that maximize pharmacist involvement in patient care. Seventy percent of FPs predicted that at least half of health systems over the next five years will apply a **pharmacy team-based approach** to medication-use management, with formalized levels of responsibilities for technicians, students, residents, and attending pharmacists (item 3). Advanced-trained pharmacy technicians, along with students, will take a more active role in patient care activities such as medication history interviews and medication teaching. Some states are supporting programs that allow appropriately trained technicians to conduct the final check in inpatient dispensing, allowing pharmacists more time for patient care. Some health systems are beginning to use advanced-trained pharmacists in the role of attending pharmacists who supervise clinical generalists, residents, students, and technicians.

SUPPLY AND DEMAND ISSUES

There is growing concern about the **potential for an oversupply of pharmacists,** stemming from expanded enrollment in pharmacy education in excess of marketplace demand for pharmacists. One report indicates that 21 states will increase the number of pharmacy graduates by 100% or more from 2001 to 2016, with a declining demand for pharmacists caused by automation and expanded use of technicians in the dispensing process.[5] There is also concern about a **potential shortage of pharmacy technicians** after 2020, when accredited training will be required before certification by the Pharmacy Technician Certification Board.

Sixty percent of FPs predicted up to a 10% *decline* in the salaries of newly hired **entry-level general practice pharmacists** in health systems over the next five years (item 6). The prospect of a leveling off or decline in starting salaries for pharmacists will probably vary by geographic region. Where it occurs, it is a dramatic contrast with the era, not so long ago, of attention-getting rises in salaries precipitated by expansion of the chain drugstore industry and development of new roles for pharmacists in healthcare institutions.

Salaries of newly hired **entry-level pharmacy technicians** in health systems are likely to *increase* by at least 25% (item 7), according to 54% of FPs. Supporting this prediction is that the role of technicians in health-system pharmacy will probably expand, and there is likely to be a need for more technicians with advanced training. Current salaries of pharmacy technicians in some markets are below the level of a "living wage," raising a fairness issue that practice leaders should address.

FPs suggested that one area for role expansion by "non-pharmacists" that is *not* likely to occur in the near future is **verifying medication orders** that conform to treatment protocols (item 8).

STRATEGIC RECOMMENDATIONS FOR PRACTICE LEADERS

1. Develop a specific plan for a **pharmacist privileging process** that ensures that each practitioner is competent for his or her responsibilities. Build support for your plan by showing administrative and clinical leaders how pharmacists with appropriate and documented qualifications can contribute to achieving health-system goals related to health maintenance, chronic care, quality of care, and cost effectiveness.
2. **Minimize "cognitive surplus"** on the pharmacy team by shifting responsibilities among staffing levels to fully tap the abilities of all staff members (pharmacists, residents, students, and technicians) consistent with their legal scope of practice.
3. As your department plans for the future by taking into account projections and recommendations in *Pharmacy Forecast* reports and other sources, assess what **new competencies** will be needed on the pharmacy team and proactively plan to secure those competencies through staff development and recruitment.
4. Strongly encourage your Congressional representatives to pass legislation that will grant federal **provider status** to pharmacists. Invite administrative, medical, and trustee leaders of your health system to add their voices to this campaign.
5. Ensure that your pharmacy technicians are **compensated fairly**, taking into account their essential role on the pharmacy team and the cost of living in your area.
6. Actively strategize with employers of pharmacy technicians and technician training programs and in your region to ensure an **adequate supply of PTCB-certified technicians** in 2020 and beyond when accredited training will be a requirement for certification.

