

## AAIM Perspectives

AAIM is the largest academically focused specialty organization representing departments of internal medicine at medical schools and teaching hospitals in the United States and Canada. As a consortium of five organizations, AAIM represents department chairs and chiefs; clerkship, residency, and fellowship program directors; division chiefs; and academic and business administrators as well as other faculty and staff in departments of internal medicine and their divisions.

# Building Leadership Capacity for Mission Execution in a Large Academic Department of Medicine



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Development of an effective, functional leadership structure is critical to the success of any large-scale organization. The department of medicine (DOM) includes over 1800 full- and part-time faculty, 900 nurses, 881 trainees, and more than 1000 employees in nonclinical roles. Like many academic departments, faculty carry out our missions on 2 campuses—Johns Hopkins Hospital (JHH) and Johns Hopkins Bayview Medical Center (JHBMC). These campuses provide complementary strengths, different patient demographics, and serve as program development laboratories for our entire health system. Our overall departmental budget is composed of 3 revenue streams: approximately one-half is from sponsored research, one-quarter from hospital joint agreements, and one-quarter from professional fees. In this unique organizationally and financially integrated model, called a “functional unit,”<sup>1</sup> physicians, nurses, and administrators are part of a single financial unit with a shared mission.

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We have developed a comprehensive vice chair faculty leadership structure that allows efficient execution of our tripartite mission, while at the same time engaging the entire workforce in a unified vision.

### VICE CHAIR LEADERSHIP STRUCTURE OVERVIEW

The vice chair (VC) structure is organized around 4 areas: education, clinical care, research, and people. All VC positions were solicited through an open request for applications process. A detailed job description was disseminated to all department faculty, and applicants underwent comprehensive interviews with the department director and other stakeholders, including division directors, nursing leaders, school of medicine leaders, and health system leadership. The request for applications process enabled us to identify faculty with talent and leadership aspirations, select the strongest candidates with a passion for the academic mission, and create a culture of transparency.

Because of the “functional unit” structure of the department, the director has a broader scope of reports and responsibilities than might be present in traditional academic departments. Given the breadth and complexity of these roles, the director created a new executive vice chair (EVC) position. The EVC meets

weekly with the department director, advises the director on departmental direction, policy, and operations, and attends various meetings representing the director, serving as departmental leader in the director's absence. The EVC is also responsible for overseeing a monthly VC meeting. To ensure that each VC is meeting his or her goals, the EVC conducts annual reviews with each VC. The EVC aids the director in faculty recruitment and retention, including recruitment and orientation of new division directors and VCs. The EVC provides oversight to division directors and administrators in preparing annual division reviews in collaboration with the VC for faculty development and promotions. Finally, a critical role for the EVC that evolved was to help shape departmental culture and enhance engagement for all employees by 1) leading the development of a unifying mission and vision statement (**Table 1**) and 2) initiating and overseeing the department's new civic engagement initiative.<sup>2</sup>

### FACULTY DEVELOPMENT AND PROMOTIONS: WE ARE PEOPLE SERVING PEOPLE

The vision for the DOM Faculty Development and Promotions Office is to support the highest academic achievements for all faculty across biomedical research, medical education, clinical care, program building, innovation, commercialization, quality, safety, and improving systems of care. At Johns Hopkins School of Medicine, there is a single promotion pathway (ie, only tenure track without a clinician/educator nontenure track) with criteria for national

recognition (promotion to Associate Professor) and national leadership or international recognition (promotion to Professor). The DOM Faculty Development Office works with the School of Medicine's Office of Faculty Development to develop guidance on preparation of promotion packages, especially for those outside the traditional physician-scientist pathway.

The department supports efforts to maximize recognition by taking an active role in nominating faculty for appropriate awards and maintaining a master directory of awards offered by internal medicine-related professional organizations. Further, a process for recognizing and rewarding clinical excellence was established in the department. The Miller-Coulson Academy for Clinical Excellence<sup>3</sup> began at JHBMC and is now available to all faculty on a competitive basis, and more recently has extended to recognize outstanding advanced practice clinicians and trainees.

