Achieving Competency-Based, Time-Variable Health Professions Education

JOSIAH MACY JR. FOUNDATION

2017 ANNUAL REPORT
The Foundation’s logo incorporates the mid-nineteenth century ship’s flag of Josiah Macy & Sons, New York, shipping and commission merchants and ancestors of Josiah Macy Jr.
Macy Meetings
## Contents

4 : President’s Statement

7 : A Brief History

8 : Achieving Competency-Based, Time-Variable Health Professions Education

16 : Macy Faculty Scholars Program

22 : Assessing Our Effectiveness

24 : 2017 Board Grants

Drexel University
Boston University
Ohio University Heritage College of Osteopathic Medicine

26 : 2017 President’s Grants

Ichan School of Medicine at Mount Sinai
The Arnold P. Gold Foundation
Baylor College of Medicine
EqualHealth
National Medical Fellowships, Inc.
University of Minnesota
University of Washington
Accreditation Council for Continuing Medical Education
Institute on Medicine as a Profession
Massachusetts General Hospital
Rockefeller Philanthropy Advisors (Jonas Center for Nursing and Veterans Healthcare)
University of Missouri School of Medicine
The University of Texas at Austin
Brandeis University
United Hospital Fund
University of Alberta (CAB VI)
URU, The Right to Be, Inc.
The Addiction Medicine Foundation
Columbia University
George Washington University
New York Academy of Medicine
Association of American Medical Colleges
National Academy of Sciences
New York University
Accreditation Council for Graduate Medical Education
Arizona State University Foundation
Maine Medical Center
National Academies of Practice

30 : Board of Directors and Staff

31 : Financial Statements
As we pursue our long-term goal of aligning health professions education, clinical practice, and the health needs of the public, I continue to be uplifted and stimulated by the students, residents and young faculty I meet, and by the spirit of experimentation and innovation we are seeing in health professions education. 2017 was no different. In fact, it was an exceptionally gratifying and productive year for us at the Josiah Macy Jr. Foundation.

This year, we gave special attention to advancing competency-based, time-variable education—a revolutionary alternative to our traditional time-limited educational system. It was the topic of our annual conference, it is the theme of this annual report, and I believe that integrating it into our health professions education and practice continuum is key to transforming the American health care system.

Competency-based education—in which learners are evaluated based on their mastery of specific concepts and skills—has been around for many years, but time variability—which allows learners flexibility in the amount of time they spend acquiring the required competencies—is a newer concept. In competency-based, time-variable education, time is viewed as a resource that can be adjusted to optimize individual learning experiences. Programs implementing this approach to education are beginning to see positive outcomes—though there is still much to learn.

In this report, we reflect on the discussions and recommendations from our 2017 conference, Achieving Competency-Based, Time-Variable Health Professions Education and highlight the work of some of our grantees in related areas. There are many steps that must be taken to shift our health professions education, training, and practice continuum toward a model that better meets the needs of both learners and patients—but we believe they are attainable. We are grateful for the opportunity to further pique the high level of interest we are seeing in competency-based, time-variable health professions education with a Special Supplement to Academic Medicine in 2018, which will feature nine original articles and a commentary. This special issue was born out of the commissioned papers and discussions at our Macy conference.

While we disseminate the recommendations and materials from our 2017 conference, we are hard at work planning our 2018 conference, Improving the Environment for Learning in the Health Professions. The conference, scheduled for April 2018 in Atlanta, will identify ways to
improve educational environments as a means to optimizing learning and reducing “burnout” among health professions learners, faculty, and practitioners.

Now in its seventh year, the Macy Faculty Scholars program has supported 36 faculty from medical and nursing schools around the country. This year, we welcomed five new scholars—one of whom is building on an educational innovation implemented at her institution by a previous Macy scholar. I have taken great pride over the years in watching the scholars come together as a network of peers to share ideas and support each other’s work and to take on leadership roles at their institutions and nationally. I was delighted to co-author, with Macy Faculty Scholar Alan Dow, MD, a commentary on interprofessional education in the August 31 issue of the *New England Journal of Medicine*.

Momentum around the recommendations from our 2016 conference *Registered Nurses: Partners in Transforming Primary Care* carried into 2017. A series of regional meetings that we co-sponsored with the American Academy of Nursing to discuss the recommendations were very well attended. And the report has stimulated a number of initiatives to enhance nursing education in the knowledge and skills needed for primary care nursing. In fact, this topic is the project of one of our new Macy Faculty Scholars.

We also have participated in the continuing dialogue around graduate medical education (GME) reform, spurred in large part by our 2016 conference series spotlighting regional innovations in GME. Our hypothesis that changes in the content, site, and funding of GME would be largely stimulated by regional, state, and academic medical center initiatives has turned out to be true. We have continued to learn about and sometimes participate in some of these regional and academic center initiatives of GME reform (such as a summit on GME reform with the Cleveland Clinic). We helped to sponsor a National Academy of Medicine workshop on GME outcomes and metrics which included the ACGME and many other institutional and national stakeholders.

Another exciting milestone this year: we wrapped up a very successful national grant program on education for medical professionalism by bringing the grantees together to share what they learned and discuss their plans for moving forward. A 2012 Macy grant to the Institute on Medicine as a Profession (IMAP) supported 19 projects over five years to develop and implement novel ways to teach and promote professionalism in medical schools and residency programs around the country. In September, Macy and IMAP grantees gathered in New York, to participate in deep, thoughtful, and sometimes personal discussions about medical professionalism. We are producing a monograph of the meeting that will include summaries of all 19 projects as well as highlights.
from the keynote addresses and plenary discussions.

Earlier in the year, the Foundation commissioned an independent evaluation of our grant-making practices by surveying our grantees. The evaluation, which was conducted by the Center for Effective Philanthropy (CEP), followed up on a 2009 survey. While the results of the 2009 survey were quite positive, we saw many opportunities for improvement. We initiated a number of changes at the Foundation to improve our operations and communications—all designed to increase our impact. In the current survey, all principal investigators on Macy Board Grants since 2009 and all Macy Faculty Scholars since inception were surveyed. We were very gratified that results of the survey were very positive. Many respondents described the Foundation as “innovative,” “visionary,” and “transformational,” and rated us very highly for communication and support. In fact, CEP reported to the Macy Board that our results were among the top five of all the 250 foundations they have surveyed and number one in some categories. As I commented to the Board, this would not have happened without the consistent and thoughtful efforts of the whole Macy team.

Finally, I must admit that the creation of this annual report has been a bittersweet process for me because it is the last one I will oversee as President of the Macy Foundation. In July 2017, I announced that I would be stepping down as President in June 2018. I have spent a wonderfully productive and fulfilling decade leading the Foundation, and I anticipate that my final six months will be the same. I could not have imagined a better place to build on all I have learned and done prior to this position; I have been encouraged, supported, stimulated, and educated by kindred spirits around the country devoted to improving the health of the public by transforming the education of our physicians, nurses, and other health professionals. I am grateful to all of you who have been a part of this exciting journey with me—particularly to our Macy Faculty Scholars, grantees, and conferees who have inspired me and taught me so much. I will offer some further reflections on my tenure in a special report we will produce in the spring of this year.