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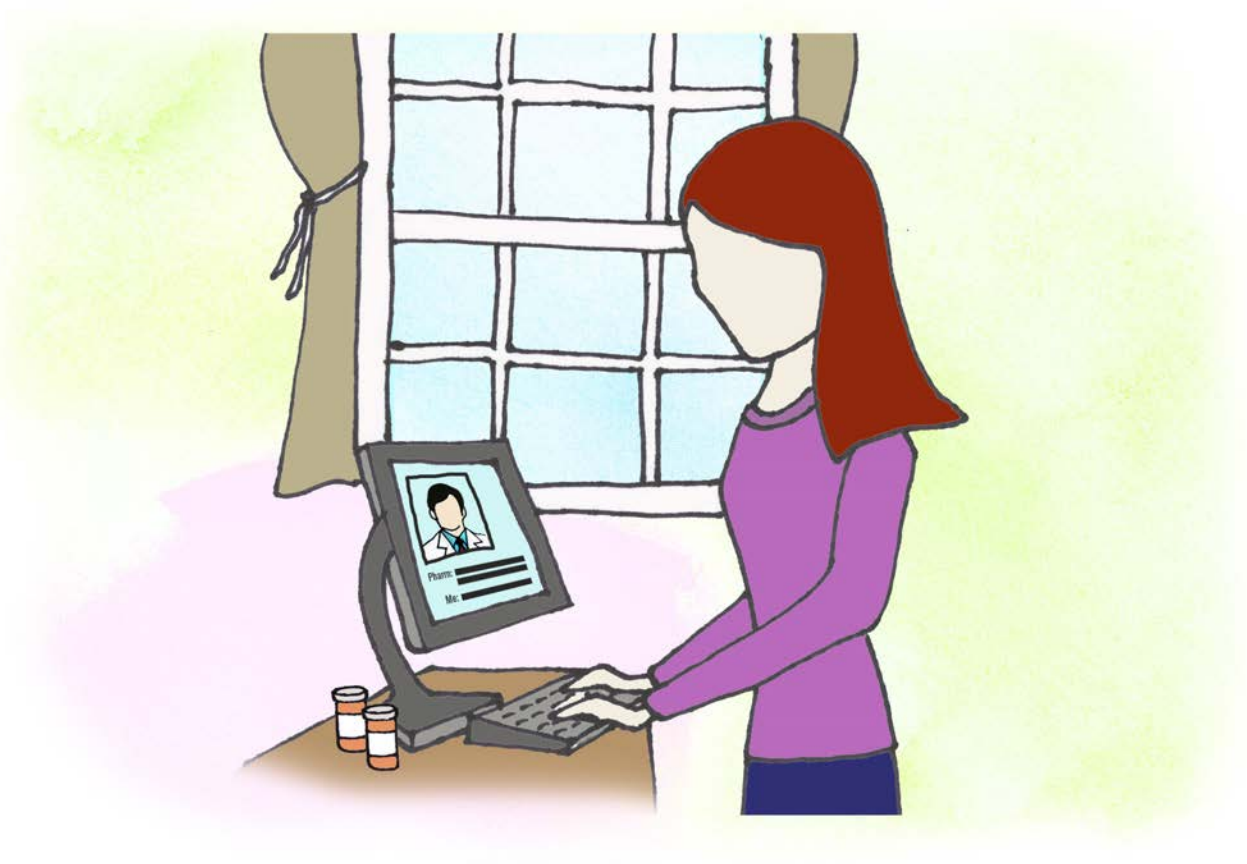


Patient Empowerment:

FROM PATERNALISM TO SHARED DECISION-MAKING

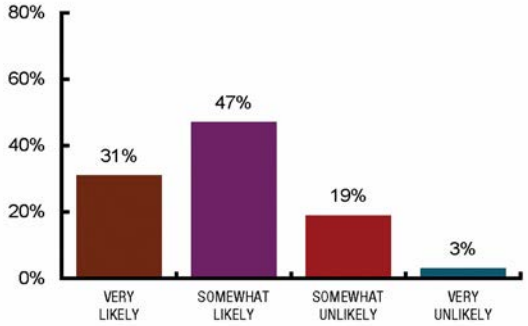
EDWARD LI

WHAT IS PATIENT EMPOWERMENT?

