

**Ernest Mario School of Pharmacy**  
**Pharmacy Practice and Administration Working Group Report**  
**2018-2019**

**WORKING GROUP OVERVIEW**

**1. Introduction**

The Ernest Mario School of Pharmacy (EMSOP) is recognized as providing one of the most challenging, dynamic, and satisfying programs of study leading to the Doctor of Pharmacy (PharmD) degree. In concert with supportive faculty and staff, students at the School build a foundation for learning that continues long after graduation.

The Department of Pharmacy Practice and Administration focuses on the clinical and regulatory aspects of pharmacy practice. The mission of the Department is to educate student pharmacists to advance the profession of pharmacy through innovative and cost-effective multidisciplinary patient care, collaborative research and scholarship, and community engagement, in a dynamic and complex healthcare environment. Graduating students are equipped with the necessary skills to adapt to a changing healthcare environment. Students are also provided with scientific fundamentals, ethics, and attitudes necessary to adapt their careers to changes in healthcare over their lifetime. This mission supports the overall mission of the EMSOP in four critical areas: teaching, practice, scholarship, and service.

**2. Charge**

Rutgers Biomedical and Health Sciences (RBHS) is launching a formal review of the EMSOP.

The review process should begin with a brief SWOT analysis (strengths, weaknesses, opportunities, threats). The process should be prospective, focusing on the efforts to enhance the quality of the Department and the Health Outcomes, Policy, and Economics (HOPE) program. The process should be collaborative and collegial, and should provide independent and objective feedback, metrics on performance and the achievement of goals, and instill confidence in the faculty.

The report of the Working Group on the Department of Pharmacy Practice and Administration should include the following:

- An overview of the history of the Department and the creation of HOPE as a unit within the Department
- Current organizational charts
- Description of the Department's teaching, research, clinical practice and service responsibilities

- Comparison of selected policies, procedures, faculty resources, etc. with pharmacy practice departments in peer and aspirant pharmacy schools.
- Academic/strategic plans for the Department, including HOPE, outlining planned directions in education, research, and administration for the next five years
- Lists of faculty, research associates, staff, post-docs
- Financial information, including budgets, grant income/expenditures, salary scales, etc.

The Working Group on Pharmacy Practice shall:

- Conduct meetings and interviews with internal and external constituents as needed
- Solicit comments and feedback on the preliminary report from faculty, staff, and students, at its discretion
- Present a final report to the Dean and the Schoolwide Review Committee that is prospective rather than retrospective and includes a resource document and a summary of recommendations for the Department to pursue
- Report should be submitted by January 18, 2019

### **3. Membership**

Mary Bridgeman (*Chair*)  
Christopher Adams (*Vice Chair*)  
Christine Robinson  
Liza Andrews  
Tobias Gerhard  
Megan Maroney  
Rachel Meyers  
Laura Pizzi  
Julie Saleh  
Lucio Volino  
Janice Weinstein (staff)

### **4. Meeting Dates**

October 10<sup>th</sup> (Departmental Strategic Planning Retreat)  
October 12<sup>th</sup> (Initial Working Group Meeting)  
November 13<sup>th</sup> (Strategic Planning Sub-Committee Meeting)  
December 11<sup>th</sup> (Working Group Meeting)  
January 3<sup>rd</sup> (Working Group Meeting)

## 5. Meetings with School Administrators, Faculty, Staff, Students

December 13<sup>th</sup> (Presentation of Departmental Strategic Plan to Deans Barone and Goldin)

December 17<sup>th</sup> (Strategic Planning Meeting/Comment with Students)

January 8<sup>th</sup> (Working Group Meeting for Student Comment)

## DOCUMENTATION REVIEWED

1. EMSOP website for mission, goals, strategic plan, and other pertinent information
2. Self-Study Report of Rutgers, The State University of New Jersey, EMSOP, submitted to the Accreditation Council for Pharmacy Education June 2011
3. Interim Report of Rutgers, The State University of New Jersey, EMSOP, submitted to the Accreditation Council for Pharmacy Education October 2015
4. Websites of peer and peer aspirant Schools of Pharmacy for evaluating structure, mission, vision, department name, and other pertinent information
5. Survey results from polling peer and peer aspirant institutions from the BIG 10 and top 10 National Institutes of Health funded Schools of Pharmacy
6. Survey results from polling faculty members within the Department for determining scholarly and clinical metrics
7. Strategic planning report, RBHS, 2014-2019
8. Strategic planning report, EMSOP, 2015-2020

## BACKGROUND

### 1. History/Context

When John Colaizzi assumed the Deanship of the College of Pharmacy at Rutgers University in 1978, there were five academic departments in the school: the Departments of Pharmacy, Pharmaceutical Chemistry, Pharmacology, Pharmacognosy, and Pharmacy Administration. This had been a traditional departmental structure in colleges and schools of pharmacy since at least 1950. However, by the 1970s, many schools had modified their departmental structure to include a department dedicated to the teaching of the clinical courses and the practice experience rotations, which were mandated by accreditation standards by the late 1970s, as well as to accommodate the offering of the PharmD degree in some of the schools.

As of 1978 at Rutgers, courses related to "clinical pharmacy" and the practice experience rotations were offered through the Department of Pharmacy. The Department of Pharmacy courses were mostly concentrated on subjects that are currently classified as "pharmaceutics," but the department was also responsible at that time for teaching practice-related courses such as "community and

institutional practice," as well as for the practice experience courses which were very minimal, and consisted of occasional visits to area hospitals.

One of the new Dean's early priorities was to initiate a more substantial program of practice experience rotations that included clinically intense rotations in hospitals as well as rotations in community pharmacies and in the pharmaceutical industry for all students. This required the hiring in the early years of the 1980s of the first "PharmD faculty" at Rutgers who assumed the responsibility for the clinical rotations in hospitals and for the greatly expanded practice experience rotation courses. The early PharmD faculty and the practice experience courses, as well as the earliest courses dealing with pharmacotherapeutics were accommodated within the Department of Pharmacy.

Although there were some synergies between the professors who specialized in classical pharmaceuticals and the PharmD faculty, it was also apparent that this was not a viable arrangement. It was also becoming apparent that a non-tenure accruing clinical track was essential for the PharmD faculty who had to maintain viable clinical practices. Eventually, and with significant effort and much negotiation, the faculty and the University administration began to accept the idea of a modernized departmental structure as well as the establishment of a clinical track for faculty outside of the tenure stream. By the mid-1980s, it had also become apparent that the PharmD degree was eventually going to become the only degree for all pharmacy graduates, and with this in mind, the Dean and the faculty planned to initiate the offering of an optional PharmD degree which would be available to B.S. pharmacy graduates who wanted to come back and earn the PharmD in a two-year program that involved a thesis. The offering of the "two-year add-on PharmD" was initiated in 1987. During the 1990s, Students enrolled in the 5-year B.S. program were also able to opt to spend an additional year to graduate with both the B.S. and the PharmD.

With all of these initiatives underway, and with the announcement during the 1990s by the Accreditation Council for Pharmacy Education, that by the year 2000, the 6-year PharmD would be the only permissible degree for pharmacy graduates in the U.S., it became obvious that the existing departmental structure was no longer feasible, and a complete reorganization of the departmental structure became effective. There were also developments among the increasingly research-active basic science faculty that required changes in departmental nomenclature. So by the mid-1990s, the Department of Pharmacology was re-named the Department of Pharmacology and Toxicology, the Department of Pharmaceutical Chemistry was re-named the Department of Medicinal Chemistry, and the Department of Pharmacognosy was re-named the Department of Chemical Biology. The Department of Pharmacy became the Department of Pharmaceuticals, and the Department of Pharmacy Administration became the Department of Pharmacy Practice and Administration. The PharmD/clinical faculty were assigned to the new Department of Pharmacy Practice and Administration, which included

responsibility for the practice experience component of the curriculum as well as for all practice-related courses. During the 1990s, the Departmental structure in the School of Pharmacy at Rutgers became: Pharmacy Practice and Administration, Pharmaceutics, Pharmacology and Toxicology, Medicinal Chemistry, and Chemical Biology.

In recent years, there have been discussions among the faculty and the school and University administration about the possibility of streamlining the departmental structure by combining some of the basic science departments in order to reduce the number of departments. There have also been discussions about shortening the name of the Department of Pharmacy Practice and Administration. To date, however, no such decisions or actions have been made or implemented, so the five-department model remains in effect. The Department of Pharmacy Practice and Administration has grown considerably over the years, and now includes significantly more full-time faculty than any of the other departments in the School combined.

At present, Pharmacy Practice clinical faculty members maintain practice sites at 20 key hospitals and other institutions in Northern and Central New Jersey, including hospitals within the RWJBarnabas Health System, Hackensack Meridian Health System, Atlantic Health System, and others. Primary clinical practice areas include general internal medicine, infectious diseases, critical care, emergency medicine, pediatrics, oncology, and psychiatric pharmacotherapy. In addition, the Department supports a number of postdoctoral training programs, including seven resident positions across five pharmacy residency training programs, the Rutgers Pharmaceutical Industry Fellowship (RPIF) Program which includes more than 200 industry fellows, and fellowship and masters programs in health outcomes research (MS-HOPE). Additionally, a member of the Department's tenure-track faculty serves as director, overseeing the Center for Pharmacoepidemiology and Treatment Science (PETS) at the Rutgers-Institute for Health (IFH).

### **Health Outcomes, Policy, and Economics (HOPE) Program**

In recent years there has been a significant focus on healthcare costs, policies, benefits, and comparative effectiveness in relation to improving patient outcomes. The new US healthcare reform bill resulted in an additional 32 million Americans joining the healthcare system. As a result, there is an increasing need for highly trained professionals who can provide expert analysis and research in health economics, including patient reported outcomes, economic modeling methodologies, and epidemiology. This need extends across the pharmaceutical industry, among healthcare providers, private payers, and within government agencies. The HOPE program, which is based in the Department of Pharmacy Practice in the EMSOP, meets this growing scientific need. Started in 2013 through pilot funds obtained from corporate donors, HOPE now has 2 faculty and 3 staff:

- Laura T. Pizzi, PharmD, MPH – Professor and Director (full time with HOPE)

- Ayse Akincigil, PhD – Associate Professor (part time with HOPE)
- Matthew Ciantar – HOPE Education Program Coordinator (full time with HOPE)
- Katherine Prioli – Health Economics Research Analyst (full time with HOPE)
- Wendy Bara-Cutler – Business Specialist (full time with HOPE)

The HOPE office suite is physically based on the 4<sup>th</sup> floor of EMSOP. A more complete description of the HOPE program and offerings is available in **Appendix 1**.

### **Center for Pharmacoepidemiology and Treatment Science (PETS)**

PETS was established as a multidisciplinary center for pharmacoepidemiology and treatment science at the Institute for Health (IFH) on July 1, 2017. Tobias Gerhard, PhD, FISPE, an Associate Professor in the Department of Pharmacy Practice and Administration, serves as the Center's founding director. The proposal for PETS was developed with broad internal and external consultation over a two-year period involving many of the region's leading pharmacoepidemiologists and other stakeholders from industry, contract research organizations, and Rutgers. Their input and feedback helped shape the PETS concept and will continue to support the ongoing research and training conducted by the Center.

The mission for PETS includes performing high-quality, high-impact, well-funded research related to use and outcomes of therapeutics and diagnostics and initiating an interdisciplinary training program for current and future scientists and professionals in academia, industry, and regulatory agencies. Core faculty members in PETS possess expertise in the study of therapeutics and diagnostics including the analysis of large databases, observational research methods, and intervention studies. While PETS research is not limited to specific clinical areas, current PETS core faculty have interests in drug use, safety and effectiveness of medications and medical devices in vulnerable populations including children, pregnant women, older adults, and patients with mental disorders; causes and treatment of childhood autoimmune diseases; global pharmacoepidemiology and pharmacoepidemiological methods.

PETS aims to bring faculty together from various schools, departments, and institutes at Rutgers as well as colleagues from industry and regulatory agencies with the goal of maximizing the Center's impact on research, educational programming, and the health of communities. Relevant backgrounds and expertise range from epidemiology, biostatistics, and biomedical informatics to clinical medicine, economics, and other social sciences.

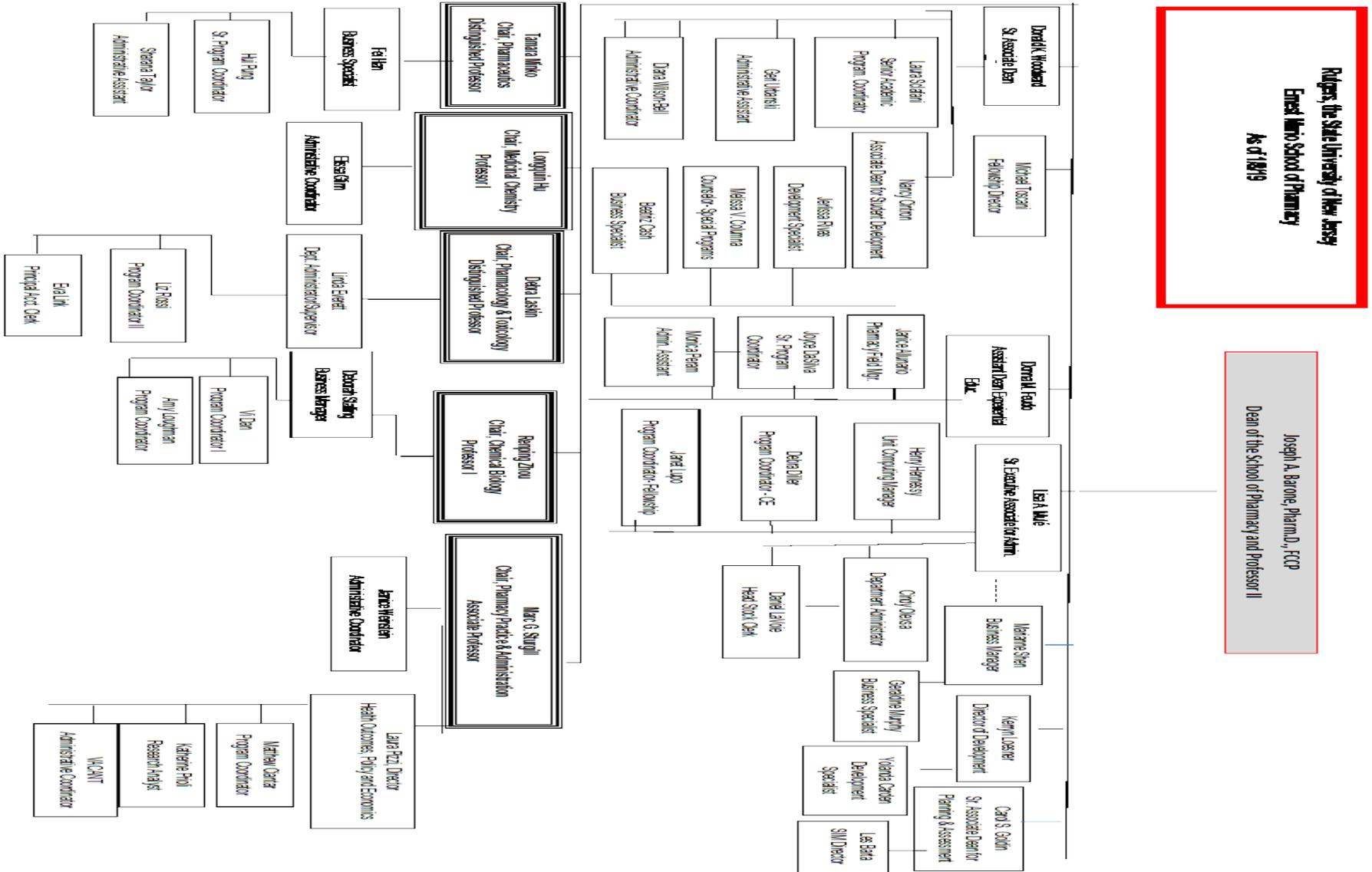
Faculty in the Department of Pharmacy Practice and Administration will be key collaborators for PETS in the coming years. Pharmacy Practice faculty can serve as valuable clinical collaborators in PETS-led studies while PETS core faculty and staff will be able to provide methodological and data-analytic support to studies initiated

by Pharmacy Practice faculty. Last but not least, there are substantial synergies between the areas of interest of PETS and HOPE and we expect very close and fruitful collaboration between the two programs in the coming years.