I’d like to say a special “thank you” to my extraordinary Macy colleagues—the Foundation’s Board members and our staff—for your commitment and dedication to the mission of the Macy Foundation and your belief that we can make a difference. I look forward to watching our many and varied efforts continue to bear fruit in the years ahead. Thank you all.

GEORGE E. THIBAULT, MD
Kate Macy Ladd established the Josiah Macy Jr. Foundation in 1930 to honor the memory of her father, a well-known philanthropist who died young. Ladd intended the Foundation to devote itself to the promotion of health and the ministry of healing.

Over the decades, the founding mission has remained the same while the focus has shifted from medical research to health professions education. Today, the Josiah Macy Jr. Foundation is the only national foundation dedicated solely to improving the education of health professionals.

For more on the Foundation’s history, please visit our website: www.macyfoundation.org
There is no question: we must make changes in the ways doctors, nurses, and other health care professionals in the United States are educated and trained.

If our health care system is going to meet the health needs of our nation—including an aging population burdened by costly, complex chronic diseases—we must align the pedagogy and curricula in our health professions schools with the evolving realities of clinical practice.

At the Macy Foundation, we believe that achieving this goal requires a shift toward competency-based, time-variable health professions education.

A COMPETENCY-BASED, TIME-VARIABLE SYSTEM OF EDUCATION

In the prevailing educational model, health professions students spend pre-determined...
amounts of time learning required subjects, with time in place and grades on standardized exams serving as proxy measures for competence.

But this tradition-bound model is no longer sufficient; a growing body of evidence suggests that too many students are graduating from our health professions schools with gaps in their knowledge and deficiencies in their skills. There is a growing concern that the lengthening process of educating and training health professionals is inefficient with its many transitions and redundancies. And there is further concern that it is does not prepare our future practitioners for lifelong learning.

In a competency-based, time-variable educational system, learners advance when they have demonstrated mastery of all required, previously agreed upon competencies. This approach allows students to learn at their own pace and gives faculty members the opportunity to tailor education to the needs of the students. And it begins to break down the artificial distinctions we have created between the stages of education, training, and practice, creating a continuum that enables learners to seamlessly move from one phase of learning to the next as they master required competencies, and nurturing a commitment to life-long learning.

A DEEP DIVE INTO AN EMERGING EDUCATIONAL MODEL

To accelerate competency-based, time-variable health professions education, the Macy Foundation made it the topic of its annual conference this year. The conference, Achieving Competency-Based, Time-Variable Health Professions Education, brought together 39 educators in medicine, nursing, and pharmacy as well as experts in educational theory and reform, medical residents, and program accreditors to consider the issues and develop recommendations.

Conference Chair Catherine Lucey, MD, executive vice dean for education at the University of California San Francisco School of Medicine, opened the meeting with a call to action. “We are not 100 percent confident that everyone who moves through our educational programs—whether in medicine, nursing, pharmacy, dentistry, or social work—is equipped to meet the needs of individual patients and improve the health of entire populations,” she said. “The real challenge for us [as educators] is to make sure that our educational programs are sound enough to reliably produce a workforce that is going to ensure that every patient gets the type of care that we would want for someone for whom we care deeply.”

For two-and-half-days, the conferees wrestled with various aspects of the topic in plenary sessions and breakout groups. They began by discussing two commissioned papers and three case studies. The papers and case studies reviewed the literature and theoretical basis for these changes, provided a vision for the future, and featured successful examples of competency-based, time-variable curricula at medical and nursing schools in the U.S. and Canada. By the final day, the conferees had come to a consensus around a vision statement and recommendations regarding competency-based, time-variable health professions education.
VISION STATEMENT

With the achievement of competency-based, time-variable health professions education, we envision a health care system in which all learners and practitioners are actively engaged in their own education and continuing professional development to improve the health of the public. In this system, learners and faculty partner to co-produce learning, all practitioners are life-long learners, and all health care environments place a high value on learning.

RECOMMENDATIONS FROM THE 2017 MACY CONFERENCE:

1. System Redesign—Curricula, learning environments, and faculty development require systematic redesign to achieve a successful competency-based, time-variable health professions education system.

2. Creating a Continuum of Education, Training, and Practice—Institutions responsible for health professions education and health care delivery as well as those who lead, learn, and work within them should embrace the view of health professions education as a learning continuum that spans formal education, clinical training, and professional practice.

3. Implement a Robust Assessment System—Leaders in health professions schools and their health care system partners should champion, develop, and implement a program of assessment that supports competency-based, time-variable training and explicitly links educational programs to improved health care outcomes.

4. Enabling Technologies—Health professions education and health care delivery institutions should develop and use enabling technologies in the implementation of competency-based, time-variable education throughout the professional education continuum of the practitioner.

5. Outcomes Evaluation—Competency-based, time-variable health professions education programs should be designed, implemented, and evaluated in relation to preparing their graduates to advance important societal goals, including improved patient care and improved practitioner performance and satisfaction.
Each of the headline recommendations were accompanied by five to six detailed actionable recommendations. (The entire report is available at www.macyfoundation.org.) The conferees concluded the report with the following statement: “Implementing such a model will take leadership at all levels, the development of a robust program of assessment, a commitment to research and innovation, a shifting of culture toward co-producing education, and resources devoted to education and educational research. In the end, we believe health professionals will be better prepared to meet patients’ needs and more satisfied in their chosen careers. Health care will be more efficient and of higher quality, and society will be healthier.”

EXAMPLES OF MACY-FUNDED ACTIVITIES IN THIS AREA

Improving Clinical Reasoning

“The Macy conference touched on everything that we’re doing at my institution,” said Debra Klamen, MD, MHPE, senior associate dean for education and curriculum at Southern Illinois University (SIU) School of Medicine, and a member of the conference planning and writing committees. “At SIU, we are successfully pushing boundaries and changing the culture. We’re changing how students learn by letting them go at their own pace and then holding them accountable for their progress. Essentially, we are getting out of the way of our students so they can show us what they’re capable of—which is more than we think.”

This effort referenced by Dr. Klamen is supported by a four-year, 2014 Macy grant Improving the Clinical Reasoning of Medical Students: Guaranteeing the Competency of Graduates. As principal investigator, Dr. Klamen has been working with her colleagues at SIU to revamp the medical school’s curriculum, designing and implementing a competency-based, time-variable model focused on improving students’ critical thinking and clinical reasoning abilities.

Studies conducted at SIU and at other medical schools all found that “despite the immersive clinical experiences during the traditional third year of medical school, students’ clinical
reasoning skills did not improve; their skill levels in that area remained flat following the third year,“ Klamen said. “Clearly, they weren’t learning at the level we thought they were, or at the level they needed to reach to care for patients.”

With the Macy grant, Dr. Klamen and her team built an online learning curriculum that amounts to a virtual clinical setting where students can acquire critical clinical competencies by working through online patient cases covering 144 discrete diagnoses. The students start working their way through the cases in their first year of medical school and finish in their third year, which also has them doing four-week clinical rotations. Further, the average amount of time third-year students spend with patients every day has been increased from three hours to seven and one-half hours.