The VC for Faculty Development and Promotions is supported by 2 associate VCs (AVCs)—the AVC for Women's Academic Careers and the AVC for Diversity and Inclusion (**Table 2**). These

AVCs work closely with the VC to ensure that women and faculty underrepresented in medicine (URIM) are successful. Activities include supporting the career development of women and URIM faculty through enhanced mentorship, access to career development opportunities specific to women and minorities, leadership training, and nominating qualified individuals for awards, speaking opportunities, and leadership positions. Regular meetings and exit interviews with women and URIM faculty are used to identify potential barriers that may differentially impact their careers. The office has developed an "equity benchmarking tool" to collect and maintain data on key metrics that reflect the expressed core value of equity and the commitment to departmental transparency.

### PERSPECTIVES VIEWPOINTS

- A key to sustaining impact in academic Departments of Medicine is to develop a diverse, mission-focused leadership structure that capitalizes on faculty strengths to execute the tripartite mission—clinical care, research, and education.
- An effective leadership structure should engage the entire department workforce (faculty, nursing, and administration) in a unified mission and vision.
- Developing faculty and supporting their highest scholarship achievements is key to success of the academic mission.

**Table 1** Mission, Vision, and Core Values: Department of Medicine, Johns Hopkins University School of Medicine

Mission	Vision and Core Values
<p>We are people serving people, to promote health and alleviate suffering locally and globally by:</p> <ul style="list-style-type: none"> <li>• Delivering exceptional care</li> <li>• Developing and educating future leaders</li> <li>• Driving innovation and discovery</li> </ul>	<p>We want to:</p> <ul style="list-style-type: none"> <li>• Inspire a culture of respect, integrity, service, equity, and excellence (our core values)</li> <li>• Engage all Department of Medicine employees in serving our patients</li> <li>• Lead the world in personalized patient care, medical education, and biomedical discovery and innovation</li> </ul>

**Table 2** Vice Chair Job Descriptions and Responsibilities

Executive Vice Chair	<ul style="list-style-type: none"> <li>• Directly advise the Director on departmental direction, policy, and operations, attend various meetings representing the Director and serve as the surrogate department leader in the absence of the Director.</li> <li>• Meet weekly with the Department of Medicine executive leadership team.</li> <li>• Work with the Director, Vice Chair for Clinical Operations, and JHM to lay the foundation for interdisciplinary clinical service line agreements for complex disease management and wellness.</li> <li>• Aid the Director in faculty recruitment and retention, including recruitment of new Division Directors, Vice Chairs, and other departmental leaders.</li> <li>• Work with the Director to assess, develop plans, and operationalize effective partnerships between various JHM constituencies.</li> <li>• Serve as Acting Director (meeting attendance, signature authority) in the Director's absence.</li> <li>• Provide leadership and oversight to Division Directors and administrators in preparing annual division reviews, and actively participate in those reviews.</li> <li>• Oversee mission, vision, and departmental culture.</li> </ul>
Clinical Affairs Vice Chair for Clinical Affairs	<ul style="list-style-type: none"> <li>• Oversee and coordinate efforts to ensure that both inpatient and outpatient care is delivered in an effective, safe, high-quality, and patient-centered manner.</li> <li>• Guide implementation and maintenance of a comprehensive model for continuous quality improvement across all aspects of DOM clinical operations, including process and patient outcomes, patient and provider engagement and satisfaction, and financial performance.</li> <li>• Lead and support strategic planning efforts around the development of interdisciplinary programs that address complex illnesses, enhance efficiency, and improve access to clinical care.</li> <li>• Supervise Associate Vice Chair of Inpatient Operations in Epic implementation and dissemination, length of stay management, readmissions management, and monitoring and improving inpatient throughput.</li> <li>• Supervise Associate Vice Chair of Ambulatory Operations in monitoring primary and specialty clinic performance, access to clinical services, patient satisfaction scores, ambulatory care protocols, and After-Care Clinics and readmission prevention efforts.</li> </ul>
Associate Vice Chair for Inpatient Operations	<p>Common responsibilities at JHH and JHBMC</p> <ul style="list-style-type: none"> <li>• Oversee bed management throughout the DOM (including after-hours calls).</li> <li>• Serve as Hopkins Access Line liaison.</li> <li>• Monitor quality for handoffs and transitions within DOM and between departments.</li> <li>• Oversee quality control for consult services provided by the DOM.</li> <li>• Oversee departmental length of stay management and re-admission reduction efforts including proactive, strategic planning for utilization of alternate care sites.</li> <li>• Lead projects designed to enhance physician professional experience, joy of practice, and top of license work relating to inpatient care.</li> <li>• Monitor and lead improvement in inpatient throughput—emergency department time of decision to admit to discharge; discharge and transfer barriers.</li> <li>• Co-lead efforts in inpatient clinical documentation excellence in collaboration with the Vice Chair for Quality, Safety, and Service</li> <li>• Develop new models of care delivery in collaboration with VC for Clinical Affairs and other partners</li> </ul> <p>Responsibilities specific to JHH:</p> <ul style="list-style-type: none"> <li>• Oversee inpatient EMR implementation.</li> <li>• Support HCAHPS monitoring and improvement.</li> <li>• Refine and implements collaborative models for inpatient redistribution between academic campuses.</li> </ul> <p>Responsibilities specific to JHBMC:</p> <ul style="list-style-type: none"> <li>• Co-lead DOM efforts on Maryland Hospital Avoidable Condition Reduction.</li> </ul>
Associate Vice Chair for Ambulatory Operations	<ul style="list-style-type: none"> <li>• Monitor primary and specialty clinic performance such as template and space utilization and access metrics such as time to appointment bump rates using Ambulatory Dashboards and other tools.</li> <li>• Serve as a champion for patient satisfaction and actively monitor CGCAHPS scores and identify best practices and opportunities for improvement.</li> </ul>

