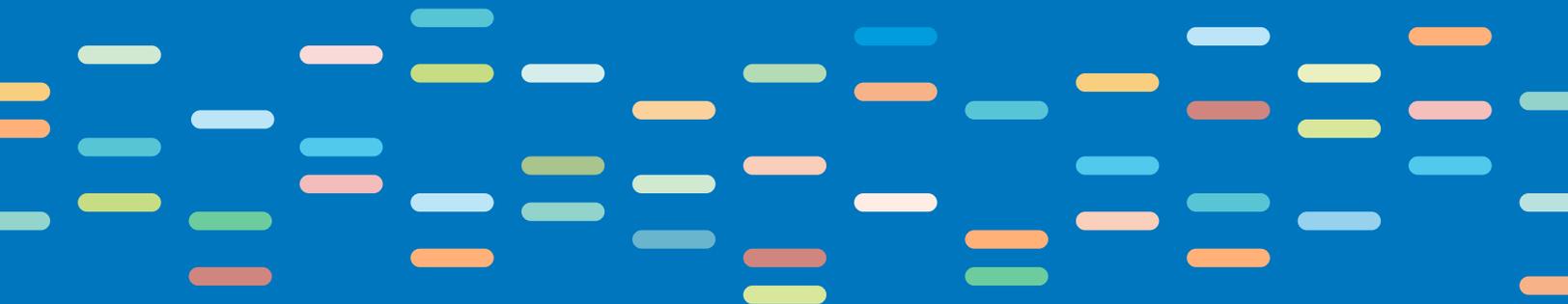


Yale Medicine  
Annual Report

2018



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## Message from the CEO



As we have done in the past, we are pleased to provide you with a brief summary of the performance, achievements, and strategic initiatives of Yale Medicine (YM) in 2018. Given the fast pace of our daily lives, it is essential for us to take a step back to reflect on our accomplishments over the past year. But as you read through this Annual Report, it is also important to appreciate that it captures only a sliver of our clinical activity, and it does not reflect the enormous effort that goes into teaching our residents, fellows, and students or the breadth and depth of our world-class research. Rather, it is designed to showcase a few key areas of energy and success within our clinical enterprise and to share our strategic priorities for the practice.

I am happy to report that our patient volumes continue to increase, we are achieving better utilization of our assets across New Haven, and our patient satisfaction scores remain on the rise. We continue to expand our Stamford, Conn., site and are developing plans to partner more closely with Greenwich Hospital to provide additional services in lower Fairfield County. Yale Clinical Optimization Services is making a substantial operational impact across the system, while focusing on enhancing the physician and patient experience. Our Network Development and Strategy team continues to work with referring providers to improve their experience and increase referrals to YM. In Population Health, we have successfully launched an eConsult initiative with the departments of Cardiology and Neurology, with very promising early results.

We have also implemented several initiatives to help enhance the daily working environment for our physicians. Specifically, we instituted Tap and Go to reduce the number of times a provider must manually log into Epic; we installed Mobile Heartbeat on phones for enhanced communication between clinicians; and recently we completed a virtual scribe pilot, which is resulting in virtual scribes being rolled out across the practice.

Most importantly, YM has worked tirelessly with Yale New Haven Health (YNHHS) to strengthen and enhance our relationship. Critical to this effort is the integration of key leaders across the institutions. Our recent recruitment of Steven Choi, MD, as the inaugural Chief Quality Officer for YM and YNHHS is already having a positive impact. Moreover, Peter Schulam, MD, PhD, has taken on a joint role as the Chief Innovation and Transformation Officer for both YM and YNHHS. Also in 2018, Rogerio Lilenbaum, MD, was named the inaugural Chief Medical Integration Officer for Ambulatory Services for YNHHS, Northeast Medical Group, and YM. These three joint appointments demonstrate our commitment to work together to achieve the goal of an integrated health system.