The students also work with their preceptors to design a personalized education plan that allows them to spend 15 weeks working on one or more areas of their own choosing. That could mean spending more time focused on mastering certain competencies or diving into a research project or any number of options to enrich their educational experiences. In order to graduate, students must pass a 14-station standardized patient exam. It is anticipated that some students will be able to graduate in less than four years having demonstrated mastery of all competencies.

“We know we’re on the right track with all the changes we’ve made,” said Klamen. “Faculty like having more time to work with and get to know their students. Students are very happy to be spending more time with patients than with textbooks. And we’re finding that scores on the Step 2 Clinical Knowledge medical licensing exam—usually taken at the beginning of the fourth year of medical school—are running about 15 percent higher now than they were, and 100 percent of students are passing it.”
Fostering a Continuum of Pediatrics Education & Training

Another Macy-funded effort to implement a competency-based, time-variable education model is currently being piloted at four medical schools: the University of Colorado-Denver, University of Minnesota, University of California San Francisco, and the University of Utah.

This effort, known as the Education in Pediatrics Across the Continuum (EPAC) program, has been jointly supported by the Association of American Medical Colleges (AAMC) and Macy. It is designed to be a proof of concept for advancing learners through medical school, residency, and on to clinical practice based on their demonstration of competence rather than their time in the program.

Following a four-year program planning period, each of the four schools agreed to recruit four to five new medical students every year for four years to participate in the pilot. During the planning period, the schools identified the competencies around which to design their curricula and designed a framework for assessing those competencies (which they based on the AAMC’s “Entrustable Professional Activities” assessment guidelines).

The first student cohorts began matriculating in either the 2014-15 or 2015-16 academic years (depending on which school they attend), and are now well into their educational careers, with the first students having successfully transitioned into pediatrics residencies during the 2016-2017 academic year in a time-variable fashion.

The four-site pilot is generating significant interest from all corners of the health professions because it is gathering much-needed data on the feasibility of the model. In fact, the value to medical educators of the information being gathered is high enough that EPAC recently was awarded a two-year grant from the National Board of Medical Examiners to support evaluation of the pilot program.

Early indicators so far point to its success. “EPAC has been one of the great joys of my professional career, a truly mind-blowing innovation,” said Robert Englander, MD, MPH, associate dean for undergraduate medical education at the University of Minnesota, who was involved in the grant from the beginning. “We never thought it would be possible to agree on what outcomes we want, to assess students based on those outcomes, to get institutional buy-in to change the way we do things, and on and on. It’s been an exercise in testing all the assumptions about all the things we thought could NOT be done—and here we are doing it all.”

Englander also stated his takeaway message from EPAC so far: “Competency-based, time-variable education can be done. It is really hard work, but it is feasible. We still have a lot to learn about the model, but it is at least as good as and probably better than what we have been doing.”

Accelerating the Pathway to Residency

In 2013, the New York University (NYU) School of Medicine launched its accelerated pathway program, which enables learners to complete their undergraduate medical education in three years instead of the usual four, and then transition into a pre-selected residency program at NYU. Though other medical schools had similar efforts underway, NYU was the only institution at the time that had all of its residency programs participating in the accelerated pathway program.

With support from the Macy Foundation, NYU regularly convenes a growing group of medical
schools—known as the Consortium of Medical Schools with Accelerated Pathway Programs (CAMPP)—that have implemented (or are implementing) their own programs.

The accelerated pathway is not in the strictest sense the competency-based, time-variable model. But, it does challenge the conventional wisdom about the time necessary to complete the undergraduate medical education (UME) process and forces an increased emphasis on assessment to assure competency. Its focus is on enabling selected students who have chosen a specialty to enter residency early. This also requires a much closer relationship between the faculty involved in UME and GME.

“There are many reasons to implement an accelerated pathway program,” said Steven Abramson, MD, senior vice president and vice dean for education, faculty, and academic affairs at NYU School of Medicine. “Competency-based education may be one of them, student debt relief is another.” (Medical students graduate with an average $165,000 in medical school debt after four years). “But it is a good idea even without those motivators. Many students no longer need that last year of medical school. They already know what area of medicine they want to go into, and they don’t need a year of electives to help them figure it out. By finishing in three years, they can move more quickly into their residency training, which is really what determines who you are as a physician.”

The consortium—which started out with eight schools and has grown to 14, with three more exploring the possibility—meets monthly by teleconference to discuss what’s working well, what challenges are being overcome, and what feedback the schools are getting from both their own staff and students and the community at large. According to Joan Cangiarella, MD, co-principal investigator and associate dean for faculty affairs at NYU School of Medicine: “We want students to have a choice about their educational programming, so they can choose what is best for them—for their learning styles, for their interests, for their futures. We’re finding that about 15 percent choose to finish in three years, about 60 percent in the standard four years, about 20 percent in five years, and the rest are usually MD/PhD students who take longer. The most important thing is to focus not on the amount of time, but on medical school and residency as a continuum of learning.”

In addition, a recently awarded Macy Board grant to Ohio University Heritage College of Osteopathic Medicine is supporting interprofessional faculty development for a new initiative that combines medical school and residency training in family medicine. This is a six-year, combined UME/GME program that is part of a partnership with the Cleveland Clinic and is another example of an accelerated pathway program.

LOOKING FORWARD

According to Macy President George Thibault, MD, “For years, the health professions have been talking about competencies as a way to assess the performance of our learners, but we haven’t really used them to design our educational programs. We need to start designing curricula with outcomes in mind—how can we best prepare our students to meet the needs of the public? The answer is not a one-size-fits-all education. Competency-based, time-variable education is a tool that will help us respond to the challenge of aligning education with the needs of the public.”
Comments from Thought Leaders on Competency-Based, Time-Variable Health Professions Education

GEORGE MEJICANO, MD, MS
Oregon Health & Science University School of Medicine
Macy Conference Planning Committee Member

Educators working in health professions schools and teaching hospitals have the duty to produce compassionate and competent physicians that will serve society. Similarly, we have a responsibility to our learners to make the educational journey as effective and efficient as possible. Competency-based, time-variable education promises to consistently achieve both these aims: optimize time as a resource while ensuring the quality of our graduates. The time for system-wide, transformative change is now and the path forward has been described in the recommendations described by the participants of a conference hosted by the Josiah Macy Jr. Foundation last June.

OLLE TEN CATE, PHD
University Medical Center Utrecht
Macy Conferee

The core mission of health education programs is training competent professionals for safe practice. Competency-based education is a reformulation of that old mission, to keep reminding us continuously of its priority. Clinical educators must supervise and monitor learners, and tailor education until they feel confident to entrust them—their new colleagues—with the unsupervised provision of care. The time that it takes is a derivative.