Vice Chair for Patient  
Safety, Quality, and  
Service

- Monitor documentation standards and open encounters.
  - Develop new and integrate Ambulatory Care Protocols into DOM clinical practice in collaboration with stakeholders.
  - Champion JHM Transitions of Care efforts with a specific focus on provider communication;
  - Serve as the department liaison to After-Care Clinics and other readmission prevention efforts;
  - Participate in department meetings and committees such as the Clinical Affairs leadership team, safety and quality improvement committees; and,
  - Represent the DOM at relevant JHM committees such as the Clinical Practice Association (CPA) practice management committee and John Hopkins Outpatient Care Ambulatory Triad.
- Safety/Risk:
- Review unexpected deaths and major adverse events with the goal of participating in root cause analysis (RCA) and identifying opportunities for improvement.
  - Develop and lead risk-reduction teams involving additional DOM leaders, as appropriate, to address problems related to processes and systems.
  - Review and investigate event reports and participate in and contribute to interdisciplinary case evaluations.
  - Investigate and report relevant cases to hospital committees (eg, Clinical Quality Improvement, Risk Management Committee)
  - Work to improve safety culture in the DOM units and ambulatory clinics.
- Patient Family-Centered Care:
- Monitor HCAHPS scores and achieve results consistent with the JHM strategic plan and monitor CGCAHPS scores as needed/as appropriate.
  - Implement best practice bundle with focus on nurse leader rounding.
  - Evaluate physician-related complaints and refer for peer review as appropriate.
- Quality/performance Improvement (in collaboration with Physician Advisor):
- Monitor external measures to ensure performance is on track with National Leader strategy (core measures, MHACs, hospital-acquired infections, hand hygiene, Physician Quality Reporting System, Meaningful Use, value-based purchasing/HEDIS, etc.). Actively utilize Department dashboard to measure quality and safety priority metrics and active performance improvement teams to address any measure seriously below performance target.
  - Coordinate review of deaths and major adverse events with DOM Morbidity & Mortality conference.
  - Develop Departmental/Functional Unit QI priorities and plan in collaboration with the Vice Chair for Clinical Affairs.
- Value:
- Standardize care where appropriate, create algorithms, and implement decision support tools and reduce variation where appropriate.
  - Utilize clinical analytics to identify areas of opportunity to eliminate harm, improve quality outcomes, and reduce waste.
  - Utilize value/financial analytics to identify areas to reduce cost: utilization in labs, drugs, imaging, blood, and supplies.
  - Work to reduce hospital length of stay and reduce readmission.
- HealthCare IT Safety (in collaboration with Vice Chair for Data Integrity and Analytics):
- Identify risks of potential harm related to Health IT systems and develop/implement risk mitigation strategies to prevent potential harm.
- Trainee and faculty education (in collaboration with Program Directors):
- Resident training in the basics of safety, service, and value and communication of safety goals.
  - Ensure safety leaders within the departments/divisions/units have the appropriate skills and resources to lead quality efforts in their area.
  - Collaborate with the Residency Director, Vice Chair for Education, and Armstrong Institute Director to promote educational and scholarly opportunities in safety, quality, and service for trainees and faculty.