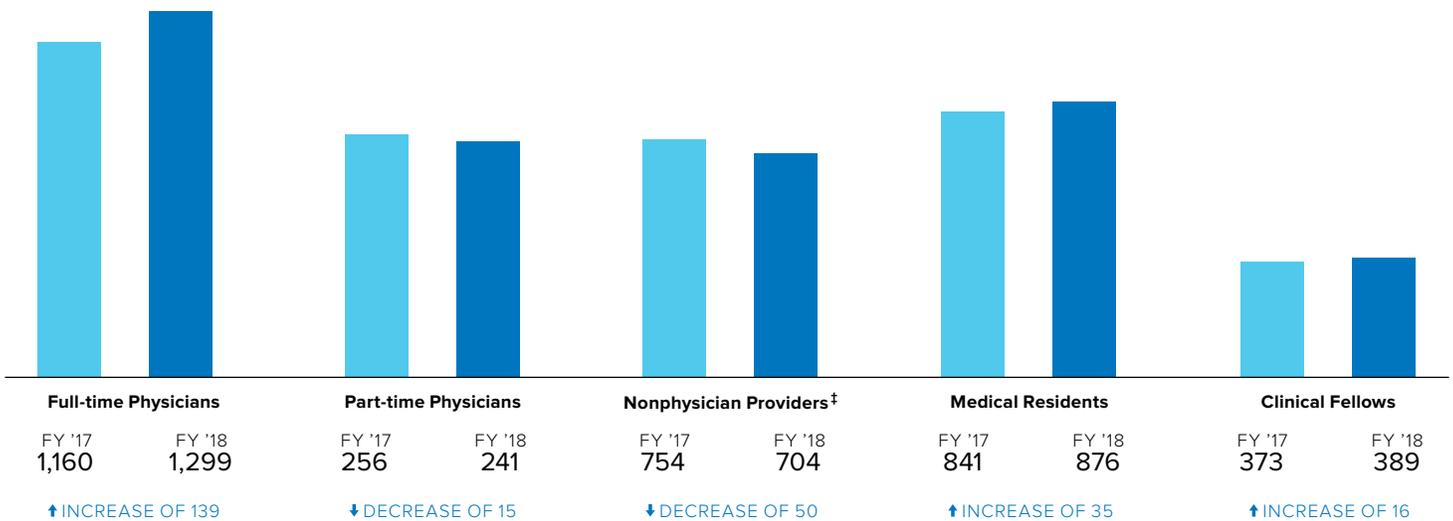
Please take a few minutes to read this document, as it reflects the success of initiatives and activities that have been launched and approved by your YM Board. The leadership of the practice and the YM Board are honored and grateful for the opportunity to serve. As always, if you have any questions, thoughts, or concerns, please give me a call or send an email. I wish you a very happy and productive 2019.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul Taheri MD, MBA". The signature is fluid and cursive, with a small flourish at the end.

Paul Taheri, MD, MBA  
CEO, Yale Medicine

# Facts and Figures



\* Includes all credentialed providers. † Approximately 2,600 staff members support YSM's clinical mission. ‡ Includes advanced practice registered nurses, physician assistants, licensed nurse midwives, certified nurse anesthetists, licensed clinical social workers, audiologists, and other health care providers.



## Yale Medicine Continues to Experience Strong and Steady Growth

In 2018, Yale Medicine (YM) continued to work on many fronts to optimize our clinical activity and enhance the patient and provider experience. From new technologies to quality initiatives, from new and renovated facilities to a growing digital footprint, we have been working to implement a wide range of improvements across the enterprise.

These continued efforts have helped us to achieve strong and sustained growth:

- In 2018, YM saw an 8 percent increase in completed patient visits over the prior year (1,137,560 completed visits in 2018 as compared to 1,054,122 in 2017, an increase of 83,438).
- Visit volumes at the Yale Physicians Building rose by 11 percent, from 125,836 in 2017 to 139,452 in 2018.
- Patient satisfaction (Press Ganey) scores continue to rise, from 92.5 percent in 2017 to 92.8 percent in 2018.
- Through a series of process improvements, YM experienced a 4.7 percent increase in copay collections across all YM locations, from 56 percent in 2017 to 60.7 percent in 2018. In YM Administration-managed departments, copay collections increased from 82 percent to 85 percent. Copays collected in 2018 totaled \$2,207,306.
- YM's bump rate (the provider-initiated cancellation rate) remained steady at a low of 0.6 percent, better than many of our peers nationally.