DEBRA KLAMEN, MD, MHPE
Southern Illinois University School of Medicine
Macy Conference Planning Committee Member and Macy Grantee

Competency-based, time-variable health professions education is the wave of NOW, with multiple schools and residency programs currently putting this concept to work. Whether or not this logical and evidence-based pedagogy spreads to become a national (or international) norm in the future remains to be seen, as change is difficult, and radical change is even more so. If this obstacle can be embraced, instead of rejected out of hand, health professions education will make an impressive forward leap into the future for the benefit of all learners involved.

DEBORAH POWELL, MD
University of Minnesota Medical School
EPAC Advisor

Competency-based, time-variable medical education (CBTVME) has finally become more than a theoretical ideal. First successfully tried in orthopedics residency training in Canada, CBTVME has been achieved in undergraduate medical education through the Education in Pediatrics Across the Continuum (EPAC) project which was funded by the Macy Foundation. EPAC has now successfully advanced its first cohort of students at four medical schools into GME (six of the 12 students in this cohort advanced to GME in the first semester of their fourth year) and 3 students in the second cohort at one school are already in their intern year having progressed in variable time. The successful completion of residency training by these EPAC students will prove the full success of this medical education model. CBTVME has been facilitated by two advances in medical education; namely the longitudinal integrated clerkships which allow for repeated longitudinal assessment of students by a core group of faculty and also the development of a framework of competencies (the core EPAs and associated milestones) which facilitates these assessments.

CATHERINE LUCEY, MD
University of California, San Francisco School of Medicine
Macy Conference Chair

Competency based, time-variable education holds incredible promise to solve some of our most challenging problems in health care and education. A focus on ensuring that every health professional has the full set of competencies needed to serve our patients will make high quality health care accessible to everyone, regardless of who they know and where they live. And a strategy that minimizes competition for grades and instead prioritizes frequent formative assessment to help each individual achieve their best will create healthier, more supportive environments for our learners and more satisfying roles for our faculty.
We were excited this year to welcome our seventh class of Macy Faculty Scholars. Among the five new scholars are two nurse educators and three physician educators. For the next two years, they will design and implement curricular reforms at their educational institutions. They also will connect with the broader network of 31 current and former Macy Faculty Scholars who are similarly engaged in educational innovations at nursing and medical schools around the country.

One of the new scholars’ projects will introduce and integrate interprofessional education into the required pediatrics clerkship for medical students. Three of the new scholars’ projects will involve the development of interprofessional curricula focused on new areas of study for health professionals, including the impact of disparities on the development of young children, evidence-based evaluation and treatment for substance use disorders and addiction, and health systems science. Another project, also involving the development of new coursework, responds to recommendations from the 2016 Macy Conference to increase educational opportunities in primary care for nursing students.

The Macy Faculty Scholars Program was launched in 2010 to support the career development of leaders and innovators in health professions education. Applicants selected as scholars have demonstrated a commitment to educating health professionals so that they are better prepared to meet the needs of patients within the evolving health care system. They also have shown themselves to be respected colleagues, engaged leaders, dynamic teachers, and creative problem solvers at their schools. And they are increasingly taking on national leadership roles.
As a neonatal nurse practitioner, Ashley Darcy-Mahoney uses her clinical skills to help at-risk infants thrive. As an assistant professor of nursing at The George Washington University (GW) School of Nursing and as a Macy Faculty Scholar, she wants to improve the educational experiences of future pediatric clinicians so that they too can do their best to help children thrive. She is designing a scholars program for nursing and medical students interested in pediatrics so that they better learn how adverse circumstances can impact early brain development of infants and children.

According to Darcy-Mahoney, who also directs infant research at GW’s Autism and Neurodevelopmental Disorders Institute, the evidence is strong that toxic stress and adverse childhood experiences negatively impact developing brains, but the concept is only slowly trickling down into the pediatrics curricula that prepare the health professionals who care for children. “The health professions have been doing a lot in recent years to expose learners to population health concepts, like health disparities and social determinants of health,” said Darcy-Mahoney. “But that effort has been almost entirely about adults, with very little focus on children.”

Darcy-Mahoney will launch a Pediatric Equity Scholars program with a single, online and experiential pilot course in January 2018, and from there, plans to continuously refine and expand the program, incorporating a variety of educational and clinical experiences. She is creating partnerships with community-based programs, such as food banks and homeless shelters, and plans to engage parents in the program, to share real-life stories about their children with the scholars.

“It’s time to recognize that we, as adults, have a very small window in which to make a profoundly positive impact on the brains and lives of children,” said Darcy-Mahoney. “We need to make it a priority.”

Maja Djukic, an assistant professor of nursing at New York University’s (NYU) Rory Meyers College of Nursing, is heeding the call to increase learning opportunities for nursing students interested in primary care practice. In response to recommendations from the Macy report Registered Nurses: Partners in Transforming Primary Care, Djukic began looking for ways to expand opportunities for nursing students at NYU to focus more of their education on primary care practice. Generally, nursing schools focus educational programming for registered nurses on inpatient and acute care delivered in hospitals and other facilities.

“As the demand for primary care physicians and nurse practitioners increases, registered nurses can help expand primary care team capacities by taking on extended roles” Djukic said. “One such
extended role is patient panel management.”

Using a virtual education model, Djukic is developing a set of online, self-directed learning modules, called Integrating Management of Patient Panels Across the Curriculum with Technology (IMPPACT), to teach nursing students how to manage a panel of patients as well as other fundamentals of population health. Students will work with an existing panel of 2,000 virtual patients to learn how to monitor a panel’s health data and identify ways to optimize the health of the entire group of patients. This means, for example, that students will learn to identify patients who have high blood pressure and implement system level strategies for helping patients keep their blood pressure under control, including strategies such as virtual coaching on nutrition and physical activity, and use of registered nurse-led insulin titration protocols.

“Only a small percentage of registered nurses currently work in primary care,” said Djukic, “and those who do are generally underutilized. By adding population health management to the curriculum, I hope that we can both increase the numbers of registered nurses going into primary care and prepare them to take on larger roles that will help better meet the needs of patients.”

**Jed Gonzalo, MD, MSc**  
*Penn State College of Medicine*

Health systems science is a relatively new area of study in health professions schools. It brings together, under one umbrella, such topics as patient safety and quality improvement, population-based care and social determinants of health, patient engagement and advocacy, informatics, high-value care, and health care policy and economics all of which can be taught interprofessionally.

“All of the components of health systems science are crucial for physicians and other health professionals to understand,” said Jed Gonzalo, associate dean and associate professor at Penn State College of Medicine. “Most schools are teaching them to varying degrees, and most schools are devising their own approach. We’ve reached a point where we need standardization across schools in what we teach and how we teach it. So, like a sheaf of wheat, we’ve bundled all these individual topic areas together into a synthetic whole, creating a textbook and establishing the area of ‘health systems science.’”

Gonzalo has been involved in the formal development of health systems science both at Penn State and through the consortium of medical schools that are part of his Accelerating Change in Education grant from the American Medical Association. He will continue his work in the area in two ways:

First, he will refine a one-year-old medical school faculty development program, the Health Systems Science Academy, to make it truly interprofessional. “We want more health professionals than just physicians teaching health systems science, and we want them teaching all types of future health professionals, not just medical students.”