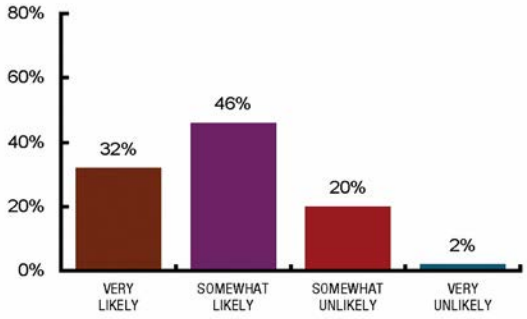
The **era of patient empowerment** and shared decision-making is upon us, ushered in by federal policies and facilitated by the ability to readily access healthcare information. Patient empowerment is an **integration of the ethos of patients, providers, and the healthcare system** to influence patients' behavior such that they participate in shared decision-making, manage their own healthcare, and participate in other communal activities.[1] The intent of empowering patients to become more actively involved in their healthcare decisions is to improve health outcomes and provide cost-effective care.[1,2] By definition, such shared decision-making compels patients to acquire the requisite knowledge to select the most rational decision for their own situation. It also requires the patient to have **self-efficacy**, perceived **personal control**, and a level of **health literacy**. At the provider and healthcare system level, there are programs that can be implemented to improve the patient's attainment of knowledge, self-efficacy, and health literacy, and ultimately increase patient empowerment behavior. Such programs are transforming healthcare towards a more patient-centric model with clear implications for pharmacy professionals.

How likely is it that the following will occur, by the year 2020, in the geographic region where you work?

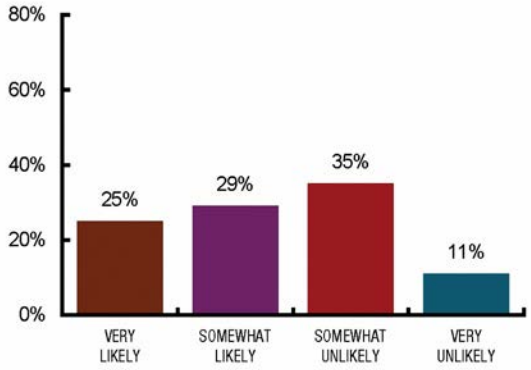
1 At least 50% of health systems will utilize tablets, mobile applications, Web-based applications, or similar technology to collect **patient-reported outcomes** and data on **medication adherence**.



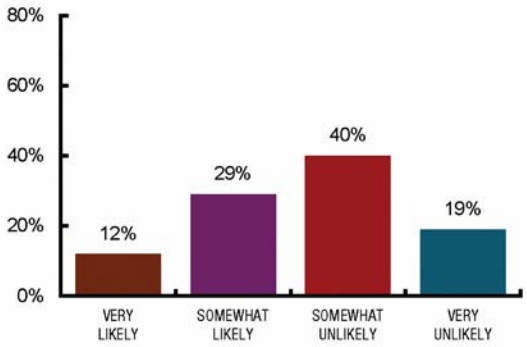
2 At least 50% of health systems will **provide patients with decision-making support** (e.g., mobile applications, health coaches) to increase their knowledge of treatment options and to help them communicate their preferences to the patient care team.



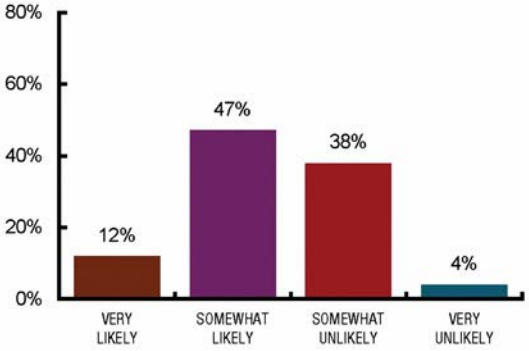
3 At least 50% of health systems will have **patient representation** on clinical-policy committees.