Long Ridge Medical Center in Stamford, home to a multispecialty practice with a focus on musculoskeletal care, is one of many areas where Yale Medicine saw steady growth in 2018.

ROBERT LISAK PHOTO

## **MAKING INROADS IN FAIRFIELD COUNTY**

While YM's patient base continues to expand in the New Haven area, the Long Ridge Medical Center (LRMC) in Stamford is also experiencing steady growth. The Stamford practice, which opened in the fall of 2016, represents YM's first major effort to penetrate the highly competitive lower Fairfield County market. The past year has been a significant one for the practice, with extensive efforts to build relationships with community providers, as well as plans for future expansion.

The Center brings together the resources of YM and Yale New Haven Health in a multispecialty practice that includes orthopaedic surgery, neurosurgery, rheumatology, neurology, and physiatry. In 2018, the practice experienced a 14 percent increase in patient volume. The number of completed patient visits at LRMC rose from 9,665 in 2017 to 11,267 in 2018, an increase of 1,602 visits.

In early 2017, Craig D. Tifford, MD, was named to the new position of medical director for Long Ridge Medical Center. An orthopaedic surgeon who specializes in sports medicine, he has been practicing orthopaedic surgery in the Stamford area since 2000.

Lower Fairfield County's proximity to New York City makes it an exceptionally competitive area that demands aggressive marketing, among other strategies. With his extensive knowledge of the Stamford market, Dr. Tifford has been working exhaustively to strengthen relationships with lower Fairfield County primary care physicians. For example, he and members of YM's physician liaison team have visited physicians throughout the Stamford and Greenwich area and have organized lunches at local practices, where primary care doctors can meet some of the LRMC clinicians in an informal setting.

"Those kinds of grassroots efforts have really proven to be worthwhile," Dr. Tifford says.

Strategic growth initiatives planned for 2019 include expanded operating hours, to enable provision of after-hours and weekend orthopaedic urgent care services.

In addition, LRMC has plans to add new subspecialties, as well as additional service lines. For example, a full-time orthopaedic foot and ankle surgeon is being recruited, and the Yale Transplant Service is going to start seeing patients in Stamford in the near future. The practice is performing an increasing number of procedures on site, including fluoroscopically guided injections and an array of orthobiologic treatments for various musculoskeletal conditions.

YM's effort to break into the lower Fairfield County market is much like nurturing a startup company – it requires a great deal of attention, time, and patience, Dr. Tifford says. "We are definitely growing and moving in the right direction."

**For more information, please contact Chief Operating Officer  
Maryam Saeri at [maryam.saeri@yale.edu](mailto:maryam.saeri@yale.edu).**



## Working Together to Enhance Quality and Safety

Yale Medicine and Yale New Haven Health (YNHHS) took significant steps forward in 2018 in their joint commitment to enhancing quality across both enterprises.

In September, after a national search, Steven Choi, MD, was hired as the first-ever chief quality officer for YM and YNHHS. His objective is a lofty one: to develop a single, unified strategy for quality and safety across all inpatient and ambulatory YM and YNHHS practice sites.

Later in the fall, YM's Quality Committee and the YNHHS Quality Council joined forces, creating a joint group that will drive the quality agenda across both enterprises. The new, combined body includes more than 40 clinical and operational leaders from both organizations. It will be led jointly by Dr. Choi; Gary Desir, MD, chair of Internal Medicine and chair of the YM Board; and Katie O'Leary, executive director of safety and quality for YNHHS.

