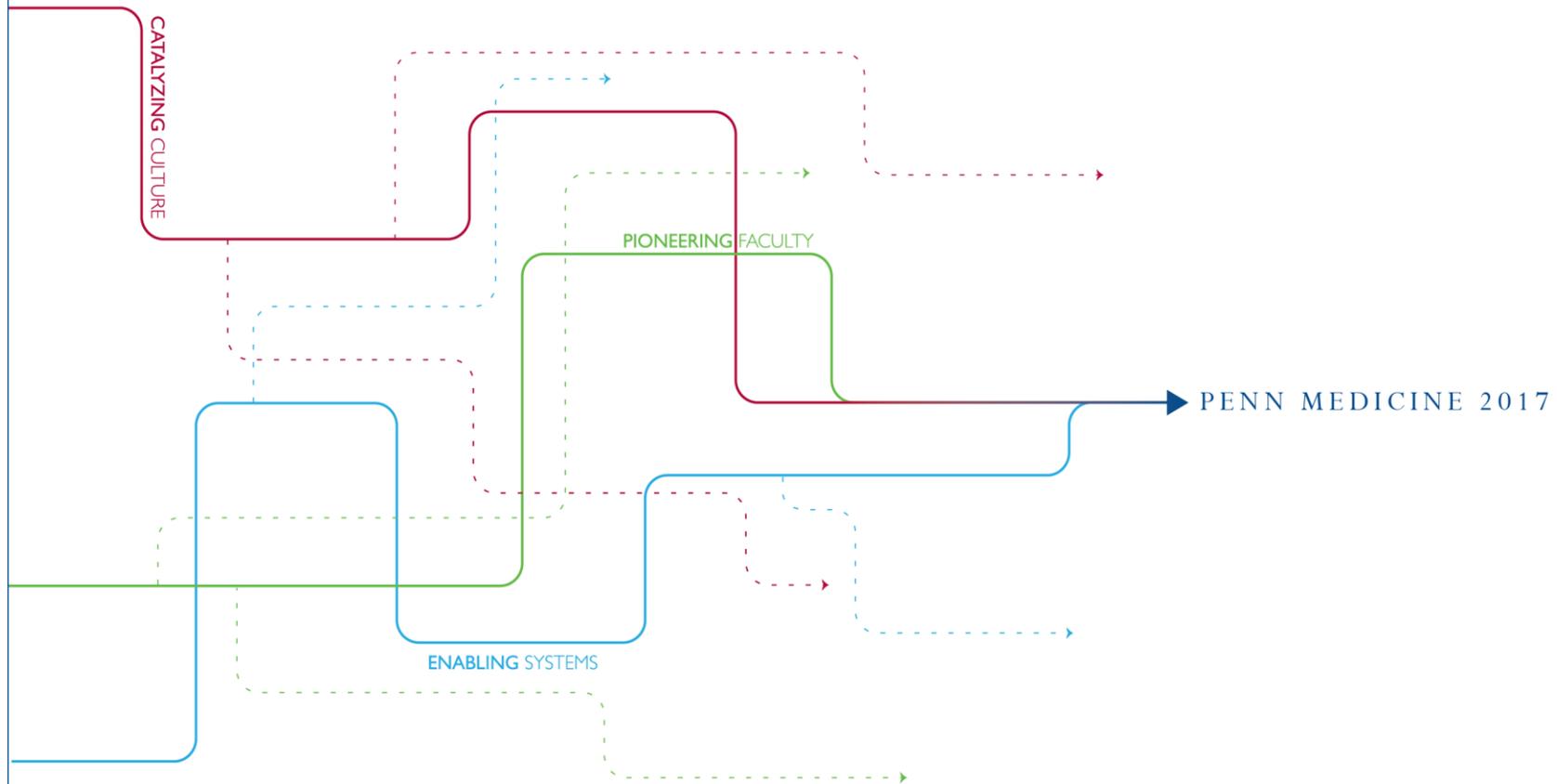


# Shaping the Future of Medicine

FIVE YEAR STRATEGIC PLAN | 2013-2017



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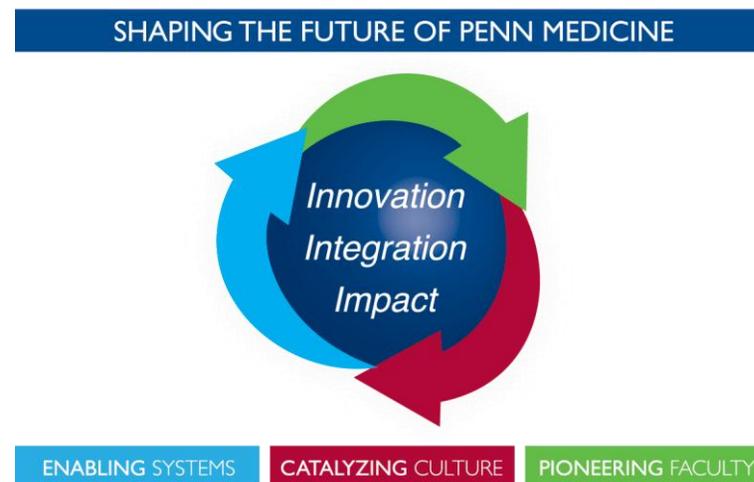
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## Overview

*Penn Medicine* is an integrated academic medical center comprised of the Perelman School of Medicine and the University of Pennsylvania Health System. As the nation's first medical school and hospital, we will continue our nearly 250 years of accelerating the translation of research and knowledge into clinical practice by leveraging our integrated operating model to support of our missions.

Our **Mission** is to *advance science* through research, *provide outstanding patient care and community service*, and *educate future leaders* in medicine.

Our **Strategic Plan for Penn Medicine** is to shape the future of medicine through *innovation, integration and impact* with three galvanizing themes.



## Strategic Priorities | Executive Planning Council Report

This final report is based on the thorough and inclusive work of the faculty-led Executive Planning Council (EPC) and its six Working Groups. The report of the Executive Planning Council includes 35 major recommendations, which in turn contain more than 250 specific action items. It is important that we retain the breadth and depth of this effort by intermittently revisiting these reports. However, an effective communication and implementation process requires focus on a more limited number of high priority initiatives. Using the themes developed by the EPC, the implementation process will focus on 15 major strategic initiatives. Several of these priorities incorporate similar recommendations from more than one working group. Many of these additional recommendations will be addressed as part of our routine administrative processes rather than being highlighted here. Thus, many topics not highlighted in the implementation process will still receive attention. We strongly urge each faculty member to become acquainted with the Executive Planning Council report which is available online at [http://www.med.upenn.edu/strategy/docs/EPC\\_Report.pdf](http://www.med.upenn.edu/strategy/docs/EPC_Report.pdf).

### Lead in Delivering Individualized Medicine

1. **Create clinical facilities of the future to support patient-centered care.** We will undertake *major facility upgrades* for ambulatory and inpatient services, using the patient and their family's needs as our guidepost.