### **Rutgers Institute for Pharmaceutical Industry Fellowships**

The Rutgers Institute for Pharmaceutical Industry Fellowships (RPIF) Program is the world's largest and most diverse premier industry-based training program that partners with the leading pharmaceutical and biopharmaceutical companies. It is designed for individuals with a Doctorate of Pharmacy to further their experience in the pharmaceutical industry through work experience and clinical research. Deans John Colazzi and Joseph Barone instituted the Fellowship Program in 1984, starting with one fellow at one company, Roche. Over the next 35 years, the program has expanded to over 200 fellows from 20 companies and has nearly 1000 graduates throughout the drug development industry. Currently, the program has fellows both on the east and the west coasts (Genentech and Amgen). Although not directly reporting to the Chair of the Department of Pharmacy Practice, the Pharmaceutical Industry Fellows contribute to the teaching and research initiatives of the Department of Pharmacy Practice. See **Appendix 2** for a more detailed description of the fellowship activities and achievements as related to the activity of the Department of Pharmacy Practice and Administration.

2. Organizational chart (For a list of Departmental committees, charges, and membership, refer to Appendix 3.)



### 3. Mission/Goals

The Department of Pharmacy Practice and Administration aspires to foster an innovative, collaborative, and clinical academic environment for learners as part of a dynamic health science campus. The Department engaged in a Strategic Planning retreat in Fall 2018, and the identified mission, vision, and goal statements arising from this process are developed in alignment with the broad goals of the School and RBHS. The full report and strategic plan for the Department is available in **Appendix 4**.

#### **Mission**

The mission of the Department of Pharmacy Practice and Administration is to educate student pharmacists to advance the profession of pharmacy through innovative and cost-effective multidisciplinary patient care, collaborative research and scholarship, and community engagement, in a dynamic and complex healthcare environment.

#### **Vision**

To promote innovation, interprofessionalism, collaboration, and community engagement as a nationally recognized pharmacy leader in clinical practice, research, and teaching.

#### **Four Pillars to Support and Mission, Vision, and Aspirations of the School:**

- ❖ Teaching
- ❖ Research
- ❖ Clinical practice
- ❖ Service

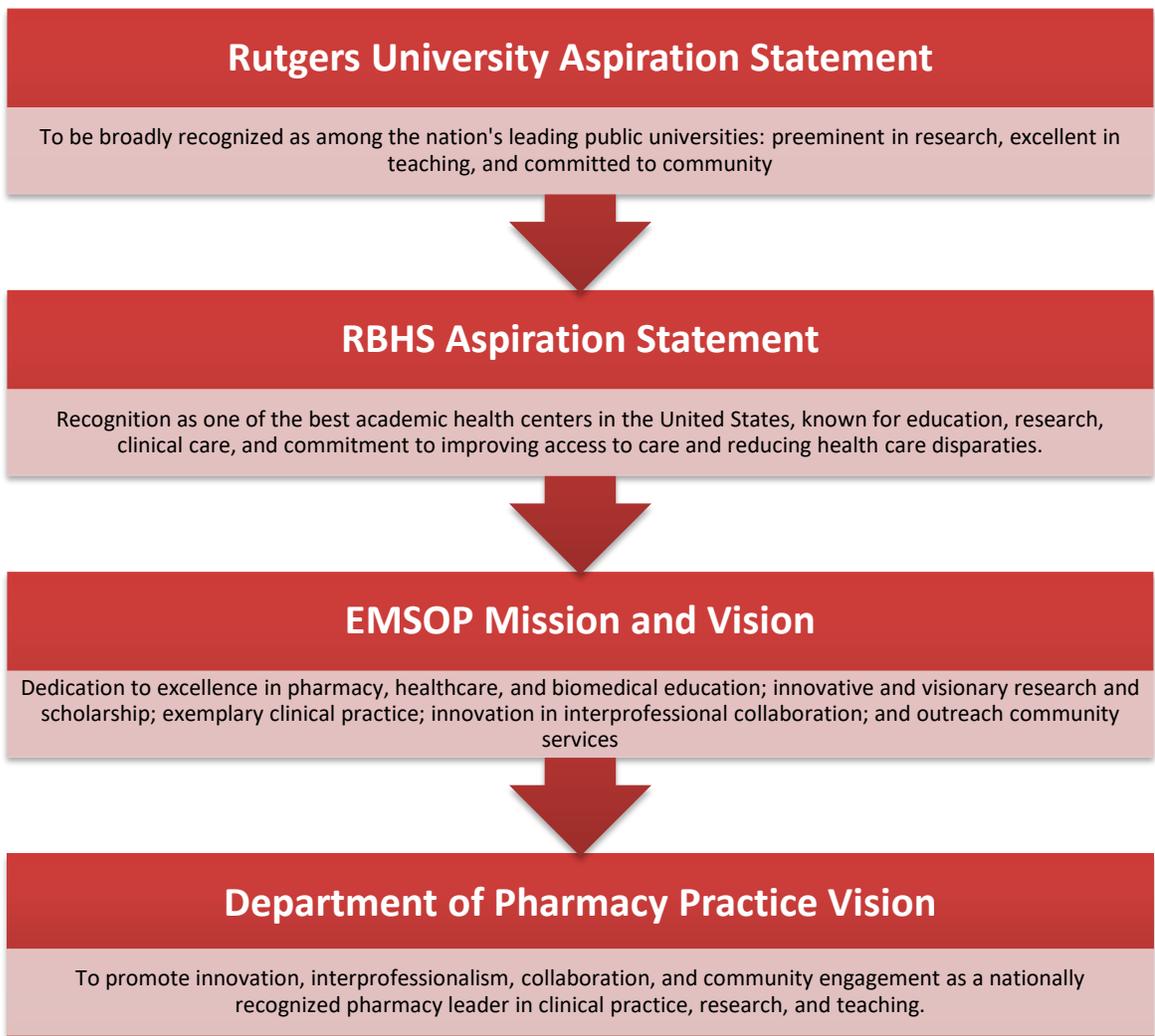
#### **Strategic Goals for the Department**

The Department has identified four strategic goals to support the mission and fulfill the visions and aspirations for growth, while keeping in mind the present School-wide, University-wide, and broader healthcare environments:

1. To improve **academic and clinical collaboration** among faculty, students, and programs within the department, school, and RBHS.
2. To enhance the existing environment and infrastructure in order to **promote faculty development and excellence** in teaching, scholarship, clinical practice, and service.
3. To successfully **integrate interprofessional education activities** within the curriculum to improve educational outcomes for RBHS students.
4. To enhance the **visibility and recognition** of faculty and student initiatives and achievements.

The Department's Strategic Planning process was undertaken with scrutiny of the overarching aspirations, mission, vision, and strategic priorities of the University, RBHS, and EMSOP. For example, elements of the overarching goals of RBHS, including a focus on health-related initiatives that cut across schools/programs and enable RBHS to become greater than the sum of its parts, and integration across Rutgers and coming together of RBHS and other Rutgers faculty to join collective expertise and interests, among other aspects of these larger planning documents, are reflected in the strategic goal statements previously described.

In mapping the Department's vision to those of its parent entities, it should become apparent that the Department's mission, vision, and goals have been constructed with the intention of supporting those respective aspects of operation for the School, RBHS, and University at-large.



**4. Brief Description of the education, research, clinical, and/or community service programs relevant to the mission of this unit/program**

The majority of the faculty members of the Department, specifically those with non-tenure track or clinical appointments, are responsible for supporting three of the four main pillars of the School, including clinical practice, teaching, and service. A smaller portion of faculty members in the Department are tenure-track and thus evaluated for their impact on research, teaching, and service, respectively. For an example of a position description of a clinical faculty member, refer to **Appendix 5**.

**Clinical Practice** – Clinical faculty members are expected to establish a comprehensive clinical pharmacy service or practice at a hospital or practice setting affiliated with Rutgers University’s EMSOP; all clinical faculty are licensed pharmacists registered to practice by the New Jersey State Board of Pharmacy. As clinical practice represents the area of greatest concentrated effort, the expectation is that faculty members are at their sites for the majority of their time, integrating themselves into their respective practice sites. This informs the teaching, scholarly activity, and service of clinical non-tenure track faculty.

**Research and Scholarship** – Research, while not an evaluated criterion for the clinical non-tenure track, presents itself as an opportunity to work collaboratively with tenure-track colleagues in other departments or across schools within RBHS. Further, many clinical faculty participate in clinical research to derive best-practices in medication use at their respective hospitals or practice sites, or may engage in the scholarship of teaching and learning, evaluating best practices related to teaching in the classroom or clinical precepting. For the tenure-track faculty members in the department, research serves as a major component of evaluative criteria for reappointment and promotion. Additionally, there is a greater emphasis on securing research funding for tenure-track faculty unlike for those in the clinical track.

**Teaching** – For the clinical faculty members, the majority of teaching experience occurs in the experiential setting, with students precepted by faculty members who are integrated into practice sites across the state. Faculty members participate in didactic teaching at the School in the therapeutics courses and electives based on their areas of specialty; a majority of these courses are team-taught and teaching is shared to minimize faculty time away from practice sites as much as possible. Clinical and tenure-track faculty members alike have been integral in supporting the process of curricular revision the School has been working through, implemented starting in Fall of 2017.

**Service** – Service for both tenure- and non-tenure track faculty members encompasses committee work at the practice site, departmental, school, or university-wide, as well as service to the profession of pharmacy and the community at large. Faculty work in collaboration with students, including serving as preceptors providing oversight for community outreach events; student

organization advisement; mentorship and academic advising; facilitating and overseeing research initiatives; and many other ways to support the student experience. Members of the Department are engaging with state- and nation-wide initiatives and serve on panels, councils, boards, and other entities to inform health policy throughout New Jersey and the national and international communities.

## **5. Academic plans – outlining plans/directions in education, research, and administration for the next three years**

With the growth of the Department resulting in an enhanced clinical presence at hospitals and healthcare sites around the state; the expansion and inclusion of HOPE, PETS, and RPIF; the formation of RBHS, which creates ample opportunities for interprofessional education and practice; and the school-wide roll out of a new curriculum starting in Fall 2017, there are a number of initiatives the Department is involved with on an ongoing basis. Over the next three years, the Department intends to work toward the strategic goals previously outlined while continuing to build an infrastructure that supports faculty success in the pillars of clinical practice, research, teaching, and service. These plans have developed in concert with input from student stakeholders, faculty, staff and the administration of the School.

### **Education**

The Department of Pharmacy Practice and Administration will continue to lead the School's major curricular revision to an integrated, modular design focused on active learning and innovative teaching methodologies. During the next three years, we plan to accomplish the following objectives:

- (a) Complete the introduction of the new PharmD curriculum, along with inter- and intra-departmental faculty-led assessment of course and overall curricular design and function;
- (b) Increase faculty participation in teaching-intensive components of the curriculum, particularly the five integrated Pharmacotherapy Assessment Skills Series (iPASS) skills components, resulting in a more even distribution of didactic teaching responsibilities;
- (c) Create a Departmental staff position to coordinate and refine varied components of the curriculum (e.g., week-to-week timing and progression of lecture, iPASS, simulation, and related topics);
- (d) Establish continuous and ongoing assessment of all components of the curriculum, including student evaluations;
- (e) Establish a Departmental Curricular Assessment Subcommittee, which reports to the Schoolwide Curriculum Committee, to interpret assessment results and suggest responses;
- (f) Continue to establish new and improve existing Advanced Pharmacy Practice Experience (APPE) rotation opportunities, including innovative elective rotations (e.g., clinical research, academia, writing, public service, patient/professional advocacy, etc.);

- (g) Redesign the emphasis of Post-Rotational Evaluation and Preparation (PREP) Week, focusing on more mock North American Pharmacist Licensure Examination (NAPLEX) questions, quizzes, and examinations to better prepare new graduates for the NAPLEX examination, and;
- (h) Encourage more Departmental faculty to participate in formal scholarly activities with students, including the Honors Research Program.

## Research

Departmental faculty will continue to be encouraged to engage in scholarly activity, including conducting and publishing research work, whether educational or clinical in nature. During the following three years, the Department plans to accomplish the following objectives:

- (a) Encourage faculty to take full advantage of curricular reform to design and implement educational research aimed at assessing the impact of the new curriculum and its varied components;
- (b) Establish an improved system of research support, both within the Department and in collaboration with the other School departments;
- (c) Implement formal collaborative research seminars with the other School departments (e.g., Pharmacy Grand Rounds, journal clubs, disease topics focused on gaps in current treatment modalities, presentation of research results, reviews of newly approved drugs, etc.);
- (d) Establish formalized Departmental focus or special interest groups (e.g., faculty in pediatrics, critical care, internal medicine), designed to meet on a regular basis and discuss ideas and opportunities for collaboration, and;
- (e) Establish regular research workshops, during which faculty will be encouraged to bring new ideas or existing projects for discussion, feedback, or assistance (e.g., protocol refinement, Institutional Review Board (IRB) application, statistical help, grant sources).
- (f) Evaluate the research infrastructure of the Department, including the interface between the Department and the Honors Research and independent research opportunity offerings, and streamline the information conveyed to students regarding research opportunities.