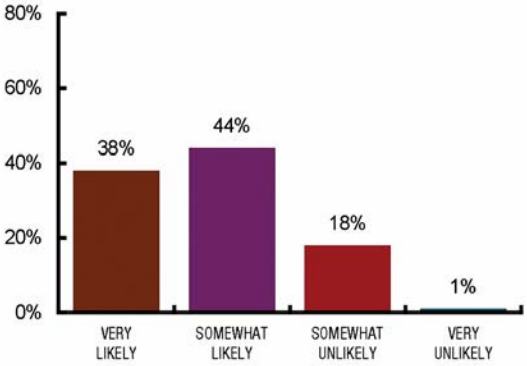
4 At least 25% of health systems will have patients or patient-advocates **co-lead patient safety and quality improvement committees**.



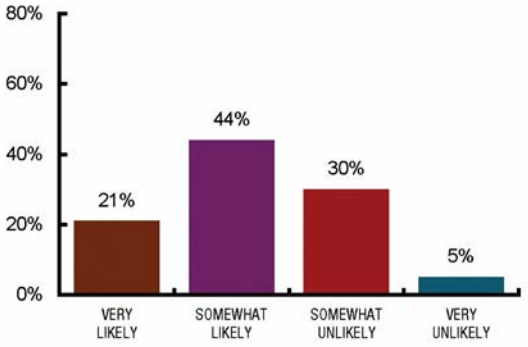
5 At least 50% of health systems will use a standardized process for including **patients' preferences** along with clinical evidence and professional judgment in treatment decisions.



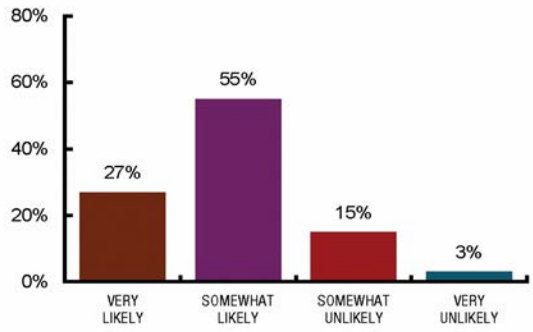
6 **Palliative care consultations** in health systems for advanced illnesses will increase by at least 50%.



7 Health systems will observe a 50% increase in **patient-assistance programs** to lower patient out-of-pocket costs for medications.



8 After weighing clinical benefits/risks and the **out-of-pocket cost** for a newly prescribed high-cost medication, 25% of health-system outpatients will decide to forgo treatment with that medication.



SHARED DECISION-MAKING TOOLS

Federal health policy is focused on increasing patient empowerment. For example, section 936 of the Patient Protection and Affordable Care Act contains provisions aimed at producing patient decision aids and creating infrastructure to improve shared decision-making tools and techniques.[3] About three-fourths of Forecast Panelists (FPs) believe it is likely that at least 50% of health systems will provide this type of support to patients to increase their **knowledge of treatment options** and help them communicate their **treatment preferences** (survey item 2). A hallmark example of shared decision-making is the provision of **palliative care** at the end-of-life; palliative care teams routinely work with patients and families on advanced directives and other supportive care issues. These services can be viewed as a form of patient empowerment as defined above and have been associated with improved quality of care.[4] Notably, 82% of FPs believe that **palliative care consultations** for patients with advanced illness will increase by at least 50% (item 6). However, FPs believe that the overall **integration of patient preferences** into treatment decision-making (through a standardized process) is less likely to occur, with only 59% of FPs predicting this is somewhat likely or very likely for at least half of health systems (item 5).

ENHANCING PATIENT SELF-EFFICACY AND SELF-MANAGEMENT

As described in the 2015–2019 edition of the *Pharmacy Forecast*, the utilization of mobile and telehealth applications is already affecting the delivery of healthcare[5]; thus it is logical to extrapolate the use of such applications to facilitate the collection of patient data and allow patients to perceive a higher level of control over their treatment. About three-fourths of FPs believe that at least 50% of health systems will play an active role in facilitating this for patients by utilizing technology to **collect patient-specific information**, including medication adherence data (item 1). It appears that there will be less adoption of patient engagement at the policy level within health systems. FPs were almost evenly divided about whether or not there will be **patient representation** on hospital clinical policy committees (e.g., the pharmacy and therapeutics committee) in half of health systems (item 3); even fewer (41%) believed that patients or patient advocates will **co-lead patient safety or other quality improvement committees** in 25% of health systems (item 4).