  - a. **Inpatient capacity.** There is an immediate lack of inpatient capacity at the Hospital of the University of Pennsylvania. We will solve this in the short-term by reallocating services among the acute care hospitals, expanding inpatient facilities at Penn Presbyterian Medical Center, and improving diagnostic and interventional capabilities at Pennsylvania Hospital. We will also continue the groundwork needed to create state-of-the-art replacement capacity at HUP by 2020.
  - b. **Ambulatory capacity.** We will *expand our regional presence*, through additional Practice of the Future sites including Southern Chester County and Central Montgomery County, to increase access to Penn Medicine services. Additionally,

with the continued shift to ambulatory delivery we will continue to improve outpatient facilities at all three acute care hospitals.

- c. **Affiliated capacity.** The focus of care delivery will be broadened to include the role of community-based physicians, hospitals, and Penn Medicine satellites as we develop a distributed network of providers for more population-based payment models.

## 2. Optimize the patient experience and coordinate care across disciplines.

- a. **Improve patient access.** We will make investments to *increase access to care*, such as expanded specialty slots, more operating room and inpatient capacity, improved transfer and transport management, and enhanced imaging and consultative services. We will reduce the time and effort required by patients and their families to obtain information, including designing better phone access and introducing online scheduling, an after-hours nurse call center, and check-in kiosks.
- b. **Seamless transitions.** We will enhance our ability to care for chronic and complex-care patients by establishing an evidence-based *advanced model of primary and episodic team-based care*. This will include longitudinal management of patients (supported by expanded ambulatory facilities at Pennsylvania Hospital and Penn Presbyterian Medical Center) and new referral-management with IT linkages for referring primary care physicians, community based specialists, and Penn home care.
- c. **Universal professionalism.** Penn Medicine faculty and staff will *continue* to hold themselves to the highest level of professional conduct, efficiency of service, and compassion and aspire to the highest level of clinical outcomes for our patients.
- d. **Integrated clinical information technology.** We will provide the most relevant information to those delivering care, by integrating our inpatient and ambulatory electronic medical record systems into a unified interoperable system by 2017.