Education

Vice Chair for Education

Training Programs:

- Support training program directors in oversight of residency and fellowship education and assist in recruitment efforts.
- Meet and exceed accreditation standards for all DOM training programs.

Faculty

- Support recognition of educator faculty through awards nominations, publicity, and connection to open leadership positions.
- Collaborate with VC for Faculty Development with promotions processes and review educational scholarship of educator faculty.

## Students

- Review Departmental letters of recommendation for JHUSOM Internal Medicine (IM) applicants.
- Advise JHUSOM IM applicants.

## Other

- Lead educational strategic planning process every 5 years minimum and review educational program performance annually.
- Oversee educational budget and build innovative funding strategies to support educational programs.
- Chair DOM Medical Grand Rounds Committee.
- Attend local and national education meetings (eg, Graduate Medical Education Committee, Association of Program Directors in Internal Medicine, AAMC)
- Oversee Associate Vice Chair for Education

## Associate Vice Chair for Education

Responsible for DOM undergraduate medical education

- Promote culture to inspire JHUSOM students to pursue IM careers.
- Oversee and review basic and sub-internship clerkships and rotation directors at all sites.
- Meet and exceed all accreditation standard for student programs.
- Review and catalog all DOM teaching in preclinical curriculum.
- Coordinate non-JHUSOM medical student observerships.
- Oversee IM interest group in JHUSOM.
- For IM residency applicants, author all Departmental letters of recommendation and advise all JHUSOM IM and combined program applicants.

## Other

- Co-lead educational strategic planning process every 5 years minimum and review educational program performance annually.
- Support educational effort for DOM faculty.
- Serve as the Co-Chair of DOM Medical Grand Rounds Committee and manage CME accreditation for Medical Grand Rounds.
- Attend local and national meetings.

## Deputy Director of Education at JHBMC

Share in some of the vice chair for Education and AVC for Education responsibilities listed above on the Bayview campus for its training programs.

## Research

## Vice Chair for Research (duties in partnership)

- Build comprehensive strategic efforts to better support our mission of discovery.
- Recruit investigators to serve as members of the Department's research committee and oversee the annual Research Retreat Steering Committee.
- Develop guidelines for a fiscally sound, transparent, department-wide bridge-funding policy.
- Oversee, analyze, and develop recommendations for departmental infrastructure required for pre- and postgrant accounting and administration.
- Serve as DOM representative to the School of Medicine Research Council.
- Serve on the DOM Emergency Preparedness Committee for Research and maintain the research business continuity plan.

## Vice Chair for Basic and Translational Research

- Supervise, in partnership with the Administrator, DOM-sponsored research staff
- Serve as the primary departmental liaison to basic science departments in the Johns Hopkins University School of Medicine.
- In collaboration with the VC for Data Integrity and Analytics, maintain data retention policies and provide education and resources to ensure DOM laboratory compliance.
- Guide the recruitment and professional development of basic science-oriented faculty.
- Provide oversight to DOM Facility Operations to ensure effective use of all research space assigned to the Department, including policy development to guide space assignment.
- Facilitate equipment transfers of incoming and departing faculty.