COST IMPLICATIONS OF PATIENT EMPOWERMENT

One of the major benefits of enhancing patient empowerment and engagement is to **promote the most cost-effective care** and reduce healthcare costs.[6] One study showed that providing patients with enhanced support regarding their treatment options via health coaches resulted in lower hospital admissions and fewer surgeries in preference-sensitive conditions.[7] The majority of FPs (82%) think that it is likely that 25% of hospital outpatients will **forgo treatment with high-cost medications** when weighing the benefits, risks, and costs (item 8). This information should be juxtaposed with the belief of two-thirds of FPs that **patient-assistance programs** to reduce patient out-of-pocket costs are likely to increase by 50% (item 7), highlighting the importance of considering patient out-of-pocket costs during the treatment decision- making process.

STRATEGIC RECOMMENDATIONS FOR PRACTICE LEADERS

1. Assertively develop **technology tools** (in-house or in partnership with outside vendors) that **facilitate patient empowerment** related to medication-use issues.
2. Increase **pharmacist involvement on services that facilitate patient empowerment** and where medication adherence is clearly linked to outcomes (e.g., cardiology, palliative care, diabetes education, oral oncology, etc.).
3. Engage executive and clinical leaders in assessing whether **patient representation on clinical policy committees** is desirable and feasible (i.e., for marketing, patient satisfaction, or outcome-improvement purposes) for patient empowerment at your institution.

4. Assess objectively whether the **intended benefits of patient empowerment programs** (as related to pharmacy services) have been achieved. A framework for such an assessment has been published.[1]
5. Evaluate the pharmacy department's **resources allocated toward facilitation of patient assistance programs** to lower out-of-pocket costs for medications. Consider developing a plan to increase such resources within the next five years to meet increased demand while simultaneously assessing the long-term financial viability of such programs.

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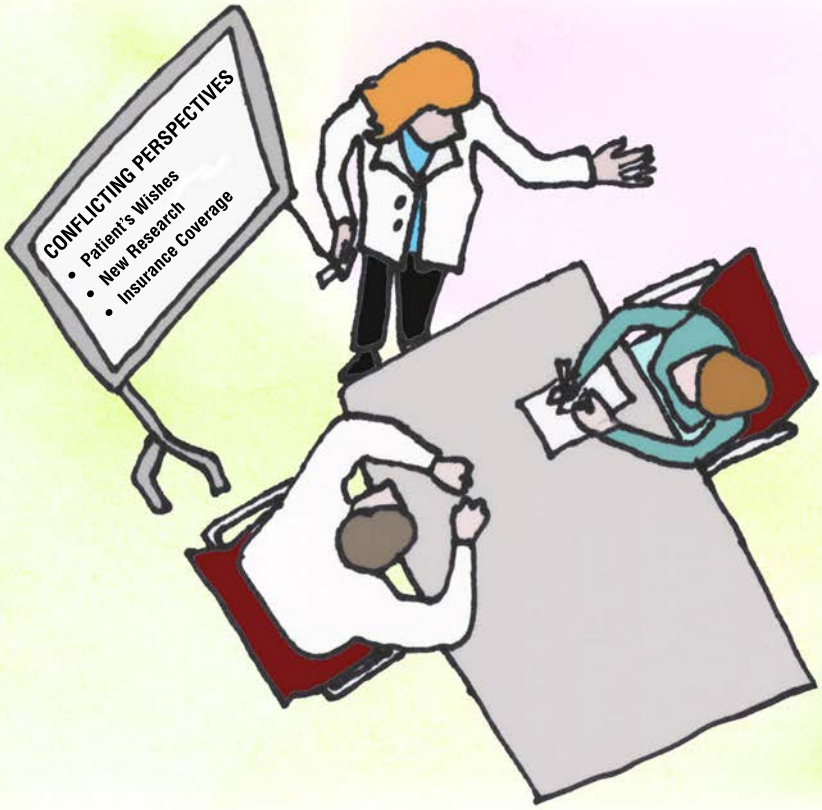