- e. **Service excellence.** We will improve the *patient experience* by delivering superior clinical outcomes in a patient centered environment. Action steps required to achieve this goal include developing and promoting well-defined *service excellence standards*, improving employee selection processes, on-going training for managers and staff, leader rounding, new reward and recognition programs, and rapid experimentation to pilot new methods and processes for improving the patient experience.

### 3. Create new models of clinical care delivery and effectiveness.

- a. **Translational Centers of Excellence.** To bridge the divide between basic science and clinical care and to bring rapid innovation to our patients, we will establish **Translational Centers of Excellence** as an organizing vehicle. Initial foci will include, but not limited to, preventing breast cancer recurrence, hematologic malignancies, pancreatic cancer, thoracic cancer, metabolic disease, and neuroscience.
- b. **Excel at complex clinical care and prepare for new payment models.** We will strengthen our approach to disease-based service lines with a focus on complex clinical care programs led by multidisciplinary teams. These will include cancer, heart & vascular, neuroscience, musculoskeletal, women's health, transplant, metabolic, and digestive disease. These programs will require shared governance, aligned incentives, team-based decision-making, and the application of research advances. The Clinical Practices of the University of Pennsylvania (CPUP) will establish inter-departmental coordination through shared incentives to produce the optimal outcomes for each patient.
- c. **Launch Innovative Health System Research and Comparative Effectiveness Projects leading to New Outcome Measures.** Penn Medicine will assume a national role in developing and testing the safety and effectiveness of treatment protocols and new models for delivering high quality, efficient medical care. We will lead the way in assisting the country in reducing the cost of healthcare through evidenced-based models.
- d. **Center for Personalized Diagnostics and clinical decision-making.** With an initial focus on cancer genomics, the Center for Personalized Diagnostics will be an innovative Penn Medicine initiative for developing new approaches to disease classification and individualized treatment protocols.

- e. **Connected health.** We will develop IT platforms to assist in managing populations more effectively through an inpatient surveillance system, social media and a “hospital to home” telehealth systems.
- f. **Preventative care.** We will continue to promote existing, and develop and test new methods for disease prevention as the ultimate course for improving health outcomes and lowering health care costs.

### Realize Penn Medicine’s Potential for Innovation

- 4. **Improve technology transfer and commercialization.** Translational research, a priority at Penn Medicine, offers an ideal opportunity for forming more effective partnerships with the private sector, which increasingly turns to academia for research and development alliances. While remaining true to our legacy as an academic medical center, we will also develop new relationships with industry that promote the translation of our discoveries into effective therapies, devices, and products that improve the human condition.

At the direction of President Gutmann, the University is launching a new model for technology transfer at Penn and implementing specific initiatives to foster a culture that encourages innovation and commercialization of research discoveries. Many of the themes emerging from this new organization are aligned with, and emanate from, the thoughtful discourse by the Penn Medicine faculty during this planning process. The University will announce the new model later in the spring of 2013.

- a. **Foster clinical trials.** Aggressively increase clinical trials underway at Penn Medicine through a streamlined organizational structure, a dedicated Phase 1 Unit in the Perelman Center, and continued improvements in IT support.
- b. **Establish a Penn Venture fund to support early stage research.** Working within guidelines to be established by the University, a venture fund will be established, managed by independent third-party experts and funded by philanthropy.

- c. **Provide “one stop shopping” to faculty for discoveries and start-up companies.** Planned improvements include licensing officers and tech transfer support staff embedded within the PSOM, re-training and recruitment of service oriented staff, and growth of expertise in medical device and software licensing and development.
5. **Create a new *Institute for Biomedical Informatics*.** We will unify current programs and assets under the leadership of a new *Institute for Biomedical informatics*. We will provide our faculty with high-performance computing capacity and establish a research data store that will be known as “*PennOmics – the Engine behind Precision Medicine.*” In addition to the recruitment of the Institute Director and new faculty with expertise in this domain, a new master’s program in biomedical informatics and computational biology will allow us to develop—from within—informaticians for the future.
6. **Develop a Penn Bio-bank focused on disease-based initiatives.** We will build a powerful capability for bio-sampling and bio-banking and support it with an enhanced effort for clinical phenotyping. This will culminate in an enterprise-wide bio-banking program with comprehensive patient samples and longitudinal patient phenotypes.