## Administration

The Department of Pharmacy Practice and Administration has grown substantially in the past five years, currently comprising 61 faculty members. In an effort to increase the support network for our faculty, the Department plans to accomplish the following objectives over the following three years:

- (a) Establish a process to appoint two Departmental Vice-Chairs, who will assist with faculty development (annual performance evaluations, site visits, etc.), reappointment, promotion, and other faculty support needs, and;
- (b) Strengthen the annual process for formal evaluation and site visits, with the goal of assessing each member of the Department annually.

**6. Lists of unit/program faculty, post-docs, resources, accomplishments, other data as appropriate.**

A list of the Department faculty and staff members, including (where applicable) current rank, practice site, and years of service at Rutgers, is included in **Appendix 6**. In addition to faculty and staff members, a full roster of the RPIF fellows that receive post-doctoral appointments through the Department are included in **Appendix 7**.

**FINDINGS**

**1. Achievements (last 5 years)**

As a snapshot of the Department's output and productivity over the past 5 years, a survey of the faculty members conducted as part of the Departmental Working Group Review revealed the following:

The Department of Pharmacy Practice and Administration has added 18 new clinical faculty positions since January 2013, including Oncology with the Rutgers-Cancer Institute of New Jersey in New Brunswick, two Ambulatory Care positions with the Austin Health Clinic in Trenton, Infectious Diseases at Robert Wood Johnson University Hospital in New Brunswick, Emergency Medicine and Critical Care at Saint Joseph's Regional Medical Center in Patterson, Outpatient Psychiatry at Monmouth Medical Center in Long Branch, Critical Care at Capital Health Regional Medical Center in Trenton, and two Ambulatory Care/Population Health positions with RWJBarnabas Health (one in Edison and one in Long Branch).

Departmental faculty members continue to make major contributions to the teaching, service, and scholarly achievements of the School. From January 2013 through 2018, Departmental faculty accounted for the following:

- (a) 448 peer-review publications, including book chapters and published abstracts. The majority of these publications were in pharmacy or medical journals related to the respective faculty member's area of clinical expertise, including journals such as *Pharmacotherapy*, *Blood*, *Pediatrics*, *Critical Care Medicine*, and *Currents in Teaching and Learning*.
- (b) 576 presentations at professional scientific meetings, including posters and platform presentations, at meetings such as the American Society of Health-System Pharmacists Midyear Clinical Meeting, the American College of Clinical Pharmacy Annual Meeting, and the Pediatric Pharmacy Advocacy Group.
- (c) 40 grants totaling \$86,466,342, inclusive of fellowship contracts and agreements (see **Appendix 8**).

It is worth noting that faculty in the department are responsible for the didactic instruction for 20 required courses and an additional 20 professional elective

courses, encompassing approximately 80 credit hours of teaching in the professional curriculum for the first through third professional year students. For students in the fourth professional year of training, of the nine 5-week Advanced Pharmacy Practice Experience rotation cycles (200 hours, 5 credits each), students are required to complete a minimum of three of these experiences with clinical faculty members. Clinical faculty members, on average, serve as preceptors for 15 students per year, accounting for approximately 120,000 experiential hours with faculty members annually. Additionally, numerous faculty members serve as Residency Program Directors or preceptors for pharmacy residents rotating through their service as part of practice site expectations.

When surveyed, faculty members identified major contributions to clinical practice at their respective institutions. As an example of some of the most significant impact clinical faculty members have had on their practice sites over the past 5 years:

- ❖ Established a nursing-driven alcohol withdrawal protocol when in the past the institution had no established protocol or guideline for management
- ❖ Implementation of chimeric antigen receptor (CAR) T-cell program in pediatric patients, requiring significant pharmacy input and guideline development
- ❖ Implementation of Neonatal Sepsis Calculator in the neonatal intensive care unit (NICU)
- ❖ Development of Pediatric Antimicrobial Stewardship Program
- ❖ Conducted research which ultimately helped to create two faculty positions at Henry J. Austin Health Center, a Federally-Qualified Health Center (FQHC) in Trenton, which was a new clinical model
- ❖ Established an alpha-gal drug database for healthcare professionals and patients around the country
- ❖ Implemented the Alternative to Opioids Program at St. Joseph's University Medical Center and recently implemented a buprenorphine dispensing program for severe opioid withdrawal in the Emergency Department
- ❖ Established new practice for tPA preparation by pharmacy for management of acute thromboembolic stroke with improved turnaround times
- ❖ Developed a Pharmacy Based Immunization Program for Hospital Affiliated Pharmacies and trained inpatient and outpatient pharmacists to vaccinate
- ❖ Established and expanded pharmacy practice in the care of solid organ (kidney/pancreas) transplantation across the continuum of care, pre-, peri-, and post-transplant; implemented APPE in Solid Organ Transplant

The clinical talents and expertise of faculty members within the Department have been recognized through local, regional, national, and international awards and recognitions:

- ❖ 2018 Patient Care Provider Award, Next-Generation Pharmacist Awards, Pharmacy Times and Parata Systems
- ❖ 100<sup>th</sup> "Great Catch" in Promoting Patient Safety Award, Robert Wood Johnson University Hospital, RWJBarnabas Health, 2018

- ❖ Rutgers Health Certificate of Recognition for Interprofessional Education, 2018
- ❖ 2018 Bowl of Hygeia Award, New Jersey Pharmacists Association
- ❖ Teacher of the Year 2018, RWJBarnabas-Somerset Family Medicine Residency Program
- ❖ Presidential Citation 2017, Pediatric Pharmacy Advocacy Group (PPAG)
- ❖ Rho Chi Faculty Advisor of the Year, 2017
- ❖ New Jersey Pharmacists Association Lifetime Achievement Award, 2017
- ❖ Outstanding Woman of the Year in Education 2017, Somerset County Commission on the Status of Women
- ❖ New Jersey Health Foundation Excellence in Teaching Award, 2016-2017
- ❖ Donald J. Wernick Academic Achievement Award, New Jersey Pharmacists Association, 2016
- ❖ phactMI Inaugural Leadership Award, 2016
- ❖ Drug Information Association 9th Annual European Medical Communication Workshop, Best Poster 2015
- ❖ New Jersey Health Foundation Excellence in Teaching Award, 2015
- ❖ Ernest Mario School of Pharmacy Alumni Council Alumnus of the Year, 2014
- ❖ Master Educator, Rutgers University Stuart D. Cook, M.D. Master Educator's Guild
- ❖ Preceptor of the Year, New Jersey Society of Health-Systems Pharmacists, 2013

Numerous clinical faculty members within the department hold Board Certification credentials in specialties recognized by the Board of Pharmacy Specialties, including the following:

- ❖ Ambulatory Care
- ❖ Critical Care
- ❖ Geriatric Pharmacy
- ❖ Infectious Diseases Pharmacy
- ❖ Oncology Pharmacy
- ❖ Pediatrics
- ❖ Pharmacotherapy
- ❖ Psychiatric Pharmacy

Finally, a number of faculty members have also been recognized for distinguished and sustained service to national professional organizations representing the pharmacy profession. Several faculty members within the Department have been granted fellowship status in the following organizations:

- ❖ American Pharmacists Association
- ❖ Society of Critical Care Medicine
- ❖ American Society of Consultant Pharmacists
- ❖ National Academies of Practice

## 2. Strengths

As part of a departmental-wide strategic planning process, conducted in September-October 2018, the current strengths of the Department can be summarized as follows:

- ❖ **Faculty** – Having a large, diverse faculty with wide variety of clinical and scholarly interest areas spanning the range of medical subspecialties and fully integrated into meaningful practice sites around New Jersey represents a strong attribute of the Department and a testament to the reputation of the School and clinical excellence. The majority of faculty are practitioners first and foremost, and bring their clinical expertise and talent into the classroom and clinical teaching settings.
- ❖ **Affiliations with healthcare institutions across the state** – Faculty in the department are actively engaging in hospital and practice sites across New Jersey, with settings as diverse as Hackensack University Medical Center in the North to the Henry J. Austin Clinic in Trenton and Monmouth Medical Center to the South. Faculty practices additionally extend beyond the Rutgers-RWJBarnabas affiliation, providing greater opportunities for students to experience a diversity of practice settings as part of their training. Further, clinical faculty are completely integrated into their practice sites, often spending more of their time each week on-site versus on campus. This integration provides students with a real-world perspective of clinical work on their Introductory and Advanced Pharmacy Practice Experiences, as the faculty members are recognized as clinicians with meaningful presence on their respective medical teams and services.
- ❖ **Postdoctoral training experience offerings** – Members of the Department share a strong relationship with the Pharmaceutical Industry Fellowship Program, including faculty working with fellows on scholarly activities related to clinical work or teaching. This is mutually beneficial, in that the faculty find support for research and teaching obligations from the fellows and the fellows, in turn, learn from the faculty about teaching and research to improve their skill sets. Offering nationally recognized and accredited post-graduate pharmacy residency training programs and masters programs in health outcomes research further enhances the visibility of the Department and School across the country and underscores the Department and School-wide commitment to learning, clinical excellence, and innovation.
- ❖ **Reputation** – The Department has a long history of regional and national recognition for scholarly accomplishments and innovation in practice. Faculty members remain on the cutting edge of care and their innovations have been acknowledged through receipt of national awards, fellowship status, and in other ways.

- ❖ **Resources** – From having both a supportive chair and administration; access to a simulation laboratory with an innovative and supportive director; proximity to the Pharmaceutical Industry Fellowship Program, HOPE and PETS programs; a new school environment with state-of-the-art technology to support teaching and collaboration; travel support for attending and representing the Department at regional, national, and international conferences; and access to the opportunities and collaboration across the larger Rutgers University community for professional and personal development, the Department and its faculty have incredible access to supportive resources to ensure success.

### 3. Areas for Improvement

There remain opportunities for enhancing the visibility of the Department across RBHS and across Rutgers, and in the regional, national, and international spaces. These potential present areas for improvement for the practice and operations of the Department can be summarized as follows:

- ❖ **Leveraging post-graduate training programs and other resources** – The number and presence of post-doctoral associates affiliated with the Department, including industry fellowship and residency program participants, represents a tremendous opportunity to expand research initiatives and to better leverage these affiliated trainees in classroom teaching opportunities. Similarly, there remains an opportunity for stronger interface and interaction between PETS and HOPE researchers, faculty, and graduate programs, such as the development of certificate or dual degree programs within the PharmD curriculum. Finally, the proximity of the School and Department relative to the pharmaceutical industry in the state represents another potentially untapped resource for collaboration that may worth further exploration.
- ❖ **Support for clinical faculty in research collaboration and integration across RBHS** – While the creation of RBHS also created a tremendous state-of-the-art healthcare institution, in many ways, the size of the institution may further silo researchers and clinicians alike. A challenge unique to the Department, given the majority of members practice at satellite clinical sites around the state, includes encouraging collaboration even among sub-specialty practitioners; at present, there is no formalized process to promote scholarly collaboration even among faculty members with similar expertise and interest within the Department. Although a number of faculty members within the Department hold adjunct appointments within other schools in RBHS, there remain further opportunities to expand collaborations with medical/dental/nursing/etc. schools, including establishment and expansion of joint faculty appointments. There remain opportunities for expanding

collaboration within the Department, across departments at the School, as well as across RBHS and Rutgers Health.

- ❖ **Support for clinical faculty in teaching collaboration and professional and personal development** – The significant growth of the Department over recent years has rendered the present structure of a singular chair and administrative support staff member inadequate to meet the needs of all faculty to ensure academic success and personal growth in their careers. Establishment of two formalized Departmental vice-chairs to help assist the chair with faculty development, including annual site visit evaluations, annual evaluations between reappointment or promotion evaluations, oversight of formalized research and scholarship collaborations and initiatives, and other aspects of faculty development will help to ensure the success and retention of members of the Department.
- ❖ **Curricular redesign** – Evaluation of the curricular design and the impact on student learning and clinical performance remains a concern of the faculty in ensuring success of the graduates of the PharmD program. The Department and faculty members have a vested interest in ensuring the success of the curricular revision, however, additional infrastructure support, including staff support to coordinate and refine the laboratory and simulation components of the new curriculum, may help to alleviate the burden placed on faculty related to didactic teaching time and preparation necessary for the new laboratory-based courses.

#### 4. Assessment of Goals and/or Strategic Directions

In order to advance the Department and to ensure strategic direction to support the mission and vision of the Department is established, oversight of the strategic planning initiatives and Departmental direction for future initiatives will be evaluated by the Chair, in conjunction with input from the Planning and Development Committee members, as necessary. Measures of success of strategic initiatives may include the following:

- ❖ Further expansion of clinical practice sites and services
- ❖ Faculty retention
- ❖ Number of successful faculty seeking promotion and/or tenure
- ❖ Establishment of departmental vice-chair positions, with assurance of annual faculty evaluation of teaching and clinical service by a senior member of the department
- ❖ Faculty satisfaction with balance of teaching obligations at the school and competing demands at the clinical practice site

## 5. Assessment of Current Operational and Capital Resource Needs

The members of the Department of Pharmacy Practice and Administration are extremely fortunate to have unparalleled resources to support their efforts related to teaching, clinical practice, research, and service; from Information Technology and laptop support on-site at the School, generous start up funds and replacement of hardware every few years, access to the tremendous databases and journals through the Rutgers University's libraries, to travel and support for scholarly dissemination of research on a national and international scale, the faculty and staff are privileged to have these resources at their disposal. The opening of the addition to the existing William Levine Hall in Fall 2017 has helped to further enhance the school-wide community and facilitate faculty, student, and staff relationships. Additionally, as part of the Rutgers University community, faculty members in the Department have full access – and support – to participate in University-wide development programs, workshops in teaching innovation, and other opportunities; many faculty members have taken advantage of these with the full support of the Department and School.

Nonetheless, there remain opportunities for improvement in operational and capital resource allocation. As previously mentioned, the size and scope of the Department, along with the geographic footprint of the various practice sites the clinical faculty are based at, has rendered the expectations for faculty development and day-to-day departmental operations (annual site visits, annual performance reviews, research and service reports, faculty evaluations, student evaluations, faculty reappointments and promotions, etc.) challenging for one person alone to execute. There remain additional areas where operational and/or capital resources may improve the overall function and operation of the Department and efficacy of the faculty:

- ❖ **Establishment of formalized Department Vice-Chairs** – To assist with faculty support, research, and scholarship initiatives to support the overall mission, vision, and goals of the Department as described previously.
- ❖ **Research support staff** – All members of the Department, whether tenure- or non-tenure track, engaging in research could benefit from a centralizing office to support operational issues associated with conducting research (e.g., adjudicating grants, submission of IRB protocol materials, etc.).
- ❖ **Infrastructure to support new educational support technologies** – The School has been increasingly interested and supportive of the incorporation of innovative teaching technologies, including software such as Examssoft, utilization of an electronic medication administration record (eMAR), an electronic student portfolio, and simulation technology. Individual clinical faculty alone who may be coordinating or co-coordinating cannot fully utilize these technologies efficiently and to their fullest capabilities. Thus, there is a need to establish a technological infrastructure to ensure optimal use in providing the technological backbone to support the new curriculum. This is

presently happening for simulation, with the appointment of a director of simulation, however, a director or staff member responsible for the daily operations of the technical and technological aspects of integrating these new technologies is much needed.