Ethics:

CHALLENGES TO PROFESSIONALISM IN HEALTHCARE

WILLIAM A. ZELLMER

IMPLICATIONS FOR PHARMACY

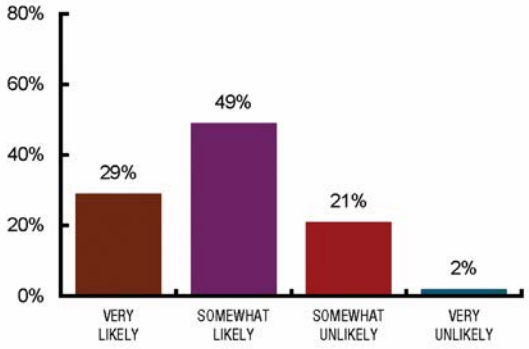
Health professionals are facing **increasing ethical challenges**, stemming partly from consolidation of payers and provider organizations, growing weight of the business imperative in healthcare, tension between population health and individual healthcare, and the rapacious pricing of some medicines. Patient well-being often hinges on the ability of health professionals to heed the ethical precepts of their calling. This topic is of special importance to pharmacists because they will more readily gain support for an expanded patient care role if they are perceived as being on the side of the patient rather than in the pocket of the business interests in healthcare.

ETHICAL DILEMMAS WILL INCREASE

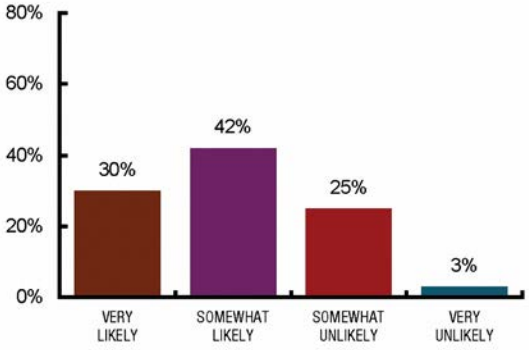
Forecast Panelists (FPs) predicted that there will be a substantial increase in the number of **ethical dilemmas** referred to health-system ethics committees for guidance over the next five years (survey item 1). This implies greater complexity of such dilemmas, to the point that individual practitioners or patient care teams do not feel confident in addressing them on their own. The deliberations of ethics committees will be enhanced if they include a pharmacy perspective.

How likely is it that the following will occur, by the year 2020, in the geographic region where you work?

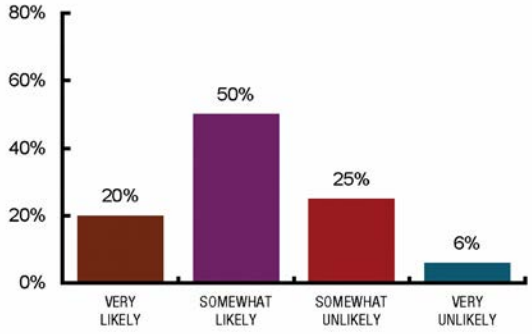
1 The number of **ethical dilemmas** experienced by health care professionals in health systems and referred to ethics committees for guidance will increase by at least 25%.



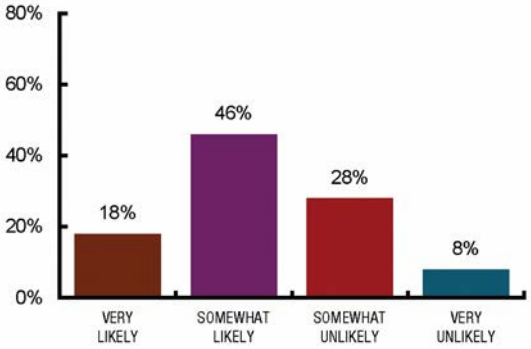
2 At least 25% of health systems will have formal programs aimed at reducing the use of **heroic measures** in end-of-life care.