## Vice Chair for Clinical and Translational Research

- Guide the recruitment and professional development of our physician-scientist and clinical and health services research-oriented faculty.
- In collaboration with the Vice Chair for Data Integrity and Analytics, maintain data retention policies and provide education and resources to ensure IRB compliance with human subjects research.
- Serve as the DOM research lead for LCME accreditation.

Vice Chair for Innovation and Commercialization (focus on biomedical technologies aligning JHU with Applied Physics Laboratory and external organizations)

Vice Chair for Innovation in Healthcare Implementation (focus on development of business and operational frameworks for faculty to implement and disseminate innovations in healthcare delivery through technology or business solutions)

Vice Chair for Data Integrity and Analytics

People

Vice Chair for Faculty Development and Promotion

- Partner with other relevant departments across the University to connect with industry in order to understand the needs and wants of our commercial partners and help to develop relationships with industry partners for the projects identified to have the most potential for commercial interest.
  - Develop and communicate to faculty and staff a succinct description of the process of protection, patent, and commercialization and serve as a resource and advocate for those engaged in these processes.
  - Increase faculty awareness of opportunities for commercialization through multiple public (eg, Grand Rounds, Division Director Meeting, divisional faculty meeting, special seminar, new faculty orientation) and private (division director, individual faculty) presentations.
  - Identify patentable ideas and processes.
  - Ensure an up-to-date database of department faculty patent and commercialization efforts, regularly comparing our efforts with national benchmarks for academic departments of medicine.
  - Maintain a joint appointment in the Johns Hopkins Carey School of Business to serve as mentor to faculty and students with an interest in the business of biomedical innovation and to participate in relevant lecture series.
  - Be an active liaison with Johns Hopkins Technology Ventures (JHTV) to help connect DOM faculty with promising research to the appropriate resources provided by JHTV.
  - Interact with the department's development officers to capitalize on any potential philanthropic partnerships with industry.
  - Develop an infrastructure for innovation that results in increased licensing revenue, disclosures, patents, and startups in the DOM with an impact on the patient and translational health care.
  - Serve as DOM representative in facilitating big data issues across the tripartite mission at all campuses.
  - Collaborate with end users and central resources to innovate and optimize data management and analysis, particularly with large data sets.
  - Develop and communicate DOM customized solutions for big data issues across the missions.
  - Serve as the primary departmental liaison to enterprise-wide IT committees, including those focused on enterprise data governance activities to ensure the comparability and consistency of clinical data managed by electronic systems throughout the enterprise.
  - Facilitate data integrity and accuracy for research and quality improvement purposes from the EMR, including integration of clinical decision support into the EMR that enhances physician workflow and adherence to meaningful use requirements (in collaboration with VC for Patient Safety, Quality, and Service).
  - Develop a strategic plan to standardize software and IT systems across our campuses.
  - In collaboration with the Vice Chairs for Research, create and maintain (1) data retention policies and provide education and resources to ensure DOM laboratory compliance and (2) policies guiding best practices for database hygiene and curation.
  - Lead efforts to ensure electronic security and privacy and develop remediation plans, when necessary.
  - Work with the Director and Communications Director to develop efficient and effective department electronic communication strategies utilizing various electronic modalities.
  - Supervise, in partnership with the Academic Administrator, DOM MNet, IT, and Analytics staff.
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- In partnership with the Chair of the Departmental Promotions Committee, determine faculty readiness for promotion and review.
  - Assemble a mentoring committee to review faculty at rank for extended time (>6 years).
  - Update and oversee the division review process in collaboration with the Director and Executive Vice Chair.
  - Review faculty annual review materials.
  - Maintain a calendar of standing award deadlines to facilitate timely nomination of faculty for research, clinical, and education awards; assist nominated faculty with the application process, and connect faculty to former DOM or institutional award recipients.
  - Recommend and support DOM faculty applying for departmental and institutional awards and local and national leadership development programs in the domains of clinical care, research and education.