- ❖ **Staff support and educational assistance for new curriculum application-based courses** – An unintended or unforeseen consequence of establishment of the new application-based laboratory (iPASS) sequence in the new curriculum has resulted in a need for faculty members involved with these courses to remain on campus for a full-day or more each week to oversee the application-based, hands-on sections of the course. This results in a significant amount of time away from the clinical practice sites devoted to teaching and results in a disjointed experience for the students that faculty may be responsible for on-site at the time. Establishment of an educational support staff position to work with faculty coordinators to ensure the successful operation of these lab courses would alleviate this burden placed on clinical faculty and allow them to focus on their clinical work and teaching more efficiently.

## RECOMMENDATIONS

### 1. Suggested New Opportunities and/or Directions that can be pursued with minimal new resources

In order to support the mission, vision, and goals described in this report, it is evident there are new opportunities that require minimal time, effort, or resources to address; conversely, other infrastructure changes will require more planning, more resources, and a longer timeline to see through to execution.

For the new directions that would further enhance the Department's ability to carry out its goals and support the mission and vision of the School and RBHS, we propose the following priority areas:

- ❖ **Establishment of two Departmental Vice Chair positions** – Working with the current Chair and the Department's Planning and Development Committee, establish defined roles and responsibilities for two Departmental Vice Chair positions, including the establishment of a mechanism for selection/appointment of these individuals along with establishment of terms for serving in this capacity, clear expectations for responsibilities of each role, and mechanism for reporting/briefing the chair on activities. The Chair and Department's Planning and Development Committee will additionally evaluate the current structure of the Department, including responsibilities and appointment of the chairman, to work to determine an optimal infrastructure.

- ❖ **Visibility, branding, department name** – As part of this critical review and the overall departmental strategic planning process, it has become evident that there remain opportunities to enhance the visibility and recognition of faculty and student achievements. From simple fixes such as obtaining faculty member lab coats with the Rutgers-EMSOP logo for recognition by medical team colleagues and patients at each clinical site, to mechanisms for highlighting faculty publications and accomplishments within the Department, School, RBHS, and Rutgers communities, the Department intends to explore opportunities for better highlighting and promotion the excellent work of its faculty members. Similarly, in considering the historical context of the Department’s name, and in surveying peer and peer aspirant institutions across the BIG 10 and top NIH-funded schools of pharmacy, it has become apparent that the very name of the Department should be reevaluated. Most other schools surveyed reported names emphasizing “Pharmacy Practice” or “Pharmacy Science”, as “Administration” may be a remnant from the time of the Department’s establishment in the 1970s.

**2. Suggested Longer-Term Opportunities and/or new Directions that require new operational and/or capital resources.**

In the longer term, the Department intends to work with the Dean’s Office and other Departments across the school to explore those opportunities for enhancing the student and faculty experience that can potentially be shared across Department-lines. Specifically, as these opportunities require the procurement of funds and establishment of job descriptions, it is fully recognized that such positions may not be able to be established within the next year or two, so a goal for the next three years would be:

- ❖ **Establishment of a School-wide research support staff position** to support the needs of all faculty engaging in research and streamlining the processes for adjudicating grants and processes across faculty members.
- ❖ **Establishing an educational support personnel position to provide the necessary infrastructure for successful implementation of new educational technologies**, including the student portfolio, ExamSoft, and electronic medication administration record. This individual might be incorporated under the Director of Simulation Lab, as there is overlap between the simulation and other educational support and design technologies.
- ❖ **Establishment of a staff support and educational assistant position for new curriculum application-based courses**, give that the majority of clinical practice faculty have responsibilities to services and obligations at their practice sites. This support will provide assistance with coordinating application-based laboratory courses (such as those in the iPASS sequence)

and will work with course coordinators to ensure seamless delivery of content.

## APPENDICES

### Appendix 1. Health Outcomes, Policy, and Economics (HOPE) Program

In recent years there has been a significant focus on healthcare costs, policies, benefits, and comparative effectiveness in relation to improving patient outcomes. The new US healthcare reform bill resulted in an additional 32 million Americans joining the healthcare system. As a result, there is an increasing need for highly trained professionals who can provide expert analysis and research in health economics, including patient reported outcomes, economic modeling methodologies, and epidemiology. This need extends across the pharmaceutical industry, among healthcare providers, private payers, and within government agencies. The HOPE program, which is based in the Department of Pharmacy Practice in the Ernest Mario School of Pharmacy (EMSOP) meets this growing scientific need. Started in 2013 through pilot funds obtained from corporate donors, HOPE now has 2 faculty and 3 staff:

- Laura T Pizzi, PharmD, MPH – Professor and Director (full time with HOPE)
- Ayse Akincigil, PhD – Associate Professor (part time with HOPE)
- Matthew Ciantar – HOPE Education Program Coordinator (full time with HOPE)
- Katherine Prioli – Health Economics Research Analyst (full time with HOPE)
- Wendy Bara-Cutler – Business Specialist (full time with HOPE)

The HOPE office suite is physically based on the 4<sup>th</sup> floor of EMSOP.

#### HOPE Education Programs

##### *Masters of Science in Health Outcomes, Policy, and Economics (MS-HOPE)*

Opened in 2014, the MS-HOPE degree is jointly offered between the Ernest Mario School of Pharmacy and the Rutgers School of Public Health. MS-HOPE responds to industry needs and increased demand for trained professionals to conduct research in health economics/outcomes, cost effectiveness, and health policy. Its interdisciplinary curriculum draws on considerable expertise at Rutgers University in economics, data analysis, biostatistics, health policy, and clinical research, and emphasizes the role of pharmaceuticals in the provision of health care. Graduates will have an integrated and comprehensive grounding in health outcomes research, epidemiology, health policy and practice in healthcare.

MS-HOPE is intended primarily for those who are seeking a rigorous, multidisciplinary graduate program in Health Outcomes, Policy, and Economics such as:

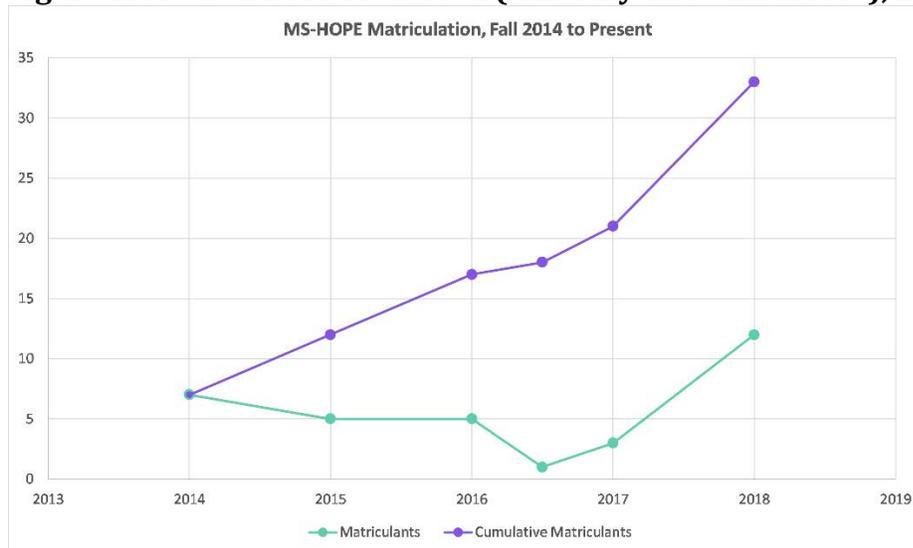
- Professionals working within healthcare settings, biopharmaceutical companies, healthcare plans or healthcare management companies, academic organizations
- Healthcare program administrators
- Professionals and analysts working in provider and payer systems
- Individuals working in public health and government or regulatory positions at the local, state, or federal level
- Healthcare providers and other healthcare system stakeholders from outside of the United States

- Professionals involved in the delivery, organization, and/or financing of health care, or seeking work in the healthcare system

Additionally, applicants with undergraduate training in economics, public policy, statistics and related areas who have two or more years of full-time work experience (ideally in academic, government or private sector healthcare research or delivery) may also be competitive applicants for this program.

MS-HOPE enrollment has noticeably increased in the past two years (**Figure 1**), as prospective students gain awareness of the degree via improved internal and external outreach, word of mouth through current students and graduates, and a dedicated program coordinator who quickly responds to inquiries. As of the Fall 2018, 23 students were enrolled, and there were 13 total alumni. A majority of these alumni (11/13; 85%) successfully attained jobs in the pharmaceutical industry, predominantly in health economics and outcomes research divisions.

**Figure 1. MS-HOPE Matriculation (annually and cumulative), 2014-Present**



### *HOPE Postdoctoral Fellowships*

HOPE currently offers four postdoctoral fellowships in partnership with pharmaceutical industry sponsors (2 slots with GlaxoSmithKline, 1 slot with Janssen, and 1 slot with Allergan). These programs vary from 1-2 years in duration and provide a pathway to industry positions for doctoral graduates who are academically trained in health economics and outcomes research. The HOPE fellows spend a majority of their time working at their industry sponsor site but have a clearly defined part time commitment to academic work being done at the HOPE center.

### *HOPE Certificate Program*

A six course HOPE certificate program was approved by the School of Public Health Curriculum committee in Fall 2018. It will be reviewed by the EMSOP curriculum

committee in early 2018 with anticipated opening in the Summer or Fall of 2019. The certificate program will provide a foundation in epidemiology and health economics.

#### *PharmD / MS-HOPE Dual Degree*

A PharmD / MS-HOPE dual degree is in development with anticipated opening in Fall 2019. The dual degree will be open to eligible EMSOP students who apply for and are accepted into the degree.

#### *PharmD Program*

HOPE supports the EMSOP PharmD program by providing the following teaching, research, and mentorship to pharmacy students:

- Lecture support for Principles of Pharmacoeconomics course (approximately 6 lectures per course offering)
- Lecture support for Pharmacy Benefit Management (1 lecture per course offering)
- Instruction for Independent Study and Honors Research Courses
- Mentoring and Advisement of the Rutgers International Society for Pharmacoeconomics and Outcomes Research (ISPOR) student chapter and participation in an annual international research competition
- Mentoring of Rutgers Academy of Managed Care Pharmacy (AMCP) student chapter's participation in the annual national research competition

#### HOPE Research

HOPE faculty and staff are actively engaged in research in the following areas:

- Applied health economic analyses (cost effectiveness, cost benefit, and cost of illness analyses)
- Economic modeling (budget impact models, decision analytic models)
- Patient-reported outcomes analyses

Under the direction of Dr. Pizzi, HOPE designs and executes HEOR analyses alongside prospective studies as well as perform retrospective analyses of major claims databases utilizing modern tools such as R, SAS, and SQL. HOPE develops budget impact and cost-effectiveness modeling using Excel/VBA, TreeAge, and R/Shiny. Sponsors are diverse (federal, pharma/device companies).

HOPE collaborates with scientists and clinicians both internal and external to Rutgers, and stakeholders from industry, health plans, and academia to answer the most pressing questions about healthcare value today. HOPE research is published in leading scientific journals as well as presented at national and international conferences.

Current research foci include:

- Aging and dementia
- Diabetes
- Depression
- Ocular disease, including glaucoma, diabetic retinopathy, and cataracts
- Infectious diseases and vaccine education programs

- Blood products, including plasma and platelet technologies
- Preterm birth

Current research partners (with whom we have active funded grants or grant proposals in development) are shown in **Table 1**.

**Table 1. HOPE Internal and External Research Partners**

Internal Partners	External Partners
Institute for Health, Health Care Policy, and Aging Research (IHHCPAR)	Thomas Jefferson University
Rutgers University Biostatistics and Epidemiology Service (RUBIES)	Wills Eye Hospital
Environmental and Occupational Health Sciences Institute (EOHSI)	University of Connecticut
New Jersey Medical School	Johns Hopkins University
Rutgers School of Social Work	Drexel University
Center for Pharmacoepidemiology and Treatment Sciences (PETS)	Brown University
Rutgers School of Public Health	University of Rochester Medical Center
	GlaxoSmithKline
	Cerus Corporation

HOPE financially contributes to Rutgers’ academic license for the Truven commercial healthcare claims dataset and Truven Medicaid dataset. These datasets are housed at the IHHCPAR but available to use for HOPE students’ capstone research, HOPE faculty’s pilot research, and HOPE faculty’s funded research (in which case a separate licensure fee applies).

Outlook

As HOPE continues to gain traction, we anticipate growth in the graduate programs as well as in funded research. We will also be focused on executing a large multicenter prospective cost of illness study in zoster eye disease (funded by GlaxoSmithKline). HOPE faculty (Dr. Pizzi) are participating in two grants already under review (Institute for Health Roybal Grant and Brown University R01). A HOPE-led federal proposal is in the planning stages for 2019 submission as is a foundation-sponsored center grant. HOPE is also slated to participate in pilot projects on the cost effectiveness of environmental interventions, funded through the incoming EOHSI center grant. New proposals are in development with other partners including the School of Public Health and School of Social Work.

Given the significant US and global emphasis on understanding the value of health-improving interventions and implementing payment models that reward for high value treatments, HOPE is an important asset to EMSOP and Rutgers University as a whole. It will be of benefit to the leadership to showcase HOPE, especially its strengths related to workforce training for careers in health economics and outcomes research, and scientific expertise in applied health economic analyses.

Key to the success of HOPE will be capacity building to meet the growing demand for this expertise. HOPE is presently in the final stages of recruitment for a research track Assistant Professor, and a Research Program Coordinator. In order to financially support these positions in the short term (i.e., the next 2 years), it will be beneficial to co-fund positions with other departments and/or seek special funds when available (i.e., the Barnabas fund to support high value faculty hires). HOPE's current office suite is sufficient to house these new hires, though HOPE fellows will likely need to work from the shared office space in the Department of Pharmacy Practice suite. However, document storage has become a challenge as we no longer have enough space to fit supplies or the study files we are contractually required to retain for research grants.

HOPE will also need to meet the challenges of a painfully complicated grant administration and financing system which all too often consumes far too much time and puts projects at risk of not getting funded or losing money after funding due to accounting problems. In addition, given that HOPE's funders include healthcare innovators from the biopharmaceutical and device sectors, the timeline during which they seek to complete health outcomes and economic studies is often far shorter than can be met by HOPE. This presents potential lost opportunity under the current system, or conversely one could view it as a new opportunity to develop a nimbler operating model for HOPE. In addition, HOPE will need to maintain unfettered access to the Truven databases to meet the increasing need for MS-HOPE capstone projects. We will continue to cultivate relationships with other Rutgers data partners during the next year.