### Enrich the Life of Our Faculty through Diversity and Flexibility

7. **Promote diversity and inclusion.** We have made steady progress, but there is much more to be accomplished to maximize our societal impact. Today, 33 percent of Penn School of Medicine faculty members are women and 5 percent are from groups traditionally underrepresented in medicine and biomedical research. As outlined in Perelman School of Medicine diversity plan, we are committed to a faculty in the future that is even more representative of our diverse society. We will recruit a **Vice Dean for Diversity and Inclusion** to lead our efforts to further enrich the academic environment and will have the authority and resources necessary to achieve these goals.
8. **Implement novel approaches for recruitment and retention of impactful people**
  - a. **New search processes for high impact scientists.** We will strengthen interdisciplinary recruitment and retention of outstanding faculty members through collaboration by our senior faculty leaders to identify recruitment needs, combine

resources to attract high-caliber faculty members with strong interdisciplinary records, and implement the highest standards for academic advancement.

- b. **Master clinician and educator program.** Building on our experience with the I.S. Ravdin Master Clinician Award (given to “doctors’ doctors” and exceptional patient advocates), we will identify, recognize, and support junior and senior faculty master clinicians in a variety of ways, including grants, mentoring, and facility support. The goal is to greatly expand this group, reflecting the high level of clinical excellence practiced at Penn Medicine.
- c. **Pipeline programs for physician scientists.** We will establish a new initiative to train, recruit, and support a stronger and more cohesive community of research-oriented MD, MD/MS, and MD-PhD trainees with exposure to and expertise in the parallel disciplines of science and medicine.

#### 9. Enhance pathways for career evolution.

- a. **Align faculty track structure to support missions and faculty success.** We will make a broad new commitment to clarify the alignment of faculty tracks with career goals and support flexibility throughout faculty careers, including retraining opportunities and selective track changes for outstanding faculty members. As part of this effort we will work with the University to conduct a comprehensive evaluation of current faculty track structures and criteria for reappointment and promotion.
- b. **Metrics for collaboration, mentoring, community engagement.** We will develop new metrics for collaboration, mentoring, and community engagement to be incorporated into the faculty evaluation and promotion process.
- c. **Programs to support work-life balance.** We will add programs to support faculty success and work life, such as on-campus childcare services for the Penn Medicine community. Future buildings and renovation projects will recognize the increasing need for collaborative spaces.

- d. **Departmental leaders for mentoring and professional development.** Support for junior faculty members should be considered strategic investments and academic success will be valued as a substantial and measurable return on investment by Penn Medicine. To assure faculty success, we will improve career development and performance evaluation efforts at all levels, and offer competitive grants for research to faculty members regarded as the most promising in the field.

## Impact Health Outcomes Locally and Globally

10. **Create focused effort on health care in Philadelphia communities.** We will encourage community-based engagement and research for establishing a more effective model of care, focusing on improved health outcomes for our Philadelphia communities.
  - a. **Revitalize the Center for Public Health Initiatives (CPHI).** Support the newly reorganized university CPHI as the organizing structure to coordinate community-based research. New pilot programs will be developed to encourage community-based research. We will also explore integrating community-based physician leaders as adjunct faculty members into the Penn community.
  - b. **Identify a Penn Medicine leader for community health initiatives.** We will identify a leader to coordinate community health initiatives across the school using the search for the new Chair in Family and Community Medicine to support this objective.
  - c. **Develop a community health advisory board.** We will convene an advisory board of community members concerned about health care delivery, to assure that our efforts are tied to the desires and needs of the community.

## 11. Engage in selective but impactful global partnerships.

- a. **Align opportunities with university initiatives.** We will seek to expand the experiences we offer faculty members and trainees at international sites and increase funding for collaborative research with international colleagues.
- b. **Identify a leader for global health initiatives.** We will develop an organizational structure and identify a leader to coordinate global health initiatives across the school.
- c. **Expand, through focused recruitment, faculty interested in global engagement.** Penn Medicine needs to be engaged globally *through its faculty*, whether it is wet bench research, public health research or service, or improving clinical care.