### INITIAL PLAN IN EARLY 2019

Dr. Choi plans to issue an initial, integrated quality and safety plan for YM and YNHHS in early 2019, and continue to build on it over time. The plan will be built around the central goal of closer collaboration and integration between the two organizations, so they can operate seamlessly with regard to quality and safety.

During his first four months as chief quality officer, Dr. Choi met with nearly 100 physicians and other clinical and operational leaders across YM and YNHHS in order to hear their needs, learn where there are opportunities for improvement, and build engagement and consensus.

"I see my role as one that is aimed at helping providers execute best practices," he says. "Regardless of where you sit, across both organizations, the missions align – and that is to

Steven Choi is the inaugural Chief Quality Officer for Yale Medicine and Yale New Haven Health.

HAROLD SHAPIRO PHOTO

## Quality

provide the highest quality care to our patients. That's what attracted me to quality – it is a universally accepted common interest for everyone working in health care.”

Dr. Choi is uniquely suited for this role. A pediatric cardiac intensivist, Dr. Choi worked most recently at Montefiore Health System in New York, where he served as associate professor of pediatrics, as the system's assistant vice president, and as director of Montefiore Network Performance Improvement. He also created and served as executive director of the Montefiore Institute for Performance Improvement. He was instrumental in the development of an integrated performance improvement plan for the health system and improved performance against publicly reported quality indicators.

Dr. Choi believes passionately in the science of quality improvement. He is an avid learner of “improvement science” and has closely studied the work of Walter A. Shewhart and W. Edwards Deming, who developed the essential principles of quality improvement over the past century.

“My philosophy with regard to health care delivery improvement is that it needs to be a fusion of principles and methodologies in improvement science, change management, and leadership,” Dr. Choi says. The traditional approach to performance improvement is to primarily focus on outcomes, but improvement science requires a steadfast commitment to process management and attention to key drivers and leading indicators that ultimately lead to successful transformation.

One of the many things that attracted Dr. Choi to Yale is the opportunity to collaborate with other schools and such programs across the University as management, public health, and engineering, and he hopes to take advantage of that in the near future.

“I think health care is just beginning to recognize and embrace the untapped potential of working with other industries when redesigning our delivery model,” Dr. Choi says.

Dr. Choi earned his medical degree from Robert Wood Johnson Medical School, completed pediatric residency training at Columbia University/Morgan Stanley Children's Hospital of New York, and a critical care fellowship at the University of Southern California School of Medicine/Children's Hospital in Los Angeles. He lives in Westport with his wife, Elizabeth, and their three children.

**For more information, please contact Chief Quality Officer  
Steven Choi, MD at [steven.choi@ynhh.org](mailto:steven.choi@ynhh.org).**



## Virtual Scribes: Valuable New Tool is Being Rolled Out Across the Practice

Among the key members of Dr. Douglas Hildrew's practice is a colleague named Amber. Dr. Hildrew and Amber are so in sync that she anticipates his needs before every patient visit, enables him to spend more time with each patient, and can even tell if he's concerned about something by changes in his voice.

But Dr. Hildrew and Amber have never actually met.

Amber is a "virtual scribe" – a certified medical scribe who documents patient visits from a remote location. With the patient's permission, virtual scribes listen to each patient encounter and provide synchronous, off-site scribing services including note creation and documentation, chart navigation, and pending of nonmedication orders.

The use of virtual scribes has been shown to significantly reduce the amount of time physicians have to spend after hours documenting patient encounters in the electronic medical record – some have even described it as "life-changing." At the same time, it allows doctors to spend more time focusing on patients and less time on the computer during patient visits.

Following a successful pilot in 2018, Yale Medicine is now preparing to make virtual scribes available to physicians across the practice, through a phased deployment that will begin in early 2019. While virtual scribes are not right for everyone, they will be an option for all YM providers who choose to use them.

Douglas Hildrew, an otolaryngologist, talks with a patient while a virtual scribe listens in remotely though a conference speaker phone and documents the session in Epic.