### Summary

In summary, the HOPE program makes significant contributions to the Department of Pharmacy Practice, EMSOP, and the University as a whole. Though HOPE is a relatively new enterprise, there is tremendous US and global interest in the disciplines of outcomes research and cost effectiveness research. As a premier biomedical institution, Rutgers not only needs HOPE's expertise but is poised to shine from it, if this enterprise can capitalize on heightened interest and successfully overcome the challenges posed by funding, staffing, and operational systems moving ahead.

## Appendix 2. Rutgers Institute for Pharmaceutical Industry Fellowships

The Rutgers Institute for Pharmaceutical Industry Fellowships (RPIF) Program is the world's largest and diverse premier industry-based training program that partners with the leading pharmaceutical and biopharmaceutical companies. It is designed for individuals with a Doctorate of Pharmacy to further their experience in the pharmaceutical industry through work experience and clinical research. Deans John Colazzi and Joseph Barone instituted the Fellowship Program in 1984, starting with one fellow at one company, Roche. Over the next 35 years, the program has expanded to over 200 fellows from 20 companies and has nearly 1000 graduates throughout the drug development industry. Currently, the program has fellows both on the east and the west coasts (Genentech and Amgen).

The RPIF Program has helped drive the demand for the growing number of employment opportunities for clinical pharmacists in industry by:

- Promoting a consistently high level of program quality, training, and outcomes across the spectrum of fellowships at multiple sponsor companies
- Coordinating the interface between key fellowship stakeholders, including preceptors, fellows, and alumni
- Fostering innovation and scholarly endeavors between Rutgers and its industry partners through the activities of participating fellows, including teaching, publications, seminars, and research

Because of its close proximity to and long-lasting partnerships with the nation's leading drug manufacturers, the Ernest Mario School of Pharmacy is uniquely capable of providing its students and fellows with exposure to the pharmaceutical and biopharmaceutical industries.

By the numbers...

- For 2018, the RPIF Program has established the first physician fellowship, with the placement of Dr. Grace Crocket at BMS, and there is hope to expand this program within the Institute.
- For 2019, the class size is projected at 228 industry fellows and the addition of a new company, Nevakar, to the family of companies. At the December 2018 meeting of the American Society of Health-System Pharmacists, where fellowship recruitment currently takes place, the Program had over 730 candidates come and interview for approximately 118 positions.
- Approximately 70% of the graduates are hired by the company they complete their fellowship training with. Others are employed in many different settings (FDA, CRO's, consulting companies, academia, investment banks).

Fellowship class composition:

- The program has representation from 61 schools of pharmacy throughout the United States.
- EMSOP students comprise approximately 20-25% of the incoming fellowship class.

- Approximately 15%-20% of the fellows have additional degrees beyond the Pharm.D. (ex., MBA, MS, PhD, JD, etc.) and several are residency trained as well.

Over the course of the past 7 years, Rutgers Institute for Pharmaceutical Industry fellows have collaborated with other students, Ernest Mario School of Pharmacy faculty, and company preceptors to average between 25-30 posters per year and 3-5 publications per year. Fellows also plan and execute an average of 4 continuing education activities/year collaborating with Ernest Mario School of Pharmacy Continuing Education Office.

Within the Department of Pharmacy Practice and Administration at the Ernest Mario School of Pharmacy, the RPIF fellows fulfill teaching requirements as part of their fellowship experience. Fellows teach either on-going or as periodic lectures:

- Pharmaceutical Industry
- Physical Assessment
- Pharmacy communications
- Pharmaceutical Economics
- Acute Care
- Leadership in Pharmacy
- Byrne Seminar- Pediatric Drug Research
- Hospital Practice Management
- Community Practice Management
- iPASS
- Clinical Pharmacokinetics
- Poison Management and Drug Abuse

RPIF fellows are also involved in the student organizations as presenters/workshop leaders:

- International Society for Pharmacoeconomics and Outcomes Research (ISPOR)
- American Pharmacists Association-Academy of Student Pharmacists (APhA-ASP)
- Industry Pharmacists Organization (IPhO)
- Drug Information Association (DIA)
- American College of Clinical Pharmacy (ACCP)
- Academy of Managed Care Pharmacy (AMCP)
- Ernest Mario School of Pharmacy's Annual Speed Networking Activity

### Appendix 3. Departmental Committees 2018-2019, Pharmacy Practice and Administration, Current as of September 17, 2018

#### DEPARTMENT PLANNING AND DEVELOPMENT COMMITTEE

**Chairs:** Julie Saleh, Mary Bridgeman, Christopher Adams

**Members**

Liza Andrews	Jimmy Gonzalez
Luigi Brunetti	Stacy Hardeo
Gregory Cabanas	Enid Morales
Saira Chaudhry	Navaneeth Narayanan
John Colaizzi	Krina Patel
Muhammad Effendi	Mary Wagner

**Charges:**

1. Develop and maintain a strategic plan for the Department.
2. Coordinate the Departmental strategic plan with those of the School and University.
3. Coordinate Departmental planning with School-wide strategic planning activities.
4. Develop and maintain an updated Department Mission Statement.

#### EXPERIENTIAL PROGRAM DEVELOPMENT COMMITTEE

**Chairs:** Krina Patel, Mei Liu, Saira Chaudhry

**Members**

Janice Allunario (ex officio)	Caitlin McCarthy
Tom Bateman	May Nguyen
Caitlyn Bloom	Kate Opsha
Kristin Bohnenberger	Joy Park
Mary Bridgeman	Ammie Patel
Lindsey Brust-Sisti	Ciera Patzke
Deepali Dixit	Ashmi Phillips
Donna Feudo (ex officio)	Pooja Shah
Jackie Johnston	Siddharth Swamy
Geeny Kim	Danielle Tompkins
Katelin Kimler	Cecilia Wong
Michael Mauri	

**Charges:**

1. Assess all experiential rotations and suggest improvements to the Curriculum Committee.
2. Identify and implement strategies to ensure appropriate continuity of experiential objectives between introductory and advanced practice experiences.
3. Coordinate long range planning for Pharm.D. experiential rotations.
4. Identify and coordinate preceptor development opportunities.

## **FACULTY DEVELOPMENT COMMITTEE**

**Chairs:** Rupal Mansukhani, Katelin Kimler

**Members** Mary Bridgeman Anita Siu  
Luigi Brunetti Michael Toscani  
Tobias Gerhard Lucio Volino  
Evelyn Hermes- Mary Wagner  
DeSantis Mike Wynd  
Saira Jan  
Christine Robinson

**Charges:**

1. Plan and coordinate quarterly faculty development seminars; last week of January, April, July, and October of each year.
2. Coordinate (with Curriculum) the completion of peer teaching evaluations for all faculty coming up for reappointment or promotion each academic cycle.
3. Coordinate the Faculty Mentoring Program for junior faculty.

## **FACULTY SEARCH COMMITTEE**

**Chairs:** Evelyn Hermes-DeSantis, Deepali Dixit, Germin Fahim, Siddharth Swamy

**Members** Christopher Adams Humberto Jimenez  
Ashmi Philips Jackie Johnston  
Patrick Bridgeman Megan Maroney  
Luigi Brunetti Steven Nerenberg  
Maria Cardinale May Nguyen  
Michael Casias Krina Patel  
Saira Chaudhry Christine A. Robinson  
Deepali Dixit Pooja Shah  
Muhammad Effendi Anita Siu  
Donna Feudo (ex-officio) Cecilia Wong

**Charges:**

1. Develop faculty recruitment strategies with input from the faculty.
2. Conduct faculty searches.
3. Assess and recommend candidates to the Dean.
4. Prepare ads for faculty, fellow, and resident recruitment.
5. Interface with ASHP staff before and during the Midyear Clinical Meeting to assure smooth recruitment.
6. Coordinate space needs.
7. Participate in activities related to recruitment for faculty, fellows and residents.

**Appendix 4. Department of Pharmacy Practice and Administration Strategic Plan, 2019-2022**



**Department of Pharmacy Practice and Administration  
Ernest Mario School of Pharmacy  
Rutgers, The State University of New Jersey  
Strategic Plan 2019-2022**

The Department of Pharmacy Practice and Administration aspires to foster an innovative, collaborative, and clinical academic environment for learners as part of a dynamic health science campus. The Department engaged in a Strategic Planning retreat in Fall 2018, and the identified mission, vision, and goal statements arising from this process are developed in alignment with the broad goals of the School and Rutgers Biomedical and Health Sciences (RBHS).

Specifically, the overarching goals of RBHS include:

RBHS aspires to be recognized as one of the best academic health centers in the United States, known for its education, research, clinical care, and commitment to improving access to health care and reducing health care disparities. This will be achieved through dedication to elevated standards of excellence and innovation, interprofessional collaboration and integration, and deep engagement with the community.

The current School-wide mission specifies:

The Ernest Mario School of Pharmacy is dedicated to excellence in pharmacy, healthcare and biomedical education; innovative and visionary research and scholarship in the pharmaceutical, biomedical, social, and clinical sciences; provision of safe and effective pharmaceutical care through exemplary clinical practice; innovative and effective interprofessional collaboration in education, research, and clinical practice; and outreach community services that address the needs of the citizens of New Jersey and society at large.

The Department, realizing the logistical concerns associated with having a majority of clinical non-tenure track faculty dispersed at hospitals throughout the state, implemented a strategic planning process that was intentionally multifaceted and multimodal, providing ample opportunities for faculty, students, and other stakeholders to provide feedback and input in the development of mission, vision, and strategic goals. The Departmental Planning

and Development Committee worked closely with staff from the Rutgers Center for Organization Leadership, who helped to provide direction in conducting an environmental scan, in co-facilitating the Departmental Strategic Planning Retreat, and in follow-up action planning post-retreat to ensure the identified goals would be attainable.

The Department Chair, in conjunction with the activity and input of the Department's Planning and Development Committee, will oversee the follow-through on the progress toward implementing strategies to demonstrate achievement of strategic goals. The Planning and Development Committee will be charged with the action planning development process, the oversight of achievement of plan implementation, and to communicate ongoing progress and activities aligned with the Department's goals, mission, and vision. Ultimately, budget, university and healthcare climate, and other factors outside of the Department's control may influence the ability to attain these goals, however, the Departmental Planning and Development Committee will oversee and modify strategic goals as necessary to ensure the overall mission and vision are supported by Departmental activity.

As an initial step in the planning process, the Department engaged in conducting an environmental scan, including an assessment of the Strengths, Weaknesses, Opportunities, and Threats (SWOT) affecting the Department's daily function, included in full in **Appendix 1**.

### **Mission**

The mission of the Department of Pharmacy Practice and Administration is to educate student pharmacists to advance the profession of pharmacy through innovative and cost-effective multidisciplinary patient care, collaborative research and scholarship, and community engagement, in a dynamic and complex healthcare environment.

### **Vision**

To promote innovation, interprofessionalism, collaboration, and community engagement as a nationally recognized pharmacy leader in clinical practice, research, and teaching.

### **Four Pillars to Support and Mission, Vision, and Aspirations of the School:**

- ❖ Teaching
- ❖ Research
- ❖ Clinical practice
- ❖ Service

### **Strategic Goals for the Department**

The Department has identified four strategic goals to support the mission and fulfill the School-wide and RBHS-wide visions and aspirations for growth, while keeping in mind the present School-wide, University-wide, and broader healthcare environments:

1. To improve **academic and clinical collaboration** among faculty, students, and programs within the department, school, and RBHS.

2. To enhance the existing environment and infrastructure in order to **promote faculty development and excellence** in teaching, scholarship, clinical practice, and service.
3. To successfully **integrate interprofessional education activities** within the curriculum to improve educational outcomes for RBHS students.
4. To enhance the **visibility and recognition** of faculty and student initiatives and achievements.

### **Strategic Themes, Action Planning, and Next Steps**

The Department has identified potential preliminary strategies for outlining how the strategic goals will be fulfilled. NOTE: Strategies were expressed during the strategic planning process; further refinement and action planning will occur under the direction of the Department's Planning and Development Committee.

1. To improve **academic and clinical collaboration** among faculty, students, and programs within the department, school, and RBHS.
  - ❖ Establish a centralized database for tracking clinical initiatives of its faculty
  - ❖ Explore the establishment of a school-based hospital surveillance data network
  - ❖ Create a more streamlined pathway for students to identify and apply for research opportunities
  - ❖ Form research interest working groups surrounding the clinical sub-specialties and interests to foster enhanced research collaboration and scholarly output
  - ❖ Evaluate the potential for expansion of adjunct faculty appointments, both for faculty **external** to the Department or School (e.g., within the Medical School, Nursing School, or School of Public Health) and for faculty **within** the department (e.g., more faculty holding adjunct appointments within the Medical School, School of Public Health, etc.)
  - ❖ Expansion of select classes or electives taught by members of the department to students from multiple schools within Rutgers or specifically, RBHS
  - ❖ Further integration of Health Outcomes, Policy, and Economics (HOPE) resources to promote funded research with members of the clinical faculty
2. To enhance the existing environment and infrastructure in order to **promote faculty development and excellence** in teaching, scholarship, clinical practice, and service.
  - ❖ Evaluate and determine effective faculty/staff ratio to support enhanced productivity
  - ❖ Conduct needs assessment evaluating:
    - Faculty time (What tasks are people doing and how much time do they spend?)
    - Time study (i.e., mimic the process that is done for residency or transplant)
  - ❖ Evaluate the structure and establishment of two departmental Vice-Chair positions
    - Departmental growth and size approaching 65 faculty members necessitate additional infrastructure support for the Chair to ensure optimal department performance

- Evaluation and establishment of the departmental Vice-Chairs would help to promote faculty development, assessment, and visibility
  - Oversee faculty mentoring support (and overhaul program for mentoring)
  - Evaluate faculty needs and areas for development
  - Oversee establishment of formal special interest groups within the department to foster collaboration (identify persons outside the department as needed, outline expectations for routine meetings, etc.)
  - ❖ Explore hiring and utilization of an educational design/support staff position to help oversee and coordinate laboratory activities associated with the Integrated Pharmacotherapy Assessment Skills Series and the sterile compounding courses
  - ❖ Leverage and support training/research expertise of the Center for Pharmacoepidemiology and Treatment Science (PETS) and HOPE to develop and support overall faculty development
  - ❖ Work with experiential office and committee to evaluate affiliation agreements/ACPE expectations for experiential training; ensure equitable student distribution and faculty workload
  - ❖ Establish a point person for addressing educational design and technological infrastructure issues
3. To successfully **integrate interprofessional education activities** within the curriculum to improve educational outcomes for RBHS students.
- ❖ Survey students and faculty to determine areas of interest and experience related to interprofessional education
  - ❖ Establish goals and metrics for interprofessional education activities
  - ❖ Inventory current interprofessional education activities and benchmark faculty involvement to identify areas for further expansion and educational opportunities
  - ❖ Develop an evaluation process to measure impact of interprofessional education activities for each professional class year and as students progress throughout the professional curriculum
  - ❖ Increase communication to students about interprofessional expectations and opportunities
  - ❖ Obtain administrative support for coordination of interprofessional education activities
  - ❖ Review content of current and in-development interprofessional education activities to ensure ACPE standards are met
  - ❖ Review accreditation standards of other RBHS schools to strategically plan new interprofessional education activities that align with interests/goals/curricular standards
4. To enhance the **visibility and recognition** of faculty and student initiatives and achievements.
- ❖ Establish goals for visibility strategies (e.g., increase recruitment, increase success at faculty advancement, support and enhance reputation of school)
  - ❖ Implement social media strategy, working in conjunction with the Student Affairs Office