Second, Gonzalo plans to lead the development of a ‘virtual’ version of the Health Systems Science Academy, including curricular materials and faculty development tools, and make it available to other health professions schools.

**Jennifer Kesselheim, MD, MEd**  
*Harvard Medical School*

At Harvard Medical School, interprofessional education
(IPE) is first introduced to pre-clinical medical students through classroom experiences, including via panel discussion among practicing health professionals. However, according to Jennifer Kesselheim, assistant professor of Pediatrics, efforts to reinforce and further develop medical students’ interprofessional competencies during the clerkship years have not yet been systematically integrated into the medical school curriculum.

As a Macy Faculty Scholar, Kesselheim will weave IPE into Harvard Medical School’s required pediatrics clerkship. Her plan is to add four new components to the six-week pediatrics clerkship, including formal introduction to interprofessional collaboration, daily participation in interprofessional practice, reflective journaling and interviews with interprofessional teammates, and an interprofessional simulation experience. She also has plans for rigorous evaluation and continuous quality improvement of the new elements.

“Interprofessional education has been happening in some corners of our clinical curriculum for some time now, but we need to be more deliberate about it,” said Kesselheim. “We need to begin intentionally working with and assessing students around the IPE competencies. We’re starting small—just with the pediatrics clerkship—so that we can work through the details and work out any kinks. But the larger goal is to refine the intervention and adapt it for the other required clerkships.”

Jeanette Tetrault, MD, FACP, FASAM
Yale University School of Medicine

Jeanette Tetrault, an associate professor of medicine at Yale University School of Medicine, has dedicated her career to advancing education and scholarship in the field of addiction medicine. It’s a field that she says needs innovative solutions to address the current opioid crisis our nation faces.

“We have 30-plus years of research demonstrating that the most commonly delivered treatment for substance use—that is, short-term, high-cost, inpatient detoxification—is not the most effective treatment,” said Tetrault, who also directs the Addiction Medicine Fellowship at Yale. “People suffering from addiction are more successful in recovery when they receive ongoing treatment and support. This treatment is ideally delivered in a primary care setting by a team of health professionals, to help patients manage their illness.

Unfortunately, care delivery is only just starting to catch up to the research, and exposure to the chronic disease management approach for addiction is minimal in health professions education.”

As a Macy Faculty Scholar, Tetrault is developing an addiction medicine curriculum to be integrated into Yale’s Interprofessional Longitudinal Clinical Experience (ILCE). In ILCE (which was launched by Macy Faculty Scholar Eve Colson), medicine, nursing, and physician assistant students learn to work together in primary care teams. For the new addiction medicine curriculum, ILCE learners will apply the chronic disease model to addiction, develop their clinical skills in diagnosing and treating addiction, and learn about the challenges that patients and their families may face navigating the health care system. Tetrault plans to rigorously evaluate the curriculum and develop a dissemination toolkit so that it may be replicated.

“Health professions learners are disproportionately exposed to patients suffering from addiction; however, most students don’t receive formal training in evidence-based assessment and treatment,” said Tetrault. “My hope is that by exposing learners early to more effective ways of treating addiction, we can begin to make a dent in the problem at a time when the opioid crisis is overwhelming patients, families, and the healthcare system.”
Catching up with the 2016 Scholars

DorAnne Donesky, PhD, RN  
University of California, San Francisco (UCSF)  
School of Nursing

Dr. Donesky identified a strong need for a palliative care course designed for practicing clinicians by the members of the four core professions—medicine, nursing, social work, and spiritual care—of the palliative care team. She is now leading an interprofessional team at UCSF in the design, implementation, and evaluation of a palliative care continuing education curriculum for practicing clinicians from throughout Northern California. The longitudinal, interprofessional curriculum, which launched in September 2017 and brings learners together monthly, has underlying themes of interprofessional communication and professional wellbeing while exploring topics consistent with the National Consensus Project palliative care guidelines.

Cristina Gonzalez, MD, MEd  
Albert Einstein  
College of Medicine

To help address health disparities, Dr. Gonzalez is creating a curriculum to teach medical students to manage their racial and ethnic implicit biases in clinical encounters. Implicit bias refers to the unconscious, unintentional assumptions about others that all people carry with them. Gonzalez and her team of nine colleagues at Albert Einstein College of Medicine have designed, implemented, and evaluated an implicit bias elective for first-year medical students, which they are refining and expanding for the spring. The team also designed and piloted a virtual patient exercise, and conducted and evaluated a faculty-training course. Their next steps include the integration of implicit bias instruction into relevant courses across the medical school.

Temple Ratcliffe, MD, FACP  
University of Texas Health  
San Antonio

University of Texas Health San Antonio’s and University Health System’s collaborative care initiative features interprofessional teams working in partnership with patients and their families. Citing challenges that new residents and other learners experience when they first enter this novel environment, Dr. Ratcliffe’s efforts as a Macy Faculty Scholar are focused on improving learners’ experiences. To date, new “field guides” have been developed for attending physicians and medical residents, and plans are in the works to revise an orientation video. Progress also has been made on improving learner assessment strategies and on a tool to facilitate the sharing of feedback among team members. Next steps include integrating fourth-year pharmacy students into the teams.
Tyler Reimschisel, MD, MHPE
Vanderbilt University School of Medicine

At Vanderbilt University Medical Center, Dr. Reimschisel is leading a pilot program to create a “Working-Learning Health System” (WLHS) that relies on multi-generational, interprofessional teams to provide personalized, cost-effective, comprehensive health services to a panel of patients. Teams will include faculty and students from medicine, advance practice nursing, and social work as well as pharmacy and physician assistant students. The curriculum will feature three content domains, including: the overarching fundamentals of health systems science; specific content related to managing patient panels; and flexible content that will be identified on an ongoing basis by the team. Comprehensive student assessment as well as rigorous evaluation of the pilot is planned to help determine if the WLHS will become a required rotation for learners in the health professions.

Jing Wang, PhD, MPH, MSN, RN, FAAN
University of Texas Health Science Center at Houston

Dr. Wang hopes to facilitate the delivery of patient-centered, team-based care by increasing health professions students’ competencies in using mobile and connected health technologies. As a Macy Faculty Scholar, she is developing an interprofessional curriculum focused on these technologies. Delivered via a “flipped classroom” (in which learning takes place online and in other non-traditional settings), the curriculum will cover a range of topics including an introduction to mobile and connected health technologies, the application of such technologies among diverse populations and settings, and technology innovation and commercialization. Following an intensive needs assessment process, a pilot course will be launched in January 2018. A Hackathon is planned to convene the course. Efforts to evaluate, refine, expand, and sustain the curriculum are underway.
Assessing Our Effectiveness

Earlier this year, the Josiah Macy Jr. Foundation commissioned an independent survey to assess its effectiveness as a grant-making organization. The evaluation, which was conducted by the Center for Effective Philanthropy (CEP), followed up on a 2009 assessment.