ROBERT LISAK PHOTO

# Technology

## **A PROMISING PILOT**

In 2017–18, 49 YM and Northeast Medical Group providers across multiple specialties took part in the virtual scribe pilot, and the results were extremely positive. For example, after-hours Epic use by participating physicians went from 11 days per month to five days per month. The number of days to close encounters decreased from approximately four days to 1.5 days.

A physician survey and a review of key metrics also found increased physician satisfaction and well-being; the ability to see more patients, if desired; and an increase in relative value units (RVU) per visit and RVU per day. In addition, the use of virtual scribes significantly improved patient satisfaction, allowing doctors to focus exclusively on their patients without being distracted by typing notes and navigating within Epic.

## **AN EXTENSION OF THE CARE TEAM**

Dr. Hildrew, who specializes in otology, neurotology, and skull base surgery, is one of the YM physicians who took part in the virtual scribe pilot. He especially likes the fact that M\*Modal, the company that provides virtual scribe services to YM, works hard to match physicians and scribes who will work well together.

“They do a really good job of pairing you with someone who’s a partner. Amber is much more than a scribe; she’s really an extension of my care team.” For example, when Dr. Hildrew begins a patient encounter, Amber has already started the note and brought his attention to lab results, imaging results, and any other updates since the patient’s last visit.

“That saves me a lot of clicks, which improves my workflow and saves me a lot of time that’s not directly involved in the patient encounter,” Dr. Hildrew says. “I can take all that time that I would have spent clicking, and I can now spend it with my patients. I think patients feel that I’m more engaged with them.”

In addition to patients, referring providers also benefit from the use of virtual scribes by YM specialists, Dr. Hildrew says. Amber copies referring providers on all patient notes, and Dr. Hildrew now has more time to provide them with additional information if their patient has an especially complex condition.

“I’ve had a lot of positive feedback from referring providers on the quality of the note and the speed and efficiency with which they receive it,” Dr. Hildrew says. “The more they know, the better the bond is with their patient.”

The bottom line? Virtual scribes are “game-changing,” says Dr. Hildrew. “In a postelectronic medical world that is so burdened with clicks, it once again gives us the power back to do what we really want to do – patient care.”

[\*Click to watch Dr. Hildrew discuss the benefits of virtual scribes.\*](#)

The virtual scribe project has been led by Chief Clinical Transformation Officer Babar Khokhar, MD; Allen Hsiao, MD; and Chief Information Officer Lisa Stump.

**For more information, please contact Chief Clinical Transformation Officer Babar Khokhar, MD, MBA at [babar.khokhar@yale.edu](mailto:babar.khokhar@yale.edu)**

# Strategic Alignment



## YM and YNHHS Work to Strengthen Partnership and Enhance Alignment

Yale Medicine and Yale New Haven Health are working to strengthen and enhance their relationship on many levels, in order to achieve the goal of an integrated health system.

TERRY DAGRADI PHOTO

From clinical initiatives to investment strategies to strategic planning, Yale Medicine and Yale New Haven Health (YNHHS) are working to align many aspects of their operations in order to provide a seamless and unparalleled experience for patients.

In 2018, the two organizations continued to enhance their collaborative relationship and took a number of significant steps toward alignment of their clinical operations and strategic priorities.

### JOINT APPOINTMENTS

YM and YNHHS made three high-level, joint appointments in 2018 in order to implement a unified vision of quality and safety; create a common, integrated standard of care; and develop and coordinate new clinical relationships. The three positions were all newly created, with dual reporting to both organizations.

**Steven Choi, MD**, was named the inaugural **Chief Quality Officer** for YM and YNHHS following a comprehensive national search. In this role, Dr. Choi is responsible for developing and overseeing the implementation of a common safety and quality agenda across all inpatient and ambulatory YM and YNHHS practice sites. For more about Dr. Choi, see article on page 7.