- ❖ Identify local media outlet opportunities (e.g., NJ.com or NJ12TV) to promote SIM lab, drug info./counseling, and increase external stakeholder awareness of departmental activities
- ❖ Enhance web presence of the Pharmacy Practice and Administration website with a site administrator who can update site regularly
- ❖ Identify branding opportunities, such as faculty lab coats at practice sites (apparel)
- ❖ Explore mechanisms for recognition for faculty and student achievements, including implementation of a departmental newsletter
- ❖ Identify opportunities to increase visibility of faculty accomplishments in various existing Rutgers publications/communications
- ❖ Develop a process to best match the type of item we are promoting (initiative, publication, etc.) to target audience and media type to optimize opportunity
- ❖ Establish formalized reporting mechanism/process for initiatives/achievements, etc.
- ❖ Recruit students to create, support, and evolve visibility strategy

**Appendix 1.**

**SWOT Analysis: Department of Pharmacy Practice and Administration, October 2018**

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>❖ Large, diverse faculty with wide variety of clinical and scholarly interest areas</li> <li>❖ Industry fellowship and residency programs</li> <li>❖ Clinical talent and expertise; commitment to clinical practice and teaching</li> <li>❖ Reputation</li> <li>❖ Supportive chair and administration</li> <li>❖ Affiliation with healthcare institutions across the state</li> <li>❖ Addition of simulation lab and director</li> <li>❖ Faculty integration into clinical practice site</li> <li>❖ HOPE program</li> <li>❖ PETS program</li> <li>❖ Faculty willingness to collaborate</li> <li>❖ New curriculum</li> <li>❖ New school environment</li> <li>❖ Interprofessional education positioning within RBHS virtual campus</li> <li>❖ Relationships with pharmaceutical industry</li> <li>❖ Emphasis on clinical experience with faculty</li> <li>❖ Some department members with lots of experience in research, teaching, etc.</li> <li>❖ Access to data and expertise from clinical practice sites</li> <li>❖ PharmD/MD program</li> <li>❖ Resources at Rutgers to professionally develop teaching (SIM lab, computer labs, technology)</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>❖ Inconsistent processes for ensuring equitable allocation of APPE students across faculty</li> <li>❖ Lack of time/opportunities to collaborate</li> <li>❖ Underutilized clinical expertise for research</li> <li>❖ Distance; faculty based at clinical sites vs. identifying as members of Rutgers community</li> <li>❖ Class size and student:faculty ratio</li> <li>❖ Competition with other Pharmacy School faculty for positions/presence within state pharmacy associations</li> <li>❖ Conflicting/competing demands for faculty time</li> <li>❖ Relationships with clinical sites and competing expectations</li> <li>❖ Inadequate administrative/grant/faculty development support/resources</li> <li>❖ Rutgers bureaucracy</li> <li>❖ Dearth of student research opportunities</li> <li>❖ Lack of cross coverage at clinical sites</li> <li>❖ Lack of protected time for non-clinical activities</li> <li>❖ No standardization of total (didactic and experiential) teaching and load, creating inconsistent responsibilities</li> <li>❖ Lack of informatics faculty</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>❖ Leverage industry fellowship and residency programs</li> <li>❖ Expand affiliations with healthcare institutions</li> <li>❖ Support clinical faculty in research collaboration</li> <li>❖ Collaborations with medical/dental/nursing/etc. schools, including establishment and expansion of joint faculty appointments</li> <li>❖ Expanding opportunities for collaboration within RBHS and Rutgers Health</li> <li>❖ Evaluation of the impact of curricular redesign</li> <li>❖ Collaboration/grant funding with/from pharmaceutical industry</li> <li>❖ Involvement with RBHS- and state-wide initiatives related to pressing medical issues, including opioid use and medical cannabis</li> <li>❖ Better and strategic involvement with state and national pharmacy societies</li> <li>❖ School-based faculty</li> <li>❖ Improved teaching assessment (SIRS and peer evaluations)</li> <li>❖ Leverage PETS and HOPE research and graduate programs (certificate, dual degree with Pharm.D.)</li> <li>❖ Development of innovative post-graduate training</li> <li>❖ Increased development for outpatient sites</li> <li>❖ Basic sciences collaboration</li> <li>❖ Establishment of more tenure-track opportunities or conversion of clinical track-to-tenure track faculty</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>❖ Erosion of pharmacy as a discipline</li> <li>❖ Shrinking job market</li> <li>❖ Drop in applications</li> <li>❖ Competition from other schools of pharmacy for clinical sites, positions within state organizations, etc.</li> <li>❖ Competition for resources within RBHS</li> <li>❖ New curriculum (increased demands for teaching time vs. clinical site responsibilities)</li> <li>❖ Most important threat – establishing standard and realistic expectations and guidelines for service to the sites; balancing practice research (“need for tracks or focus?”); expectation that all 4 pillars are equal for all faculty</li> <li>❖ High drug prices tarnishing reputation of pharmacy</li> <li>❖ Inequality of salary/salary compression</li> <li>❖ Higher pay of hospital-based positions</li> <li>❖ Lack of presence in South Jersey</li> <li>❖ Lack of clinical pharmacy presence in NJ hospitals</li> <li>❖ Complicated healthcare system necessitates pharmacists to have an ongoing understanding of evolving policies and costs affecting the care they provide</li> </ul>

**FRAMING NOTES: SWOT analysis encompasses holistic perceptions of the present environment that can affect our department’s work without regard to control over these factors.**

**ABBREVIATIONS UTILIZED: HOPE = Health Outcomes, Policy, and Economics; PETS = Center for Pharmacoepidemiology and Treatment Science; APPE = Advanced Pharmacy Practice Experience**

## Appendix 5. Sample Job Description, Clinical Assistant Professor

### POSITION DESCRIPTION

<b>Title</b>	<b>Clinical Assistant Professor</b>
<b>Reports To</b>	Chair, Department of Pharmacy Practice and Administration
<b>Reappointment/Promotion Criteria</b>	Teaching, Clinical Practice, and Service
<b>Position Summary</b>	<p>A registered pharmacist who establishes a comprehensive and dynamic clinical pharmacy service and practice at a Rutgers University Ernest Mario School of Pharmacy (EMSOP)-affiliated hospital or other healthcare site. A Clinical Assistant Professor is expected to serve as a preceptor for EMSOP Doctor of Pharmacy (Pharm.D.) students through an affiliation agreement between his/her healthcare site and EMSOP. This individual is also responsible for related educational, research and patient care activities to enhance pharmaceutical care at his/her healthcare site, while performing in accordance with institutional policies and procedures; New Jersey State Board of Pharmacy, Federal and State Regulatory Agencies, and other applicable standards. A Clinical Assistant Professor is also expected to assume teaching and service responsibilities at EMSOP.</p>

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### TEACHING

#### Definition

*(Adapted from Rutgers Policy Section 60.5.14, Criteria for Academic Appointments, Reappointments and Promotions; Revised 9/5/2014)*

- Responsible for effective instruction, whether at the undergraduate, graduate, postdoctoral, clinical, extension or continuing education level.
- Teaching may include:
  - Classroom, field, and non-credit instruction;
  - Supervision of research, student internships, professional practice, clinical practice, theses, and doctoral dissertations;
  - Academic advising and acting as a mentor to students in the Pharm.D. program, residents, and fellows;

- Improvement and enrichment of course offerings and other instructional activities within the faculty member's discipline or profession;
- Participation in interdisciplinary courses, honors courses and other special courses offered through the undergraduate colleges and other units of the University;
- Writing of textbooks and the development of other instructional materials to enhance education in the faculty member's discipline or profession.
- Must demonstrate depth and breadth of knowledge in his/her discipline, communicate this knowledge to others, and give evidence of a continuing development of knowledge to ensure continued effective teaching over the duration of his/her appointment:
  - Stay informed of advances and current thinking in his/her subject and relate them to his/her teaching in a meaningful and balanced way;
  - Communicate enthusiasm for his/her subject and create a positive environment for learning and one that stimulates imaginative thinking;
  - Maintain a critical attitude toward his/her teaching and strive continuously to improve it.

### **Teaching responsibilities**

- Serve as preceptor for EMSOP students on 5-week Advanced Pharmacy Practice Experience (APPE) rotations at his/her healthcare site.
- Serve as preceptor for Post-Graduate Year One (PGY-1) Pharmacy Practice Residents at his/her healthcare site, if applicable.
- Assist in the education of healthcare site medical, nursing, pharmacy staff, and other healthcare professionals on the safe and effective use of medications in his/her discipline.
- Contribute to educational materials such as Pharmacy Newsletters and Clinical Bulletins, if applicable.
- Contribute to team-taught required and/or elective didactic courses in the EMSOP Pharm.D. curriculum.
- Contribute to EMSOP-sponsored continuing education programs.
- Perform community outreach/educational activities.

## **CLINICAL PRACTICE**

### **Definition**

*(Adapted from Rutgers Policy Section 60.5.14, Criteria for Academic Appointments, Reappointments and Promotions; Revised 9/5/2014)*

- Expected and required to concentrate his/her primary efforts on clinical practice which forms the basis of his/her teaching:

- Apply his/her knowledge to direct patient care and/or delivery of services in the clinical setting;
- Identify, select and/or develop appropriate clinical sites to provide maximum opportunities for clinical practice;
- Introduce practice innovations that reflect cutting-edge practice modalities;
- Design and execute applied research in the clinical setting;
- Interpret and apply research results;
- Identify problems requiring investigation by research faculty.
- Expected and required to make his/her contributions, as described above, available to others in the profession through publication in appropriate professional journals and lecturing in professional and other public forums.

### **Clinical practice responsibilities**

- Establish an open and effective working collaboration with the Department of Pharmacy and pharmacy staff at the healthcare site:
  - Accept responsibility for and meet the expectations jointly established between the Director of Pharmacy at the healthcare site and the Chair of the Department of Pharmacy Practice & Administration at EMSOP;
  - Serve as a source of drug information in his/her area of expertise to pharmacy staff, residents, and students;
  - If applicable, serve as the patient-care-unit pharmacy representative and liaison between medical and pharmacy staff with respect to drug formulary management and/or other pharmacy initiatives;
  - If applicable, contribute to and/or develop relevant pharmacy policies/procedures, treatment protocols, medication use evaluations, and/or related pharmacy initiatives.
- Actively participate in and contribute to multidisciplinary meetings and patient rounds with the Attending Physician and/or housestaff and other healthcare professionals to discuss chosen treatment modalities and the rationale behind such selection.
- Provide pharmacokinetic monitoring and consultation for narrow therapeutic index drugs, as indicated.
- Provide accurate, current, and relevant drug information to patients, patient families, and members of the multidisciplinary healthcare team as indicated.
- Provide consultation dealing with various aspects of drug therapy, including dose; frequency of administration; relevant pharmacokinetic parameters; appropriate age, disease, and/or organ dysfunction-related dosage adjustments; adverse drug reactions (ADRs), and potential drug-drug, drug-food, or drug-supplement interactions.
- Identify and assist in the management of medication errors and ADRs, and develops process improvements to reduce medication errors and preventable adverse drug events.

- Provide patient education on the proper use of prescribed medications and associated compliance.
- Collaborate with other caregivers/staff, within and outside the Pharmacy Department, to develop means of enhancing patient care and services.
- Establish a clinical practice that provides impact and meaningful contributions to his/her discipline on an institutional, regional, and national level, through activities that may include but are not limited to:
  - Initiation and conduct of clinical research related to current and/or novel treatment modalities;
  - Initiation and conduct of research related to novel didactic or experiential educational modalities;
  - Presentation of the results of research initiatives at regional and/or national scientific meetings;
  - Publication of the results of research initiatives in the peer-review scientific literature;
  - Active participation in state and national pharmacy and/or other scientific organizations, and/or;
  - Establishment of a Post-Graduate Year Two (PGY-2) Specialty Residency in his/her area of clinical expertise.

## SERVICE

### Definition

*(Adapted from Rutgers Policy Section 60.5.14, Criteria for Academic Appointments, Reappointments and Promotions; Revised 9/5/2014)*

- Contributions to the academic profession, the University, the School, the clinical practice site, and to society at large, which may include:
  - Active participation in professional and scholarly associations;
  - Service on editorial boards and as a reviewer of scholarly works and proposals;
  - Participation on expert committees, research study sections, grant selection panels, research committees, or practice committees of professional associations or institutions;
  - Fostering collaborative relationships with clinical agencies providing sites for clinical practice;
  - Significant academic and professional service to the University, EMSOP, the Department of Pharmacy Practice & Administration, and his/her discipline through such activities as recruitment of scholars to the University, evaluation of peers, contributions to important committees and other activities in support of the academic development of the University, and enhancement of student academic development and student life programs;

- Application of his/her academic expertise and particular professional skills to the solution of international, national, state, county and local problems;
- Service for the public good on governmental and other special committees, boards, agencies, civic groups and commissions.

### **Service responsibilities**

- Active participation on multidisciplinary committees at the healthcare site, if applicable.
- Active participation in pharmacy committees and other initiatives at the healthcare site, if applicable.
- Active participation on committees and working groups in regional and national scientific organizations.
- Active participation on committees and other initiatives at the University, EMSOP, and Departmental level.
- Active participation as an advisor/mentor for pharmacy students, residents, fellows, and/or junior Departmental faculty.
- Service to the profession/discipline through activities including, but not limited to:
  - Service on Editorial Boards for professional journals;
  - Service as referee for journal manuscripts, meeting posters, and related scholarly output;
  - Active membership in professional societies and related committees/sub-committees;
  - Service as an officer/other leadership capacity for professional societies or related committees/sub-committees;
  - Active participation as a lecturer/educator/coordinator in continuing education (CE) programs for pharmacists, physicians, nurses and other healthcare professions.
- Service to the public through activities including, but not limited to:
  - Membership on professional boards, institutional review boards (IRBs), formulary management committees, privacy boards, or other organizations directly or indirectly responsible for safe, cost-efficient, and effective use of medications;
  - Participation in community outreach programs, which may include, but is not limited to, blood pressure or blood glucose screenings, immunization programs, outpatient education programs, fund-raising activities for health-related non-profit organizations, and other related activities.