Associate Vice Chair for Women's Careers in Academic Medicine	<ul style="list-style-type: none"> <li>• Serve as a resource for institutional faculty mentoring programs and as an advisor to faculty in need of objective career mentoring advice outside of his or her division.</li> <li>• Support and collaborate with mentoring programs established by the Diversity Council and the Task Force on Women's Careers in Academic Medicine.</li> <li>• Oversee, with the administrative support of the DOM credentialing manager, the Reappointment Review Committee.</li> <li>• Chair the DOM Task Force on Women's Careers in Academic Medicine (TF) and advisory board, which may include: leading recruitment efforts to ensure a diverse and robust membership; leading monthly meetings; preparing an annual budget; developing a schedule of annual events; planning the TF Annual Dinner; guiding TF members to develop activities and projects that address the mission and priorities of the membership and department.</li> <li>• Meet regularly with the Vice President for Diversity and Inclusion for Johns Hopkins Medicine.</li> <li>• Serve on the DOM compensation model steering committee.</li> <li>• Participate in recruitment visits for incoming faculty and leaders.</li> <li>• Participate in the divisional annual review process.</li> </ul>
Associate Vice Chair for Diversity and Inclusion	<ul style="list-style-type: none"> <li>• Chair the DOM Diversity Council (DC) and advisory board to the DC, which may include: leading recruitment efforts to ensure a diverse and robust membership; leading monthly meetings; preparing an annual budget; developing a schedule of events; overseeing the planning of the annual visiting professorship program; and guiding DC members in projects and activities that address the mission and priorities of the council and department.</li> <li>• Partner with the residency directors at the Johns Hopkins Hospital and Johns Hopkins Bayview Medical Center to conduct targeted recruitment activities for groups under-represented in medicine (URIM).</li> <li>• Oversee the DOM URIM visiting clerkship program.</li> <li>• Meet regularly with the Vice President for Diversity and Inclusion for Johns Hopkins Medicine;</li> <li>• Serve on the DOM compensation model steering committee.</li> <li>• Participate in faculty recruitment visits for incoming faculty and leaders.</li> <li>• Participate in the divisional annual review process.</li> </ul>

AAMC = Association of American Medical Colleges; AVC = Associate Vice Chair; CGCAHPS = Clinician and Group Consumer Assessment of Healthcare Providers and Systems; CME = continuing medical education; CPA = Clinical Practice Association; DOM = Department of Medicine; EMR = electronic medical record; HCAHPS = Hospital Consumer Assessment of Healthcare Providers and Systems; HEDIS = Healthcare Effectiveness Data and Information Set; IRB = institutional review board; IT = information technology; JHBMC = Johns Hopkins Bayview Medical Center; JHH = Johns Hopkins Hospital; JHM = Johns Hopkins Medicine; JHUSOM = Johns Hopkins University School of Medicine; LCME = Liaison Committee for Medical Education; MHAC = Maryland Hospital Acquired Condition; QI = Quality Improvement.

## DELIVERING EXCEPTIONAL CARE: CLINICAL AFFAIRS

The vision of the Clinical Affairs Office is to deliver the highest-quality patient- and family-centered care and foster an environment that educates trainees in core principles of safe, patient-centered care; to develop innovations in clinical care delivery utilizing financial models that generate a margin for mission-based programs and address areas of immediate departmental clinical safety and financial risk; and to lead clinical integration efforts within the department and across the health system by interfacing with partners to share best practices and to use rigorous analytic methodology to assess their impact on clinical and economic outcomes.