CEP surveyed Macy Board grantees and Macy Faculty Scholars, asking them about the Foundation’s grant-making practices. With a 78 percent response rate, the survey captured thoughtful insights and feedback that will guide the Foundation as it strives to continually improve its operations and advance its mission to better align health professions education with the needs of the public.

Among the findings; those surveyed:

- View the Foundation as a leader and a key source of knowledge in the field
- Agree most strongly that the Foundation has created impact in the areas of interprofessional education and teamwork among health care professionals, and career development of health professions educators and innovators
- Find Macy’s grantmaking processes valuable
- Report straightforward grantmaking processes that are helpful in strengthening their organizations and programs
- Report having strong funder-grantee relationships
- View Macy staff very positively and rate the clarity and consistency of Macy’s communications highly
- Value Macy’s provision of non-monetary assistance
- Forty percent of Macy grantees—a larger proportion than at most other funders—report receiving intensive forms of field-focused or comprehensive assistance beyond the grant check
- Rate Macy highly for the extent to which the Foundation improved their ability to sustain the grant-funded work
- Eighty percent of grantees note that their Macy-funded program has been, or will be, institutionalized at their organization.

Further, CEP found that the Foundation has improved significantly in all areas since the 2009 evaluation, and that in many domains it is a “high outlier” among other foundations surveyed. Overall it found the Macy results within the top five of all 250 foundations they have surveyed.

Macy President George Thibault, MD responded to the report, “These results are very gratifying and indicate that our interventions have clearly paid off. We are grateful to those who participated in the survey, and for the collaborative relationship we have with all our grantees and Macy Faculty Scholars. We look forward to implementing additional changes to further improve our processes and increase our impact. None of this would be possible without the dedicated work of all of the Macy staff.”

The following chart provides a high-level view of the 2017 grantee survey results, showing absolute and comparative ratings for key survey measures. Measures highlighted here correspond to an individual survey measure that is displayed with additional detail in the subsequent pages of the full report which can be found on the Foundation’s website.

Average Rating reports on a 1-7 scale. Percentile Rank reports relative to CEP’s comparative dataset of 250 foundations.
### Josiah Macy Jr. Foundation - Key Ratings

<table>
<thead>
<tr>
<th>Survey Measure</th>
<th>Average Rating on a 1-7 scale</th>
<th>Percentile Rank: relative to CEP’s comparative dataset.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field Impact</td>
<td>6.18</td>
<td>92nd</td>
</tr>
<tr>
<td>Advancing Knowledge</td>
<td>6.44</td>
<td>100th</td>
</tr>
<tr>
<td>Public Policy</td>
<td>5.79</td>
<td>98th</td>
</tr>
<tr>
<td>Organizational Impact</td>
<td>6.08</td>
<td>46th</td>
</tr>
<tr>
<td>Relationships</td>
<td>6.60</td>
<td>98th</td>
</tr>
<tr>
<td>Communications</td>
<td>6.33</td>
<td>96th</td>
</tr>
<tr>
<td>Selection Process</td>
<td>5.35</td>
<td>87th</td>
</tr>
<tr>
<td>Transparency</td>
<td>6.27</td>
<td>98th</td>
</tr>
<tr>
<td>Beneficiary Understanding</td>
<td>5.84</td>
<td>70th</td>
</tr>
</tbody>
</table>
**2017 Board Grants**

**DREXEL UNIVERSITY**

**Project Title:** A Multi-Institution Effort to Advance Professionalism and Interprofessional Education with ProfessionalFormation.org

Drexel University is leading a 13-partner health professions education collaborative to enhance each school’s education in professionalism and interprofessional communication using ProfessionalFormation.org (PF), an online resource for teaching, assessing, and remediating gaps in professional and interprofessional behaviors in healthcare. Interprofessional project faculty are working with each institution to integrate PF into existing curricula and create new programs in professionalism and interprofessional teamwork. The PF faculty assist in planning for pilot testing of new activities; working with the institutions to create robust program evaluations and instituting educational research at each institution; and assisting in creating faculty development programs at each institution. Concurrently, the project team is identifying existing and developing, where needed, evaluation tools to help faculty and students to monitor students’ personal and professional growth. Collaborative members provide the PF team with feedback for new PF videos and content, which will be used in the broader dissemination of the online resource.

**Principal Investigators:**

Dennis Novack, MD
Kimberlee Montgomery, DNP, CRNP-BC, CNE

**Award:** $420,094
**Duration:** 3 years
**Board Date:** January 2017

---

**BOSTON UNIVERSITY**

**Project Title:** A Longitudinal Educational Program to Advance the Health and Health Care of Refugees

Boston University School of Medicine (BUSM) is creating a longitudinal educational program to advance health and health care of refugees. The program provides both required and elective opportunities for students to learn about, practice, and research refugee health. The program includes both didactic and interactive learning curricula customized to focus on refugee health needs that will be required of all first- and second-year students. Research and service learning opportunities, a refugee health clerkship, and an interprofessional refugee health selective (for students from multiple programs at the BU Medical Campus) will be optional for students during each of their four years. This work will broaden the curriculum of BUSM and produce online materials, which will be disseminated to other health professional schools.

**Principal Investigators:**

Sondra Crosby, MD
Suzanne Sarfaty, MD

**Award:** $392,307
**Duration:** 3 years
**Board Date:** May 2017
Ohio University Heritage College of Osteopathic Medicine, in partnership with the Cleveland Clinic, has developed an accelerated family medicine curriculum, to begin in 2018, which will allow learners to complete undergraduate and graduate medical education in six years. During undergraduate education, the family medicine learners will be embedded in an interprofessional practice team at one clinic. In preparation for the new curriculum, this grant will enable interprofessional faculty to be trained in better teaching practices, including better assessment and feedback. In addition, the College will develop faculty to work with students to enable them to do population-based quality improvement work. These Master Educators will train others and foster the sustainability and spread of the accelerated curriculum within the Ohio University-Cleveland Clinic sites.

Principal Investigator:
Leanne Chrisman-Khawam, MD

Co-Principal Investigator:
Isaac Kirstein, DO

Award: $299,272
Duration: 2 years
Board Date: October 2017
ICAHN SCHOOL OF MEDICINE
AT MOUNT SINAI

This award supports an interprofessional facilitated discussion group to address job burnout for staff physicians, residents, nurses, and social workers. The intervention is based on a curriculum designed to alleviate burnout symptoms in practitioners’ professional lives.

$35,000
Award: January 2017

THE ARNOLD P. GOLD FOUNDATION

This award supports Cultivating Resiliency Through Humanism and Community, a conference of the Gold Humanism Honor Society. The meeting will include student posters, breakout sessions, and plenary talks to disseminate best practices for humanistic approaches to education and care and the culture of resiliency.

$35,000
Award: January 2017

BAYLOR COLLEGE OF MEDICINE

This award supports the development of a curriculum and film, The Threads Among Us, to address and increase physician-to-physician empathy. The film explores the physician-to-physician dynamic while the curriculum will focus on interprofessional empathy and will be used with healthcare professionals in lectures and workshops.