## Appendix 6. Faculty, Staff, and Post-Doctoral Associates in the Department of Pharmacy Practice and Administration

### Faculty, Staff, and Post-Doctoral Pharmacy Residents (current as of 1.6.19)

Name	Title/Rank	Tenure Track?	Years of Service at Rutgers	Practice Site
Marc Sturgill	Associate Professor and Chair	Yes; tenured	26	RWJBarnabas, RWJUH
John Colaizzi	University Professor	Yes; tenured	39	N/A
Michael Toscani	Research Professor and Director, RPIF	No	11	N/A
Tobias Gerhard	Associate Professor	Yes; tenured	11	N/A
Laura T. Pizzi	Professor	Yes	2	N/A
Ayse Akincigil	Associate Professor, part-time with HOPE	Yes; tenured	14	N/A
M. Thomas Bateman	Clinical Assistant Professor	No	4	Austin Clinic
Caitlin McCarthy	Clinical Assistant Professor	No	5	Austin Clinic
Joy Park	Clinical Assistant Professor	No	<1	Cancer Institute of New Jersey
Muhammad Effendi	Clinical Assistant Professor	No	<1	Capital Health Systems
Enid Morales	Clinical Associate Professor	No	27	Eric. B. Chandler Health Center
Gee Youn (Geeny) Kim	Clinical Assistant Professor	No	<1	Hackensack University Medical Center
Katelin Kimler	Clinical Assistant Professor	No	5	Hackensack University Medical Center
Michael Mauri	Clinical Assistant Professor	No	<1	Hackensack University Medical Center
Ciera Patzke	Clinical Assistant Professor	No	<1	Hackensack University Medical Center
Danielle Tompkins	Clinical Assistant Professor	No	<1	Hackensack University Medical Center
Pooja Shah	Clinical Assistant Professor	No	6	Hackensack University Medical Center
Siddharth Swamy	Clinical Assistant Professor	No	2	Hackensack University Medical Center
Michael Wynd	Clinical Associate Professor	No	21	Hackensack University Medical Center
Saira Jan	Clinical Professor	No	24	Horizon Blue Cross/Blue Shield of NJ
Michael Casias	Clinical Assistant Professor	No	<1	Hunterdon Medical Center
Ashmi Anand-Philips	Clinical Assistant Professor	No	11	Hunterdon Medical Center
Lindsay Brust-Sisti	Clinical Assistant Professor	No	6	Jersey City Medical Center

**Pharmacy Practice and Administration Working Group**

Saira Chaudhry	Clinical Assistant Professor	No	11	Jersey Shore University Medical Center
Jimmy Gonzalez	Clinical Assistant Professor	No	<1	Jersey Shore University Medical Center
Anita Siu	Clinical Associate Professor	No	15	Jersey Shore University Medical Center
Megan Maroney	Clinical Associate Professor	No	8	Monmouth Medical Center
Germin Fahim	Clinical Assistant Professor	No	5	Monmouth Medical Center
Krina Patel	Clinical Assistant Professor	No	3	Monmouth Medical Center
Julie Saleh	Clinical Associate Professor	No	28	Monmouth Medical Center
Christine Robinson	Clinical Associate Professor	No	17	Morristown Medical Center
Stacy Hardeo	Clinical Assistant Professor	No	5	Morristown Medical Center
Rupal Mansukhani	Clinical Associate Professor	No	13	Morristown Medical Center
Caitlyn Bloom	Clinical Assistant Professor	No	<1	RWJBarnabas Health
Ammie Patel	Clinical Assistant Professor	No	<1	RWJBarnabas Health
Mary Bridgeman	Clinical Associate Professor	No	11	RWJBarnabas, RWJUH
Patrick Bridgeman	Clinical Assistant Professor	No	3	RWJBarnabas, RWJUH
Deepali Dixit	Clinical Associate Professor	No	9	RWJBarnabas, RWJUH
Evelyn Hermes-DeSantis	Clinical Professor	No	23	RWJBarnabas, RWJUH
Navaneeth Narayanan	Clinical Assistant Professor	No	4	RWJBarnabas, RWJUH
Liza Barbarello-Andrews	Clinical Associate Professor	No	15	RWJBarnabas, Hamilton
Mary Wagner	Associate Professor	Yes; tenured	28	Rutgers Community Health
Rachel Meyers	Clinical Associate Professor	No	11	RWJBarnabas, Saint Barnabas Medical Center
Yekaterina Opsha	Clinical Assistant Professor	No	8	RWJBarnabas, Saint Barnabas Medical Center
Lucio Volino	Clinical Associate Professor	No	12	RWJBarnabas, Saint Barnabas Medical Center
Claudia Choi	Clinical Assistant Professor	No	<1	RWJBarnabas, Saint Barnabas Medical Center
Maria Cardinale	Clinical Assistant Professor	No	3	Saint Peter's University Hospital

**Pharmacy Practice and Administration Working Group**

Cecilia Wong	Clinical Assistant Professor	No	2	Saint Peter's University Hospital
May Nguyen	Clinical Assistant Professor	No	3	RWJBarnabas, RWJUH-Somerset
Luigi Brunetti	Associate Professor	Yes	11	RWJBarnabas, RWJUH-Somerset
Christopher Adams	Clinical Assistant Professor	No	4	RWJBarnabas, RWJUH-Somerset
Steven Nerenberg	Clinical Assistant Professor	No	5	St. Joseph's Medical Center
Humberto Jimenez	Clinical Assistant Professor	No	12	St. Joseph's Medical Center
Jackie Johnston	Clinical Assistant Professor	No	1	St. Joseph's Medical Center
Kristin Bohnenberger	Clinical Assistant Professor	No	1	Penn Medicine Princeton Medical Center
Gregory Cabanas	Clinical Assistant Professor	No	<1	Penn Medicine Princeton Medical Center
Mei Liu	Clinical Assistant Professor	No	12	Penn Medicine Princeton Medical Center

**Pharmacy Residents 2018-2019**

Nicole Daniel	Neuropsych PGY-2	N/A	<1	Shared among neurology and psychiatry sites
Dhara Shah	Pediatric PGY-2	N/A	<1	Shared among pediatric sites
Parth Parikh	Emergency Medicine PGY-2	N/A	<1	RWJBarnabas, RWJUH
Raghad Saadi	Emergency Medicine PGY-2	N/A	<1	RWJBarnabas, RWJUH
Su Jin Cho	Drug Info PGY-2	N/A	<1	RWJBarnabas, RWJUH
Yesha Patel	Drug Info PGY-2	N/A	<1	RWJBarnabas, RWJUH

**Departmental Staff Members**

Janice Weinstein	Administrative Coordinator	N/A	11 years at EMSOP, 20 years at Rutgers	N/A
Matthew Ciantar	Program Coordinator - HOPE	N/A	1 year, 6 months	N/A
Katherine Prioli	Research Analyst - HOPE	N/A	1 year, 7 months	N/A
Wendy Bara Cutler	Business Specialist - HOPE	N/A	2 months HOPE, 20 years Rutgers	N/A

## Appendix 7. 2018-2019 Rutgers Pharmaceutical Industry Fellowship Program Fellows

First Name	Last Name	Company	Department	Fellowship 1 year/2 years	Comments
Lyndsay	Golden	Acorda	Medical Affairs	2 years	
Jeffrey	Sniggs	Acorda	Regulatory Affairs	2 years	
Kaley	Weintraub	Acorda	Medical Affairs	2 years	
Soraya	Hassanpour	Amgen	Global Regulatory Affairs & Safety Rotational	2 years	
Kimberly	Koop	Amgen	Global Regulatory Affairs	2 years	
Stephanie	Lock	Amgen	Global Regulatory Affairs	2 years	
Whitney	Ndoigo	Amgen	Global Regulatory Affairs & Global Value Access & Policy	2 years	
Shuo (Jason)	Chen	AstraZeneca	Global Pharmacovigilance Oncology	2 years	
Shannon	Morrow	AstraZeneca	Med Info, Med Strategy	2 years	
Victoria	Quang	AstraZeneca	Global Labeling Strategy	1 year	
Daniel	Simmons	AstraZeneca	US Medical Affairs-HEOR Oncology	2 years	
Alexis	Stinson	AstraZeneca	US Immuno-Oncology Marketing	2 years	
Sophia	Wang	AstraZeneca	Global Regulatory Affairs Oncology	2 years	
Stephen	Agyenim-Boateng	Bayer	Global Oncology Training & Commercial Excellence	2 years	
Min Sung	Choy	Bayer	Global Regulatory Affairs	2 years	
Kevin	Crona	Bayer	Business Development & Licensing	2 years	
Jacob	Engelmeier	Bayer	Market Access	2 years	
Gina	Fu	Bayer	Clinical Operations	2 years	
Quanhao	Fu	Bayer	Global Regulatory Affairs	2 years	

**Pharmacy Practice and Administration Working Group**

Bryanna	Gray	Bayer	Medical Communications	2 years	
Leslie	Harden	Bayer	Global Regulatory Affairs Strategy	2 years	
Brenda	Ho	Bayer	New Product Commercialization & Portfolio Strategy	2 years	
Louis	Jackson	Bayer	Global HEOR/Market Access	2 years	
Rahul	Kalathiya	Bayer	MSL	2 years	
Sylvia	Kang	Bayer	Brand Marketing, US Managed Markets	2 years	
Stella	Kyaw-Soe	Bayer	Medical Communications	2 years	
Vincent	Lee	Bayer	Medical Communications	2 years	
Alison	Lieu	Bayer	Regulatory Affairs	2 years	
Saba	Nikpour	Bayer	Brand Marketing, US Managed Markets	2 years	
Ruth	Nobile	Bayer	New Product Commercialization	2 years	
Brian	Nwokorie	Bayer	Oncology Marketing	2 years	
Nicollette	Pacheco	Bayer	Medical Communications	2 years	
Joseph	Pagnotta	Bayer	Clinical Science	2 years	
Leo	Pratt	Bayer	Global Pharmacovigilance & Product Quality & Safety	2 years	
David	Szeto	Bayer	Business Development & Licensing	2 years	
Christina	Yuan	Bayer	Brand Marketing, US Managed Markets	2 years	
Esther	Adeyinka	Bayer Consumer	Pharmacovigilance Risk	2 years	
Eishdeep	Cattray	Bayer Consumer	Medical Affairs	2 years	
Kizito	Kyeremateng	Bayer Consumer	Global Medical Affairs	2 years	
Kaitlyn	Lech	Bayer Consumer	Global Product Development & Innovation	2 years	

**Pharmacy Practice and Administration Working Group**

Mark Allen	Neese	Bayer Consumer	Consumer Health Innovations & Development	2 years	
Kristiyan	Veltchev	Bayer Consumer	RX-to-OTC Switch Science	2 years	
Bryce	Adams	BMS	Oncology Med Info, Clinical Trail Operations/MSL	2 years	
Dylan	Atkinson	BMS	Market Access, US Value, Access & Payment	2 years	
Mina	Awad	BMS	Worldwide & US Medical Strategy, Immuno-Oncology	2 years	
Sandhya	Balachandar	BMS	Immunology Medical	2 years	
Steven	Caproni	BMS	Cardiovascular Med Affairs Capabilities	2 years	
Grace	Crocket	BMS MD Fellowship	Immunology	1 year	*
Brandon	Elpers	BMS	Medical Strategy/MSL Eliquis	2 years	
Swara	Kasbekar	BMS	Global Pharmacovigilance & Epidemiology	2 years	
Min Kyung (Amy)	Kim	BMS	US Medical Strategy/Publications	2 years	
Thushara	Korattiyil	BMS	Medical Communications/Publications for HEOR	2 years	
Joseph	Kosto	BMS	US Medical Strategy, Immun-oncology Portfolio	2 years	
YeSeul (Vivian)	Lee	BMS	US Commercial Regulatory Affairs	1 year	
Jennifer	Mannino	BMS	Oncology Marketing	2 years	
Alexander	Marshall	BMS	HEOR	2 years	
Lindsey	McKeown	BMS	Business Insights & Analytics	2 years	
Thomas	Nichols	BMS	US Oncology Medical Capabilities/Field Medical	2 years	
Kya	Norby	BMS Foundation	Public Health Resident	1 year	**
Aakash	Patel	BMS	Policy & Advocacy	2 years	

**Pharmacy Practice and Administration Working Group**

Karishma	Patel	BMS	R&D Business Insights & Analytics	2 years	
Samantha	Pomponi	BMS	Oncology WW Publications & Scientific Content/US Medical Strategy Immuno-Oncology	2 years	
Tayla	Poretta	BMS	HEOR	2 years	
Kiri	Roland	BMS	Global Regulatory Sciences	2 years	
Leo	Rudawsky	BMS	Market Access, US Value, Access & Payment	2 years	
Alexandra	Sharer	BMS	Cardiovascular Med Strategies/MSL	2 years	
Pavit	Singh	BMS	Access Medical Information, US I-O Portfolio Strategy	2 years	
Kendall	Sullivan	BMS	Headquarter Medical Strategy	2 years	
Keith	Wittstock	BMS	Immunoscience Med Info/MSL	2 years	
Andriy	Kuzmov	Catalent	Scientific Communications	2 years	
Alex	Bokun	Celgene	US Medical Affairs HemeOnc	2 years	
Daniel	Diljani	Celgene	Global Knowledge Management & Strategic Intelligence	1 year	
Trevor	Homan	Celgene	Clinical R&D	2 years	
Amandeep	Kaur (Riar)	Celgene	Global Regulatory Affairs	2 years	
Connie	Lin	Celgene	Global Regulatory Affairs	2 years	
Venkatesh	Satram	Celgene	Global Project Leadership	2 years	
Marina	Shahat	Celgene	Global Clinical R&D	2 years	
Landon	Shupe	Celgene	Global Project Leadership	2 years	
Chuka	Udeze	Celgene	US HEOR	2 years	
Dorothy	Zissler	Celgene	Med Info/Scientific Communication	2 years	
Lukasz	Jarosz	Daiichi Sankyo	Global Business Development	2 years	

**Pharmacy Practice and Administration Working Group**

Joshua	Lin	Daiichi Sankyo	Medical Affairs	2 years	
Harsh	Reddy	Daiichi Sankyo	Global Business Development	2 years	
Alyson	Sapirstein	Daiichi Sankyo	Global Oncology Marketing	2 years	
Bridgette	Tran	Daiichi Sankyo	Medical Affairs	2 years	
Omama	Zubairi	Daiichi Sankyo	Medical Affairs	2 years	
Sowmya	Banda	Genentech	Clinical Operations	2 years	
Christine	Cid	Genentech	Regulatory Affairs	2 years	
Anh-ton	Dang	Genentech	Clinical Operations	2 years	
Hunter	Davis	Genentech	US Medical Affairs/MSL	2 years	
Anthony	Guan	Genentech	Regulatory Affairs	2 years	
Carlos	Jara-Garate	Genentech	Regulatory Affairs	2 years	
Melissa	Kimura	Genentech	Clinical Operations, Global Studies	2 years	
Anastasia	Loukitcheva	Genentech	Late Stage Clinical Science	2 years	
Kristie	Marasigan	Genentech	Medical Aff, Medical Communications	2 years	
Samuel	McCallum	Genentech	Product Development-Safety Science	2 years	
Ernest	Mofor	Genentech	Clinical Science,I20, Innovation Team	2 years	
Himika	Patel	Genentech	Regulatory Affairs	2 years	
Nikole	Shpilfogel	Genentech	Regulatory Affairs	2 years	
Iris	To	Genentech	Late Stage Clinical Science	2 years	
Linh	Tran	Genentech	US Medical Affairs	2 years	
Sarah	Troutman	Genentech	Clinical Science, Late Stage Development	2 years	
Anna H.	Yang	Genentech	US Medical Affairs, MSL BioOncology	2 years	
Michael	Soliman	GSK	Consumer Healthcare MA	2 years	