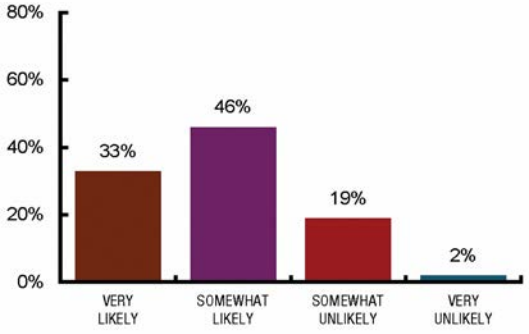
3 At least 50% of health systems will take into account the patient's **psycho-social ability to adhere to treatment** when deciding whether to include a high-cost therapy in the treatment plan.



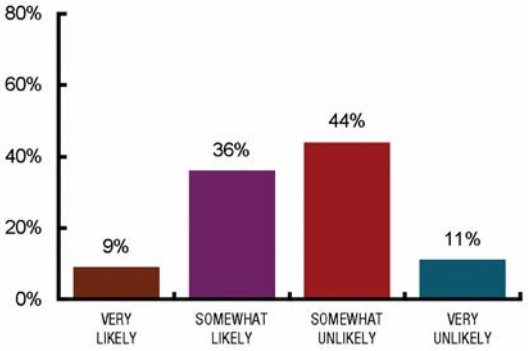
4 At least 50% of health systems will have a well-defined process for applying ethical principles in **allocating scarce resources**, such as medications that are in short supply.



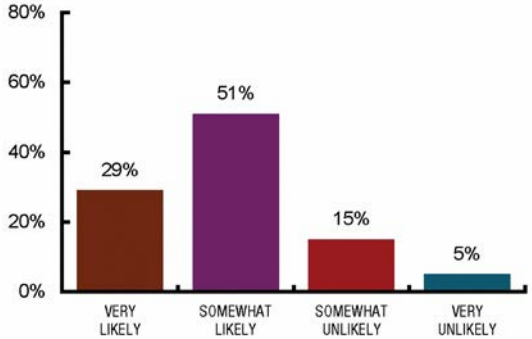
5 In more than 90% of health systems, clinicians will be required to follow specific **treatment pathways**, specified by payers and which vary among payers, when treating patients with certain high-cost therapies.



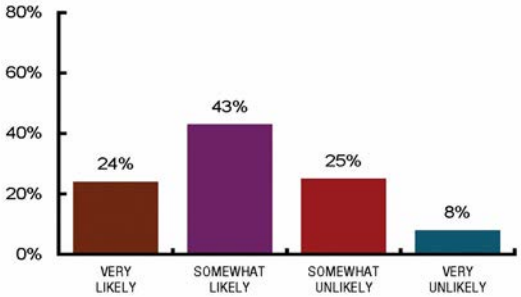
6 At least 25% of health systems will consider, in their purchasing decisions, the **ethical facets of the policies and practices** of manufacturers and suppliers.



7 At least 10% of health systems will formally assess how **population health programs** affect **individual** patient care outcomes.



8 National professional societies that represent practitioners in medicine, nursing, and pharmacy will collaborate in addressing issues related to the preservation of **professional autonomy** (the ability to apply knowledge and professional judgment in serving the best interests of the patient).



FAIRNESS IN ALLOCATING SCARCE RESOURCES

FPs made a number of predictions that touch on social justice in the use of scarce resources. Nearly two-thirds of them projected that at least half of health systems will have a well-defined process for applying ethical principles in **allocating resources that are in short supply** (item 4). Sound advice is available on how to establish ethically acceptable procedures for rationing scarce essential medicines (advice that goes beyond first-come, first-served and lottery systems).[1] Pharmacists should be at the table when organizations formulate such procedures.