$28,000
Award: February 2017

EQUALHEALTH

This award supports Beyond Reimagining, Accelerating Praxis a conference hosted by the Social Medicine Consortium. The conference will bring together health professionals, educators, and social justice activists to create a deeper understanding of social medicine and health inequities, to develop advocacy skills, and to disseminate tools used in the practice of social medicine.

$35,000
Award: February 2017

NATIONAL MEDICAL FELLOWSHIPS, INC.

This award supports the Josiah Macy Jr. Foundation Scholarship program at the National Medical Fellowships. The program provides six scholarships on the basis of financial need and academic merit for second- and third-year underrepresented minority medical students.

$33,000
Award: February 2017

UNIVERSITY OF MINNESOTA

This award supports a faculty development initiative in interprofessional education and practice within the American Interprofessional Health Collaborative (AIHC). The AIHC will implement, evaluate, and expand the programs (online networking community, career mentoring, how-to IPE vodcast series) across the United States.

$34,562
Award: February 2017
UNIVERSITY OF WASHINGTON

This award supports a new interprofessional curriculum in injury prevention that will be used in all University of Washington health science schools (medicine, nursing, public health, pharmacy, dentistry, and social work) for both undergraduate and graduate students.

$35,000
Award: February 2017

ACCREDITATION COUNCIL FOR CONTINUING MEDICAL EDUCATION

This award supports Promoting Research Across the Continuum of Health Professions Education: Making Patient Care Better, a summit that brings together leaders in interprofessional education research and accrediting organizations to create and share evidence-based models of interprofessional continuing education.

$16,000
Award: March 2017

INSTITUTE ON MEDICINE AS A PROFESSION

This award supports a two-day conference to bring together the 19 award recipients from the Macy-IMAP Educating to Professionalism program to discuss how the projects have impacted their institutions and to include recommendations for how to advance the field of education in professionalism.

$35,000
Award: March 2017

MASSACHUSETTS GENERAL HOSPITAL

This award supports the Compassion Scholars Program, a joint program of the Schwartz Center for Compassionate Healthcare and the American Association of Colleges of Nursing. The program is for medical, nursing, and other health professional students to learn about the positive impact of compassion on patients and their families, caregivers, teams, and organizations in enhancing health, resilience, and well-being and to undertake a mentored project in their institution.

$33,450
Award: March 2017

ROCKEFELLER PHILANTHROPY ADVISORS (JONAS CENTER FOR NURSING AND VETERANS HEALTHCARE)

This award supports a conference that will bring together nearly 450 Jonas Nurse Scholars (doctorally-prepared nurses who will become nurse educators and researchers). The purpose of the conference is to explore mentoring and educational opportunities with their peers and with clinical and educational leaders, executives, and policy leaders.

$10,000
Award: March 2017

UNIVERSITY OF MISSOURI SCHOOL OF MEDICINE

This award supports patient partners as permanent members of the annual Health Professions Educators’ Summer Symposium, an interprofessional community of health professions educators whose mission is to nurture and sustain leaders to spur improvement in health care. The grant will also support a publication detailing the results of having patient partners as part of the summit.

$35,000
Award: March 2017
THE UNIVERSITY OF TEXAS AT AUSTIN
This award supports the Choosing Wisely Medical Student Leadership Program summit at Dell Medical School. The summit will bring together medical students from 20 schools to instill principles from the Choosing Wisely campaign.
$21,000
Award: March 2017

BRANDEIS UNIVERSITY
This award supports the development of resources and trainings for non-chaplaincy interprofessional geriatric staff and clinicians in culturally competent spiritual care.
$35,000
Award: June 2017

UNITED HOSPITAL FUND
This award supports the James R. Tallon, Jr. Strategic Initiatives Fund, which will support objective analysis of affordable and comprehensive insurance coverage, the viability of the health care safety net, and the need for innovation to address cost and improve quality of care in New York.
$10,000
Award: June 2017

UNIVERSITY OF ALBERTA (CAB VI)
This award supports the US and Canadian Collaborating Across Borders VI Conference, a joint US/Canadian conference focusing on important issues in interprofessional education and practice.
$10,000
Award: June 2017

URU, THE RIGHT TO BE, INC.
This award will support a congressional forum on Changing the Face of STEM, and include a screening at the National Academy of Medicine of Black Women in Medicine, a Macy-supported documentary.
$5,000
Award: June 2017

THE ADDICTION MEDICINE FOUNDATION
This award supports the outreach and expansion of addiction medicine fellowship training programs across the country. Concurrently, the Foundation will work to export competency-based learning in prevention and treatment across undergraduate medical education, residency training, and health care practice.
$35,000
Award: July 2017

COLUMBIA UNIVERSITY
This award supports an analysis of the feasibility of creating and sustaining a new interprofessional doctoral education program designed to train health care and public health leaders in population health science, systems, and leadership.
$35,000
Award: July 2017

GEORGE WASHINGTON UNIVERSITY
This award supports the Josiah Macy Jr. Foundation Awards for Excellence in Social Mission in Health Professions Education. The awards, which recognize achievements in social mission in health professions education, will be presented at the 2018 Beyond Flexner conference.
$35,000
Award: July 2017

NEW YORK ACADEMY OF MEDICINE
This award supports the Jo Ivey Boufford East Harlem Initiatives Fund, which will support ongoing and future efforts to make East Harlem a healthier place to live, work, and play and to support the education and training of staff for that work.
$35,000
Award: July 2017
ASSOCIATION OF AMERICAN MEDICAL COLLEGES

This award supports an Academic Medicine supplemental issue on competency-based time-variable education in health professions. The issue is a direct follow up to the 2017 Macy Conference, *Achieving Competency-Based, Time-Variable Health Professions Education*.

$35,000

Award: August 2017

NATIONAL ACADEMY OF SCIENCES

This award supports an ad hoc committee to examine the potential for integrating services addressing social needs and the social determinants of health into the education of health professionals and the delivery of health care. The goal is to achieve better health outcomes and to address major challenges to the US healthcare system.

$35,000

Award: August 2017

NEW YORK UNIVERSITY

This three year award supports interprofessional students attending the Hermann Biggs Society Health Policy meetings.

$18,354

Award: August 2017

ACCREDITATION COUNCIL FOR GRADUATE MEDICAL EDUCATION

This award supports a symposium for the National Collaborative for Improving the Clinical Learning Environment. The symposium will bring together stakeholders in the clinical learning environment to define the optimal interprofessional clinical learning environment and the implications for how these characteristics exhibit themselves in clinical service units, hospitals and clinics, and the health system. The symposium will be held jointly with the National Advisory Committee for the National Center for Interprofessional Practice and Education.

$35,000

Award: September 2017

ARIZONA STATE UNIVERSITY FOUNDATION

This award will support the development and testing of a comprehensive, team-centered education intervention for primary care teams serving vulnerable and underserved populations. The intervention will focus on team performance and team self-care and the creation of a model for academic clinical collaboration. The grantee plans to use this work as a foundation to seek funding to implement at primary care clinical sites statewide.