The department clinical leadership team consists of 2 VCs—one for overall clinical affairs and one for quality, safety, and service—and 3 AVCs—2 focused on inpatient operations at each of the academic sites and one focused on ambulatory operations (Table 2). Each of the VCs collaborates closely with nursing and administrative leadership in a triad or dyad to lead the daily clinical mission activities of the department. The VC for Clinical Affairs is directly responsible for clinical issues that cross inpatient and outpatient settings,

including professionalism, professional satisfaction, and credentialing, and interfaces with divisional clinical directors. The VC for Clinical Affairs also represents the department on various hospital and school committees with significant clinical influence. The inpatient operations group focuses on hospital throughput, interhospital transfer processes, length of stay, readmissions, and inpatient care policies and procedures. The ambulatory operations group oversees clinical practices on both academic campuses as well as more than 30 satellite locations. This team focuses on practice improvement, compliance with access goals and metrics, and integration and standardization of best practices across the department's multiple practice sites. The ambulatory group also represents the department to the Clinical Practice Association for key strategic initiatives.

The triad team that focuses on quality, safety, and service ("quality") efforts within the department is composed of the VC for Quality, Safety, and Service; representatives from nursing and administrative operations; and a senior faculty member department physician advisor. The quality team organizes its work around 4 domains<sup>4</sup>—patient safety, defined as

internally recognized risk, detected by monitoring events reported through an electronic safety event reporting system; externally reported quality metrics such as risk-adjusted inpatient mortality, hospital-acquired condition rates, and core measure performance; patient experience, measured by the Hospital Consumer Assessment of Healthcare Providers and Systems survey; and value, identified as activities that focus on reducing the cost of care while maintaining quality.

## DRIVING INNOVATION AND DISCOVERY

### Research

The key roles of the VC of Research are to connect individuals with specialized expertise, strengthen shared resources, improve faculty research funding success, and remove barriers to conducting research. The department has divided this responsibility between 2 individuals with complementary expertise in basic and clinical research, with translation as a common emphasis (Table 2). They work synergistically on problems common to all types of research (eg, grants administration, infrastructure, core research services, communication, and collaboration), while also addressing issues unique to basic or clinical research.

The primary objectives focus on supporting faculty to excel in scientific discovery by enhancing faculty competitiveness; fostering communication and collaboration; bolstering the research infrastructure; fostering the pipeline of physician-scientists; and expanding opportunities to develop and commercialize discoveries (in collaboration with the VCs for Innovation and Commercialization).

**Grants management.** To accommodate variation in the size and research portfolios of the divisions, a mixed model of grants administration has evolved, with some large divisions operating semi-autonomously while smaller divisions rely on central departmental personnel for pre- and post-award services. Coordination of all grants administrators at the departmental and divisional levels occur through an enhanced research administration and support team. New hires now participate in a common onboarding/training process to become familiar with the grants administration systems and procedures. A “float” research analyst is maintained to rapidly provide competent, trained staff to fill vacancies. Finally, standardized reporting formats are being used for post-award management with real-time information on budget balances, burn rates, and personnel.

**Grant competitiveness.** An intranet-based peer review portal was implemented to facilitate secure document sharing for researchers to engage grant pre-reviewers to

read specific aims or complete grant proposals prior to submission. The committees are typically composed of seasoned faculty with experience on National Institutes of Health study sections.

**Research consultative services for faculty.** The research VCs, with support from the director, engaged and provide funding to the biostatistics epidemiology and data management core to offer up to 20 hours of free research consultative services to all department faculty. This core provides customer-oriented, one-stop research support services that can help faculty navigate other existing institutional resources as well as provide hands-on assistance with research studies, grants, or manuscripts.

**Research retreat.** The annual DOM Research Retreat is an excellent venue to update faculty and trainees on department research, stimulate interdisciplinary communication among clinical and basic scientists, recognize outstanding achievements, and introduce VC initiatives to the faculty.

### Innovation and Commercialization

The department has led the way at the institution in bringing the process of innovation to market into the academic mainstream by creating a first-of-its-kind program called Innovation and Commercialization in Medicine (InCMed), led by 2 VCs in collaboration with Johns Hopkins Carey School of Business. The vision of InCMed is to make the department a nation-leading engine for innovation in health care that can translate discoveries in biomedical science and clinical care delivery into marketable products that add value to the lives of patients. Major goals include helping plan department-wide projects that can lead to clear commercialization pathways; providing networking across the medical campus and with other Johns Hopkins Medicine organizations, such as the Applied Physics Laboratory; providing support for faculty-led projects through teams of entrepreneurial students and postdoctoral trainees to encourage future generations to embrace innovation for health care improvement; and providing guidance for entrepreneurial faculty, including plans to formalize an additional track for academic advancement.