**Rogério Lilenbaum, MD**, is the inaugural **Chief Medical Integration Officer for Ambulatory Services** for YNHHS, Northeast Medical Group (NEMG), and YM. In this new role, Dr. Lilenbaum will be responsible for partnering with YNHHS, YM, and clinical leadership to create and deploy common practice standards and a single signature of care across all ambulatory practice sites. Dr. Lilenbaum previously served as chief medical officer at Smilow Cancer Hospital, which he helped shape into a leading center of clinical excellence and innovation.

**Peter Schulam, MD, PhD**, has taken on the new role of **Chief Innovation and Transformation Officer** for YNHHS, in addition to his existing roles as chair of urology at YM; chief of urology at Yale New Haven Hospital (YNHH); and faculty director of the Tsai Center for

# Strategic Alignment

Innovative Thinking at Yale University. In his new position, Dr. Schulam will be responsible for facilitating the development and coordination of clinical relationships with system delivery networks and with selected affiliate hospitals.

## **SHARED SERVICES**

Through a shared services agreement, YNHHS invests in services and expertise from YM physicians. Shared services funding represents approximately 34 percent of total clinical income. Historically, the shared services arrangement has been implemented in a decentralized, piecemeal manner, in which individual departments negotiate funding for specific positions in a vacuum, without regard to strategic priorities and “big picture” goals.

In recent years, YM and YNHHS have been working to change this, so that shared services funding decisions are made in a more holistic manner, with an eye toward long-term programmatic needs that advance performance and patient care. A joint committee was established, representing both organizations, to oversee funding decisions under the shared services agreement.

Now YM and YNHHS have developed a set of shared services principles to increase transparency and ensure that funding decisions are based on such factors as program performance, patient needs, and strategic priorities.

“The focus will change from a reactive system to a broader, proactive investment strategy that supports the goal of a high-performing academic medical center on a national stage,” says YM Chief Administrative Officer Fred Borrelli.

## **AMBULATORY OPTIMIZATION**

When patients visit ambulatory sites within the YM and YNHHS systems, it’s important for them to know that they can count on the same standards of excellence and the same kinds of experiences at all locations.

That’s why YM and YNHHS are working together to optimize ambulatory sites across both systems. Babar Khokhar, MD, YM chief clinical transformation officer, and Christopher O’Connor, executive vice president and chief operating officer of YNHHS, have been working to integrate and standardize YM and YNHHS ambulatory locations. The goal is for all sites to have a similar look and feel for patients, similar technology, and consistent operating standards.

They began by performing assessments of large ambulatory sites in each delivery network, looking at such areas as operations, facilities, technology, usage, and programs. A steering committee was formed to oversee the process, with representation from each YNHHS delivery network as well as YM and NEMG. The project has now moved to Phase 2, in which the information gleaned from the assessments will be used to integrate and standardize the ambulatory locations. Rogerio Lilenbaum, MD, has joined the committee that is overseeing ambulatory optimization as a co-chair, along with Khokhar and O’Connor.

## **STRATEGIC PLANNING WITH YNHHS, JOINT MEETINGS WITH NEMG**

Ambulatory optimization cannot take place in a vacuum – it is dependent upon a set of joint strategic priorities. Toward that end, leaders of YM and YNHHS have been engaged in joint strategic planning in order to enhance practice integration and alignment.

“To function as one, you have to have a shared vision and mission, and you have to have a shared strategic plan,” says YM Chief Strategy Officer Kimbirly Moriarty.

In a related initiative, leaders of YM and NEMG, part of YNHHS, began meeting monthly in 2018 to discuss and collaborate on such areas as patient care, best practices, physician issues, patient access, and referral management. The goal is to develop a closer relationship between the two enterprises in order to create a seamless experience for patients who may be referred by NEMG doctors to YM specialists.

**For more information, please contact Chief Strategy Officer Kimbirly Moriarty at [kimbirly.moriarty@yale.edu](mailto:kimbirly.moriarty@yale.edu).**

# Clinical Transformation: Optimization



## Team Produces Measurable Improvements through Detailed Assessments of Clinical Sites

Efforts to provide an exceptional experience for patients and physicians in any clinical practice must begin with a comprehensive review of the practice's current operations, in order to determine where there are opportunities for improvement.