$34,994

Award: November 2017

MAINE MEDICAL CENTER

This award will support the Interprofessional Partnership to Advance Care and Education, a summit that will bring together senior leadership, faculty, front line workers, and stakeholders from the Accreditation Council for Graduate Medical Education. The summit will lay the foundation for expanding a clinical learning environment redesign, which began as a pilot within Maine Medical Center in 2016.

$35,000

Award: November 2017

NATIONAL ACADEMIES OF PRACTICE

This award will support Laying the Foundation for Boldly Advancing Interprofessional Healthcare in America, a forum to showcase national scholarly work and works in progress to advance interprofessional practice, education, policy, and research.

$12,000

Award: December 2017
Board of Directors and Staff

CHAIRMAN OF THE BOARD
William H. Wright II, MBA
Former Managing Director
Morgan Stanley

BOARD MEMBERS
David Blumenthal, MD, MPP
President
The Commonwealth Fund

George Campbell Jr., PhD
President Emeritus
The Cooper Union for the Advancement of Science and Art

Francisco G. Cigarroa, MD
Professor of Surgery and Director of Pediatric Transplantation
The University of Texas Health Science Center at San Antonio

Linda Cronenwett, PhD, RN, FAAN
Dean Emerita and Professor
The University of North Carolina at Chapel Hill School of Nursing
Co-Director
Robert Wood Johnson Foundation Executive Nurse Fellows Program

Linda P. Fried, MD, MPH
Dean and DeLamar Professor of Public Health
Professor of Epidemiology and Medicine
Columbia University
Mailman School of Public Health
Senior Vice President
Columbia University Medical Center

Terry Fulmer, PhD, RN, FAAN
President
John A. Hartford Foundation

Henry P. Johnson, MBA
President Wealth Management – Eastern Region
Northern Trust

Howard K. Koh, MD, MPH
Harvey V. Fineberg Professor of the Practice of Public Health Leadership
Harvard T.H. Chan School of Public Health
Co-Chair
Harvard Advanced Leadership Initiative

Paul G. Ramsey, MD
Chief Executive Officer of UW Medicine
Executive Vice President for Medical Affairs
Dean of the School of Medicine
University of Washington

George Rupp, PhD
Former President and Chief Executive Officer
International Rescue Committee

Steven M. Safyer, MD
President and Chief Executive Officer
Montefiore Medical Center

George E. Thibault, MD
President
Josiah Macy Jr. Foundation

Mary K. Wakefield, PhD, RN, FAAN
Visiting Professor
The University of Texas at Austin and Georgetown University

Gregory H. Warner, MBA
President
Ingleside Investors

STAFF
George E. Thibault, MD
President

Peter Goodwin, MBA
Chief Operating Officer and Treasurer

Stephen C. Schoenbaum, MD, MPH
Special Advisor to the President

Karen Butler
Assistant Treasurer

Eric Hoffman
Program Assistant,
Macy Faculty Scholars Program

Yasmine R. Legendre, MPA
Program Associate

Ellen J. Witzkin
Executive Assistant to the President

*Term ended in 2017
**Term commenced in 2017
Statements of Financial Position
YEARS ENDED JUNE 30, 2017 AND 2016

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>$ 4,119,789</td>
<td>$ 2,167,061</td>
</tr>
<tr>
<td>Investments, at fair value</td>
<td>127,336,556</td>
<td>118,161,963</td>
</tr>
<tr>
<td>Due from broker</td>
<td>1,065,625</td>
<td>2,940,554</td>
</tr>
<tr>
<td>Accrued interest and dividends receivable</td>
<td>117,089</td>
<td>6,122</td>
</tr>
<tr>
<td>Prepaid expenses and other assets</td>
<td>81,600</td>
<td>74,800</td>
</tr>
<tr>
<td>Property and equipment, at cost, less accumulated depreciation</td>
<td>4,571,034</td>
<td>4,774,948</td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td>$137,291,693</td>
<td>$128,125,448</td>
</tr>
<tr>
<td><strong>Liabilities and Net Assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liabilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grants payable</td>
<td>$ 641,002</td>
<td>$ 642,264</td>
</tr>
<tr>
<td>Other accrued liabilities</td>
<td>231,304</td>
<td>212,609</td>
</tr>
<tr>
<td>Deferred federal excise tax</td>
<td>115,462</td>
<td>122,854</td>
</tr>
<tr>
<td><strong>Total Liabilities</strong></td>
<td>987,768</td>
<td>977,727</td>
</tr>
<tr>
<td>Net Assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unrestricted</td>
<td>136,303,925</td>
<td>127,147,721</td>
</tr>
<tr>
<td><strong>Total Liabilities and Net Assets</strong></td>
<td>$137,291,693</td>
<td>$128,125,448</td>
</tr>
</tbody>
</table>
States of Activities
YEARS ENDED JUNE 30, 2017 AND 2016

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dividends, interest and other income on investments</td>
<td>$ 2,006,821</td>
<td>$ 2,432,877</td>
</tr>
<tr>
<td>Net realized and unrealized gain (loss) on investments</td>
<td>15,865,696</td>
<td>(8,069,394)</td>
</tr>
<tr>
<td>Investment counsel and custodian fees</td>
<td>(832,844)</td>
<td>(734,163)</td>
</tr>
<tr>
<td>Provision for taxes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current excise tax</td>
<td>(174,378)</td>
<td>(44,653)</td>
</tr>
<tr>
<td>Deferred excise tax benefit</td>
<td>7,392</td>
<td>108,540</td>
</tr>
<tr>
<td><strong>Total Revenue (Loss)</strong></td>
<td>16,872,687</td>
<td>(6,306,793)</td>
</tr>
</tbody>
</table>

| **Expenses**                |            |            |
| Salaries                    | 1,770,307  | 1,724,620  |
| Employee benefits           | 334,162    | 322,909    |
| Professional services       | 234,728    | 169,497    |
| Equipment and minor improvements | 92,487    | 56,773     |
| Utilities, insurance and building maintenance | 69,631    | 73,921     |
| Travel                      | 91,938     | 62,769     |
| Director meetings expense   | 48,568     | 51,406     |
| Other administrative expenses | 173,996   | 165,282    |
| Depreciation                | 240,576    | 246,319    |
| Grants, Conferences and Publications |          |            |
| Health professional education grants | 2,304,895  | 2,807,980  |
| Grant refunds               | (87,605)   | (60,361)   |
| President's discretionary grants | 495,012   | 477,375    |
| Matching gift grants        | 108,749    | 148,710    |
| Macy faculty scholars grants and related expenses | 1,533,820  | 1,653,338  |
| Conference expenses         | 145,849    | 150,562    |
| Publications                | 135,320    | 83,067     |
| Organizational dues         | 24,050     | 20,050     |
| **Total Expenses**          | 7,716,483  | 8,154,217  |

Increase (decrease) in net assets | 9,156,204 | (14,461,010) |
Net assets, beginning of year | 127,147,721 | 141,608,731 |

**Net Assets, End of Year**

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$136,303,925</td>
<td>$127,147,721</td>
</tr>
</tbody>
</table>