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Ben	LeMay	J&J	CIS Immunology	2 years	
Tiffany	Ng	J&J	Oncology Commercial Insights & Strategy	2 years	
Tejas	Patel	J&J	Promotional Compliance	2 years	
Jeremy	Borbon	J&J Consumer	Commercial Insights & Strategy, Cardiovascular	2 years	
Fallon	Gokhman	J&J Consumer	Consumer Medical Safety	2 years	
Sophia	Kim	J&J Consumer	Commercial Insights & Strategy, Oncology	2 years	
Abir	Mneimneh	J&J Consumer	Consumer Medical Safety	2 years	
Christopher	Varghese	J&J Consumer	Global Scientific Engagement	2 years	
Bincy	Augustine	J&J/Actelion	Global Clinical Science & Epidemiology	2 years	
Anastasiya	Koshkina	J&J/Actelion	Global Clinical Science & Epidemiology	2 years	
Krista	Allbee	Janssen	Immunology-CIS	2 years	
Diana	Destin	Janssen	Oncology Brand Marketing	2 years	
Alexa	DeVita	Janssen	Commercial Insights & Strategy Infectious Disease	2 years	
Carolyn	Riedl	Janssen	Immunology Marketing, Integrated Customer Solutions	2 years	
Amey	Shroff	Janssen	Commercial Insights & Strategy	2 years	
Nick	Spotts	Janssen	Oncology Marketing	2 years	
Simran	Bimrah	Janssen Biotech	Oncology Marketing	2 years	
Alexander	Lo	Janssen Biotech	Oncology Franchise Marketing	2 years	
Kinjal	Patel	Janssen or J&J	Commercial Insights & Strategy, Metabolics	2 years	
Carly	Herbert	Janssen Scientific	Medical Information	2 years	
Wanda	Azu Owoh	Johnson & Johnson	Global Consumer Regulatory Affairs	2 years	

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Matthew	Bermudez	Johnson & Johnson	Promotional Compliance	2 years	
Todd	Gilbert	Johnson & Johnson	Commercial Insights & Strategy, Oncology	2 years	
Lilly	Jiang	Johnson & Johnson	Regulatory Affairs	2 years	
Samantha	Kaufman	Johnson & Johnson	Global Scientific Engagement	2 years	
Jake	Martin	McCann	Strategic Marketing	2 years	
Jillian	Aquino	Merck	Clinical Safety & Risk Management	2 years	
SoHyun (Irene)	Bae	Merck	Quantitative Pharmacology & Pharmacometrics	2 years	
Kelly	Chambers	Merck	Clinical Safety & Risk Management	2 years	
Michelle	Chawala	Merck	Clinical Science & Study Mgmt, Oncology	2 years	
Suneet	Degaonkar	Merck	Clinical Science & Study Mgmt	2 years	
Marc	Fares	Merck	US Medical Affairs	2 years	
Gabrielle	Guancione	Merck	Late Stage Development- Primary Care	2 years	
Mari	Ichimaru	Merck	Clinical Science & Study Mgmt, Oncology	2 years	
Samer	Karam	Merck	Late Stage Development- Primary Care	2 years	
Eric	Kim	Merck	Translational Pharmacology	2 years	
Jateh	Major	Merck	Global Regulatory Affairs	2 years	
Kirolous	Makarious	Merck	Clinical Science & Study Mgmt, Oncology	2 years	
Sasha	McClain	Merck	Translational Pharmacology	2 years	
Nadia	Noormohamed	Merck	Quantitative Pharmacology & Pharmacometrics	2 years	
Stacie	Noreika	Merck	Global Regulatory Affairs	2 years	
Abiola	Ojo	Merck	Global Medical Affairs	2 years	

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Elizabeth	Paschka	Merck	Clinical Safety & Risk Management	2 years	
Lav	Patel	Merck	Office of Promotion & Advertising Review	2 years	
Punam	Patel	Merck	Oncology Global Medical Affairs	2 years	
Laura	Phillips	Merck	Global Medical Affairs	2 years	
Yahya	Rasouly	Merck	Oncology Global Medical Affairs	2 years	
Jesse	Siegel	Merck	Late Stage Clinical Development, Oncology	2 years	
Julia	Spiridigliozzi	Merck	Translational Pharmacology	2 years	
Tyler	Stone	Merck	Global Medical Information	2 years	
Anna	Yang	Merck	US Medical Affairs	2 years	
James	Young	Merck	Clinical Sciences & Study Management Vaccines	2 years	
Ryan	Conway	Novartis	Regulatory Affairs, Neuroscience	2 years	
Asia	Cook	Novartis	Global Oncology MSL/MIC	2 years	
Anthony	Costy	Novartis	Regulatory Strategy	2 years	
Sharon	Cross	Novartis	Translational Clinical Oncology	2 years	
Austin	Ferrara	Novartis	Regulatory Affairs	2 years	
Joe	Fink	Novartis	Late Phase Clinical Development	2 years	
Nathan	Fons	Novartis	Regulatory Affairs	2 years	
Francesca	Francois	Novartis	Scientific Engagement & Communications, Global Oncology	2 years	
Lauren	Holmes	Novartis	Late Phase Clinical Development	2 years	
Meghan	Kelly	Novartis	US Field Medical	2 years	
Kurtis	Lee	Novartis	Oncology Marketing	2 years	

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Heena	Mavani	Novartis	Regulatory Advertising & Promotion/US Med Info	2 years	
Victoria	Nesbitt	Novartis	Early Clinical Development/Translational Clinical Oncology	2 years	
Akshay	Patel	Novartis	Med Info, Reg Ad Promo	2 years	
Alan	Ross	Novartis	General Medicine, Med Info	2 years	
Mike	Severo	Novartis	US Oncology Medical, Scientific Communicaiton Oncology	2 years	
Shivani	Shah	Novartis	Regulatory Affairs	2 years	
Andrew	Van Deusen	Novartis	Commercial New Products, Business Development & Licensing	2 years	
Carolyn	Zhu	Novartis	Regulatory Affairs, Oncology	2 years	
Dorothy	Fan	Pfizer	Clinical Research & Development	2 years	
Sviatlana	Ferri	Pfizer	Global Medical Information, Global Medical Affairs	2 years	
Xiang	Guo	Pfizer	Global Medical Affairs, Inflammation & Immunology	2 years	
Tracey	Li	Pfizer	US Medical Affairs	1 year	
Leah	Madsen	Pfizer	Medical Affairs	2 years	Resigned 10/5/18
Joshua	Meinert	Pfizer	Oncology, Global Marketing & Commercial Development	2 years	
Vrunda	Parikh	Pfizer	Clinical Research	2 years	
Lindsey	Parker	Pfizer	US Medical Affairs	1 year	
Priya N.	Patel	Pfizer	Medical Information	2 years	
Oanh (Annie)	Pham	Pfizer	Essential Health Medical Affairs	1 year	
Rafi	Reyasat	Pfizer	Medical Affairs	1 year	
Christopher	Russo	Pfizer	Global Medical Affairs I&I	2 years	

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Saajan	Shah	Pfizer	I&I Medical Affairs	2 years	
Kacie	Trojanowsky	Pfizer	Consumer Medical Affairs	2 years	
Matthew	Birrenkott	Roche	Clinical Science TM	2 years	
Priya B.	Patel	Roche	Business Development Assoc	2 years	
Brittney	Starling	Roche	Clinical Science Translational Medicine	2 years	
Peter	Balogun	Sanofi	Trade Access Services	2 years	
Paige	Borden	Sanofi	US Global Cardiovascular Medical Affairs	2 years	
Christopher	Defedele	Sanofi	US Diabetes Medical Affairs	2 years	
Emily	Ewell	Sanofi	US Global Cardiovascular Medical Affairs	2 years	
Sally	Habusta	Sanofi	Clinical Documentation	2 years	
Ken	Hu	Sanofi	Global Regulatory Affairs	2 years	
Patrick	LaFontaine	Sanofi	Health Economics & Value Assessment	2 years	
Dee	Lin	Sanofi	Global Health Economics & Value Assessment	2 years	Resigning 11/2/18
Angelina	Mandic	Sanofi	Global Regulatory Affairs	2 years	
Jonathan	Naylor	Sanofi	Public Affairs, Advocacy	2 years	
Hamza	Sarwar	Sanofi	Global Medical Information	1 year	
Anastasiya	Voitsik	Sanofi	Global Pharmacovigilance	2 years	

**(8) 1-year Fellowships**

**\*\* (1) BMS Resident**

**\* (1) BMS MD Fellowship**

**202 Fellows + 1 Resident + (1) MD Fellowship = 204 Total**

Pharmacy Practice and Administration Working Group

## Appendix 8. Pharmacy Practice and Administration Grant Award Data, FY2014- FY2019

Pharmacy Practice & Administration Grant Data FY2014- FY2019

FY2014	PI	Direct Cost	F&A	Total Cost		
<b>Contract and Fellowship/Agreement</b>	Joseph Barone	\$7,352,432	\$0	\$7,352,432		
Nicholson Foundation	Mary Wagner	\$246,262	\$24,627	\$270,889		
IMAAAC	Mary Wagner	\$50,000	\$0	\$50,000		
Eric B. Chandler Health Center	Enid Morales	\$100,000	\$0	\$100,000		
<b>Year Total</b>		<b>\$7,748,694</b>	<b>\$24,627</b>	<b>\$7,773,321</b>		

FY2015	PI	Direct Cost	F&A	Total Cost		
<b>Contract and Fellowship/Agreement</b>	Joseph Barone	<b>\$9,829,138</b>	<b>\$31,094</b>	<b>\$9,860,232</b>		
Telkoku Pharma - Docetaxel Infusion & ETHA	Luigi Brunetti	\$6,673	\$3,670	\$10,343		
Nicholson Foundation	Mary Wagner	\$239,300	\$23,930	\$263,230		
Eric B. Chandler Health Center	Enid Morales	\$100,000	\$0	\$100,000		
<b>Year Total</b>		<b>\$10,175,111</b>	<b>\$58,694</b>	<b>\$10,233,805</b>		

FY2016	PI	Direct Cost	F&A	Total Cost		
<b>Contract and Fellowship/Agreement</b>	Joseph Barone	\$12,915,630	\$0	\$12,915,630		
Janssen Scientific Affairs LLC - Fellowship Development	Laura Pizzi	\$185,000	\$0	\$185,000		
Eric B. Chandler Health Center	Enid Morales	\$100,000	\$0	\$100,000		
<b>Year Total</b>		<b>\$13,200,630</b>		<b>\$13,200,630</b>		

FY2017	PI	Direct Cost	F&A	Total Cost		
<b>Contract and Fellowship/Agreement</b>	Joseph Barone	\$15,220,640	\$0	\$15,220,640		
CSL BEHRING LLC-439495	Luigi Brunetti	\$8,850		\$8,850		
INST FOR MEDICATION ACCESS & COMPLIANCE-S	Mary Wagner	\$50,000	\$0	\$50,000		
University of Connecticut	Laura Pizzi	\$2,282	\$1,255	\$3,537		
Merck Sharp & Dohme	Laura Pizzi	\$219,651	\$44,086	\$263,736		
Janssen Scientific Affairs LLC - Fellowship	Laura Pizzi	\$115,000	\$0	\$115,000		
Cerus Corp.	Laura Pizzi	\$20,520	\$6,156	\$26,675		
Wills Eye Hospital	Laura Pizzi	\$9,682	\$5,326	\$15,008		
John Hopkins University	Laura Pizzi	\$10,343	\$5,689	\$16,032		
John Hopkins University	Laura Pizzi	\$17,515	\$9,633	\$27,148		
Eric B. Chandler Health Center	Enid Morales	\$103,000	\$0	\$103,000		
<b>Year Total</b>		<b>\$15,777,483</b>	<b>\$72,145</b>	<b>\$15,849,628</b>		

FY2018	PI	Direct Cost	F&A	Total Cost		
<b>Contract and Fellowship/Agreement</b>	Joseph Barone	\$18,913,293	\$0	\$18,913,293		
JOHN HOPKINS UNIV - 2003480644	Laura Pizzi	\$105,036	\$58,360	\$163,396		
Novartis TASK-4 Fellowship	Michael Toscani	\$112,371	\$0	\$112,371		
Hoarization Foundation	Luigi Brunetti	\$84,708	\$15,292	\$100,000		
Wills Eye Hospital	Laura Pizzi	\$11,613	\$6,387	\$18,000		
Glaxosmithkline, LLC - Fellowship	Laura Pizzi	\$206,939	\$9,599	\$216,538		
Cerus Corp.	Laura Pizzi	\$20,520	\$6,156	\$26,676		
University of Connecticut	Laura Pizzi	\$43,238	\$23,781	\$67,020		
Drexel University	Laura Pizzi	\$23,842	\$13,113	\$36,955		
Eric B. Chandler Health Center	Enid Morales	\$103,000	\$0	\$103,000		
<b>Year Total</b>		<b>\$19,624,560</b>	<b>\$132,688</b>	<b>\$19,757,249</b>		

FY2019	PI	Direct Cost	F&A	Total Cost		
<b>Contract and Fellowship/Agreement</b>	Joseph Barone	\$17,881,489	\$0	\$17,881,489		
GLAXO SMITH KLIEN Zoster Burden of Eye Disease Study	Laura Pizzi	\$614,670	\$85,320	\$700,000	824915	124455
GLAXO SMITH KLIEN FELLOWSHIP 19-21	Laura Pizzi	\$228,998	\$9,890	\$238,888	822998	122930
University of Connecticut	Laura Pizzi	\$65,530	\$36,042	\$101,572	820211	120198
Janssen Scientific Affairs, LLC - Fellowship	Laura Pizzi	\$210,217	\$10,511	\$220,728	823921	123697
Hoarization Foundation	Luigi Brunetti	\$85,542	\$14,458	\$100,000		
Astellia Pharma Global Development Inc	Luigi Brunetti	\$204,565	\$61,369	\$265,934 (3 years)		
Eric B. Chandler Health Center	Enid Morales	\$103,000	\$0	\$103,000		
<b>Year Total</b>		<b>\$19,394,011</b>	<b>\$217,590</b>	<b>\$19,611,611</b>		