When there is substantial doubt about the ability of a patient to adhere to a very expensive therapy, the patient's clinicians might question the wisdom of using that therapy even if it is covered by insurance. FPs predicted that most health systems will take into account the patient's **psychosocial ability to adhere to therapy** in such cases (item 3).

Reflecting widespread concerns about the most appropriate approach to end-of-life care, 72% of FPs said that it is at least somewhat likely that one-fourth of health systems will have formal programs aimed at reducing the use of **heroic measures at the end of life** (item 2). This issue, infused heavily with cultural factors, can be addressed equitably only through dialogue among patients, families, spiritual mentors, and health professionals. Many resources are available to aid in these deliberations, including a recent best-selling book.[2] Pharmacists have an important role to play in these discussions in health systems.

Many new pharmaceuticals have extremely high price tags, based on value calculations by innovator-company economists. A relatively new phenomenon is extreme price escalation of some older single-source generic medicines that have been acquired by a mercenary breed of entrepreneur. Healthcare leaders have begun to challenge some of these pricing decisions as unjust.[3] When making purchasing decisions, health-system pharmacists are probably tempted to take into account outrageous marketing practices. However, only a small fraction (9%) of FPs said it is "very likely" that at least 25% of health systems will consider "the **ethical facets of the policies and practices of manufacturers and suppliers**" in purchasing decisions (item 6).

When resource-allocation issues arise, health professionals often are challenged to balance, ethically, their responsibility to the patient with their responsibility to societal needs. Practitioners' **responsibility to society at large**[4] should be emphasized more strongly in codes of ethics[5] and in professional education.

PROFESSIONAL AUTONOMY

Promoting conformance with best practices in healthcare has immense potential for improving patient outcomes and reducing costs. This potential has driven the development of clinical pathways (protocols more narrow than guidelines) by payers, healthcare institutions, and others. Almost 80% of FPs predicted that nearly all health systems will require clinicians to follow specific **treatment pathways** when caring for patients who are using certain high-cost therapies (item 5).

But what about those instances when population-based advice is not in the best interest of the patient? Will there be room for patients and their healthcare professionals to exercise judgment that is not supported by population-based protocols? FPs seem to have been reflecting this concern when 80% of them said that a few health systems, over the next five years, will formally assess how **population health programs** affect individual patient care outcomes (item 7). Ideally, the "same metric of value and the same decision-making principles" should be used for patients and populations.[6]

Patient welfare is at risk when the ethical perspective in healthcare is smothered by business and financial perspectives. Medicine[7] and nursing[8] have been far more active than pharmacy in expressing concerns about this risk. Two-thirds of FPs predicted that these three professions will collaborate over the next five years in addressing issues related to **professional autonomy** (item 8). Such a tri-professional collaboration would be a positive development for the future provision of ethically based healthcare.

STRATEGIC RECOMMENDATIONS FOR PRACTICE LEADERS

1. Designate a small team of pharmacists to (a) take the lead in **studying emerging ethical issues**; (b) **raise the profile of these issues** among pharmacy staff members; and (c) represent the **pharmacist perspective** in system-wide deliberations and policy development on ethical issues.
2. Advocate for development of a proactive ethically sound health-system policy for **rationing essential medicines that are in short supply**.
3. Foster discussion, at the executive and governance levels of your health system, of any **pricing of medicines that is out of line with patient benefits**. Bring this information to public attention, trusting that **sunshine and shaming** can lead to change.
4. Discuss with physicians, nurses, and other health professionals potential **compromises of ethical principles and professional autonomy** in your workplace. Bring executive leaders into the discussion and help them understand how such compromises are harmful to the quality of care and long-term success of the health system.
5. Encourage **pharmacy organizations** to give more attention to issues related to ethics and professional autonomy, including joint consideration of these topics with other health professional associations.

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