## Create Innovative Interdisciplinary Educational Programs

12. **Develop a Medical Education Center for our 250<sup>th</sup> anniversary.** We will design a Rafael Vinoly-inspired addition to the Perelman Center for Advanced Medicine with a goal of opening the new medical education center by 2015. The location of the classrooms in the center of the ambulatory care, faculty offices, translational research, and future inpatient care is a paradigm shift. This integrated home for medical education will be nationally unique.
13. **Create a Penn Medicine Education Council.** We will design novel education pathways and models for teaching and training future physicians and scientists to be effective in a changing world. We will emphasize team training, collaboration, interdisciplinary and inter-professional activities, online access, new media (e.g., Coursera) and reduced costs and time for training. We will prepare PhD and Master's students and postdoctoral fellows for a changing workforce environment by ensuring that educational initiatives are addressed in faculty recruitment and training programs. We will establish a **Penn Medicine Education Council** to operate this initiative and propose programmatic improvements and identify implementation strategies for change.

## Optimize Performance of the Penn Medicine Ecosystem

- 14. Develop transparent, evidence-based finance and space allocation decision-making models.** Penn Medicine administrative leaders will work with the faculty to design the new funding models, compensation policies, and reviews of space utilization.
- a. **Formal review of Centers & Institutes.** The multidisciplinary centers and institutes were created to keep Penn Medicine at the forefront of emerging trends in biomedical science and have significantly enhanced the success of our institution. Sustained success requires ongoing realignment of priorities and flexibility to invest in developing areas of scientific inquiry and clinical medicine. To this end, we will undertake a rigorous and metric based review of the current center and institutes' activities, impact, and governance to ensure continued alignment with the institution's strategic priorities and objectives. The outcome of the review, together with strategic priorities, will be used to determine the appropriate resourcing for each center and institute, focusing on a multi-year resourcing plan to allow the achievement of the agreed upon goals of the centers and institutes.
  - b. **Develop a new funding model that distinguishes new initiatives from ongoing support.** To provide stability for ongoing commitments and to create funds to make new commitments in alignment with our strategic priorities.
  - c. **Consolidate redundant administrative infrastructure.** Penn Medicine has integrated its IT resources and capabilities into a single, system-wide department with shared governance. This has resulted in lower costs, better integration between research and clinical faculty, and serves as an example of greater integration as we seek to enhance the service to our patients, our faculty and our trainees.
  - d. **Improve efficiency of clinical operations through integration.** UPHS must lead the way nationally on improving its cost structure and clinical outcomes. We will function as one integrated system across all campuses leading to improved efficiency.

**15. Catalyzing partnerships with other schools and institutions.** To expand research and funding opportunities, increase the quality of care that we provide, and enhance our fiscal strength, we are committed to strengthening partnerships. In particular we will expand the work that we carry out with:

- a. The **Children's Hospital of Philadelphia** in such areas as collaborating on core facilities, longitudinal research studies, and addressing the transition of care for CHOP patients as they become adults.
- b. We will also encourage and develop more active relationships with current Penn partners, including the **Wistar Institute**, Philadelphia **Veterans' Affairs** Medical Center, and **other Penn schools**, including especially Arts and Sciences, Dental, Engineering, Nursing, Wharton, and Veterinary.

## Implementation Themes

In addition to the 15 major initiatives, which are organized according to traditional mission-based areas [clinical, research, education, faculty development, community, finance], it is useful to empower these goals with three galvanizing themes:

- **Pioneering faculty.** We renew our commitment to a pioneering faculty by reaffirming our commitment to scholarship in medicine and biomedical research that encompasses a broad range of basic, translational, clinical, and population studies. We will establish a new initiative to train, recruit, and support a stronger and more cohesive community of faculty. We will grow and empower the community of physician-scientists to catalyze research that integrates disciplines. We will enhance our support for master clinicians and educators. We will support team-based investigation which is critical for our mission.
- **Catalyzing culture.** The free interchange of ideas and initiatives within and among missions is encouraged and supported. A fundamental emphasis will be on further integration across Penn Medicine to accelerate the successful achievement of our missions.

- **Enabling systems.** Essential to our success, we need to develop the scientific platforms, facilities, cores, and information technology necessary to help our faculty and staff deliver superior care, train future researchers and clinicians, and carry out transformative research.

These themes will be used to capture how the various initiatives intersect with one another to synergize and accelerate progress. For example, facilities and IT are key **enabling systems** for several initiatives. Likewise, **culture change** will be important to support new initiatives in clinical services and tech transfer. **Pioneering faculty** who are committed to innovation, collaboration, and high impact will play essential roles in multiple initiatives even though the mission may focus on research, clinical care, education, or community service.