The VC for Innovation and Commercialization (Table 2) is responsible for the overall conduct and success of InCMed and works closely with the VC for Innovation in Healthcare Implementation. In addition, the VC focuses on developing educational programs and the infrastructure required to support biotech and medtech solutions for patient care.

The VC for Innovation in Healthcare Implementation focuses on department innovations that improve the implementation and delivery of medicine, including

commercializable process improvements, educational products and programs, and other faculty-driven initiatives that aim to improve health care delivery. Some of these critical improvements involve nonpatented intellectual property or new business models for which commercialization pathways can be complex.

### Data Integrity and Analytics

The vision for the VC for Data Integrity and Analytics is to innovate, harmonize, and maintain best practices spanning the life cycle of data from acquisition, storage, and analysis to reporting and retention in a manner that fosters excellence in patient care, research, and education. This VC develops tools to protect the privacy of patients and the integrity of science, fosters innovative uses of information technology (IT) infrastructure by all faculty and staff, and infuses data integrity into training at all levels. The VC for Data Integrity and Analytics engages in IT-related governance by disseminating policy messages, facilitating faculty access to analytics resources while also guiding their responsible use, and serving as a member of multiple policy-setting committees at the departmental and enterprise levels.

### DEVELOPING AND EDUCATING FUTURE LEADERS: THE EDUCATION MISSION

This mission area is overseen by a VC for Education, an AVC for Education, a Deputy Director of Education at the JHBMC, and many other education program leads (Table 2). The VC has oversight over all educational programs in the department. The AVC oversees all student and continuing medical education-related activities in the department. The department houses 2 residency programs: Osler Medical Housestaff Training Program at Johns Hopkins Hospital and Johns Hopkins Bayview Internal Medicine Residency Program. While these programs have different structures and separate leadership, their relationship is highly collaborative.

There are several education priorities. First, we ensure that learners (eg, medical students, housestaff, and faculty) in the department have outstanding clinical skills, which includes optimizing ambulatory and inpatient clinical learning experiences with an emphasis on bedside rounding to best promote patient-centered care. Second, we created educational pathways to access the diverse spectrum of careers in health care, ensuring that residents with interest in specific career paths receive accelerated training by experts and thought leaders. Our first 3 implemented pathways in the Osler Program include:

- The Global Health Pathway includes a portfolio of structured opportunities for motivated residents to

conduct clinical and research-based global health rotations in low- and middle-income countries.

- The Patient Safety and Quality Pathway provides residents with unique, guided opportunities to improve patient safety, quality of medical care, and high value care.
- The Scientific Discovery Pathway is composed of a funded physician-scientist pathway (Molina Scholars) in which selected postgraduate year one housestaff receive a commitment from the department for fellowship training, research development, discretionary research funds, and mentored career development.

Our third educational priority is to support faculty to participate in the teaching mission. Effective faculty teaching rewards include compensation model incentive, promotional credit, and enhanced faculty development. Our fourth goal is to develop leaders in ambulatory medicine by enhancing the curriculum, precepting models, IT systems, and engagement of ambulatory subspecialists. Finally, we train residents and students to know the patient as a person, facilitated by the Alike curriculum.<sup>5</sup>

### CONCLUSION

Departments of Medicine are often the largest departments in schools of medicine, resulting in impactful contributions to the tripartite mission. A key to sustaining our impact is to develop a diverse, mission-focused leadership structure that capitalizes on the strengths of faculty and enables us to accomplish all aspects of the academic mission simultaneously. Over the 4 years that this structure has been in place, we have seen tremendous growth in transparency, accountability, and progress. It is our hope that lessons learned from our journey will serve other academic departments of medicine as they seek to optimize efforts across the tripartite mission.

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