**Pioneering Faculty. Catalyzing Culture. Enabling Systems.** Achieving the strategic priorities listed above will provide the basis for a new era of Penn's leadership in shaping the future of medicine.

## Implementation Organization

The effectiveness of any strategic plan is critically dependent upon a successful approach to implementation. To this end, Penn Medicine leadership carefully assessed the recommendations of the working groups and Executive Planning Council and reviewed these with university leadership and the Penn Medicine Board of Trustees.

Penn Medicine's administrative leadership team will work in partnership with the basic science and clinical chairs and center and institute directors to effectively implement this plan. Objectives and milestones associated with the strategic plan will be incorporated into annual individual and team performance goals. Resources for implementation have been modeled for the 5 year period and will be allocated through the annual Penn Medicine budgeting process in alignment with yearly goals. Strategic initiatives will be funded as resources are generated from operations, philanthropy, grant funding, and technology transfer.

The implementation will follow the following principles:

- **Transparent and measurable progress reporting.** Each initiative in the strategic plan will have a principal responsible party, a funding plan, milestones, and measures. The initiatives will be tracked by the implementation team and progress will be used as the basis for assessing accountability. There will be quarterly meetings and an annual review to assess progress.
- **Accountability.** All academic and administrative leaders of Penn Medicine will be responsible for initiatives that fall under their purview and will be expected to support implementation and help address problems.
- **Staging.** A number of initiatives will begin as pilot programs (for example, multi-disciplinary service lines) and their results evaluated prior to full introduction. Others will be initiated in stages (for example, bio-banking), and others will be introduced based on a combination of institutional and departmental support (for example, biomedical informatics).
- **Collaboration.** Success of this plan will require collaboration among faculty and administrative leaders. Chairs and directors will be expected to manage and allocate resources to invest in strategic priorities, for example, committing replacement recruitments to informatics and new program areas, pooling departmental resources to fund priority recruitments, and using compensation policies and performance-based metrics in support of plan initiatives. Additionally, administrative leaders will work with the clinical chairs to design and implement a revised programmatic incentive plan supportive of comprehensive service lines, research and other initiatives described here.

To insure accountability and effective implementation, each strategic initiative will be assigned to a senior faculty leader(s), usually a basic science chairs, clinical chair, or center and institute director. This will ensure continuation of the “faculty led” nature of the planning process. Each faculty leader will be teamed with a senior executive and responsible staff. These assignments will be posted on line at <http://strategy.med.upenn.edu>. These leadership teams are charged with developing metrics, milestones, budgets, timelines, and implementation strategies. In many cases, these groups will develop additional task forces for input and implementation.

The strategic plan and implementation process will be communicated via multiple venues. In addition to the written reports available on the Penn Medicine website, the plan will be reviewed at town hall and department meetings, and progress will be reviewed regularly with Chairs and Center/Institute Directors, and with the Penn Medicine Board. Over time, a broad range of our faculty will be engaged in one or more of the major initiatives.

## **Resourcing and Five Year Financial Plan**

Anticipated declines in clinical reimbursement, projected decreases in indirect medical education funding, and constrained NIH budgets require us to generate many of the resources for investing in the strategic plan from current operations and new revenue sources, such as technology transfer and philanthropy. Funding for this plan will therefore require a sustained, Penn Medicine-wide commitment to operating-efficiency and cost reduction, resource re-allocation, enhanced funds-flow management, maintenance of clinical margins, maximization of returns from research investments, and enhanced philanthropy. Rethinking our operating model and the policies that guide it will begin immediately so that full-year gains for FY2014 can be realized and reinvested in strategic priorities. An enhanced degree of openness and dialogue among faculty and administrative leaders will be necessary to achieve our goals.

The principles of the financial plan necessary to implement our strategic plan include:

- Penn Medicine will function as an integrated entity with a focus on the financial health of the entire organization.
- Each entity within Penn Medicine will be held to high standards of peer performance and expected to operate as efficiently as possible.
- Penn Medicine needs to maintain a balanced budget while creating sufficient reserves to respond to strategic opportunities and challenges.
- Significant financial decisions with potential for consequences throughout Penn Medicine will be reviewed with all involved parties before implementation.

- Capital decisions will be made at the Penn Medicine level, ensuring careful attention to balance among our core missions.

We are confident that Penn Medicine can remain in financial balance and achieve its strategic goals by continuing to apply the fiscal discipline that has been its hallmark over the past decade.