Each year, Yale Clinical Optimization Services (YCOS) conducts such assessments across Yale Medicine and Yale New Haven Hospital ambulatory sites, identifies opportunities for improvement, and implements a variety of recommendations, from workflow changes to physical renovations. The team's work has resulted in measurable improvements in many areas, including higher patient satisfaction scores, improved patient access, and decreased costs.

In 2018, YCOS continued this important work. Among its recent success stories is the Yale Eye Center at 40 Temple Street. As a result of the team's recommendations, templates were changed to make scheduling more efficient, the front desk was opened up, and an ancillary testing room was renovated to provide a much-needed facelift and additional patient capacity. The once underutilized room, which was overcrowded with equipment and could only accommodate one patient at a time, was transformed into a bright, modern space with partitioned areas where up to five patients can be tested simultaneously.

"The new space now matches the quality of care that the Yale Eye Center provides its patients," says Shelly Chastain, director of finance and administration for the Department of Ophthalmology. "The partitions allow us to test more than one patient at a time while respecting privacy, which helps facilitate patient throughput and decrease wait times."

Another area that recently benefited from clinical optimization is the Breast Imaging Center. Improvements there include a new room for technicians, streamlined scheduling, and relocating staff within the center to improve efficiency. Also as a result of the YCOS team's work, the Adult Primary Care Center changed its templates and schedules to

Pictured in the newly renovated testing room at the Yale Eye Center are (left to right): Shelly Chastain, director of finance and administration for the Department of Ophthalmology; Lucian Del Priore, chair of the Department of Ophthalmology; and Paul Votto, associate director of Yale Clinical Optimization Services.

ANTHONY DECARLO PHOTO

allow more patients to be scheduled per resident, and patient tracker boards were installed at the Heart and Vascular Center.

As of November 2018, YCOS had completed a total of 35 assessments since its creation in 2014, resulting in 2,763 specific recommendations. Departments and sections that are currently engaged in the clinical optimization process include Orthopaedics, Neurosurgery, Nephrology, YNHH Women's Center, Infectious Diseases, and Gynecologic Oncology.

**For more information on clinical optimization, please contact Director of YCOS Troy Brown at [troy.brown@yale.edu](mailto:troy.brown@yale.edu).**

**For more information on clinical transformation, please contact Chief Clinical Transformation Officer Babar Khokhar, MD, MBA at [babar.khokhar@yale.edu](mailto:babar.khokhar@yale.edu).**

# Clinical Transformation: Population Health



## eConsults and Enhanced Referrals Reduce Unnecessary Specialist Visits

Yale Medicine, through its Population Health team, recently joined the third wave of the Association of American Medical Colleges (AAMC) Project CORE program. Project CORE (Coordinating Optimal Referral Experience) aims to reduce unnecessary specialist referrals – thereby lowering costs and decreasing wait times – through the use of eConsults and enhanced referrals.

**Enhanced Referrals** provide primary care doctors with a wide range of information and guidance when they seek to refer a patient to a specialist. These tools are designed to help the physician determine whether a referral is necessary and to ensure shared expectations and planning between the referring provider and specialist. Since the program was launched in 2018, 32 percent of referrals from participating primary care sites to the participating YM specialties (cardiology and neurology) have used enhanced referral templates.

**eConsults** enable primary care doctors to ask questions of specialists through the electronic medical record. For example, if a primary care doctor notices a minor abnormality in a patient's test results, but isn't sure whether it warrants a referral to a specialist, the doctor can send the patient's chart to a specialist for an opinion. In many cases, this process can save patients from the inconvenience and expense of unnecessary referrals.

At YM, specialists in cardiology and neurology are currently providing eConsults through Epic (and are also participating in the Enhanced Referral program). Plans are under-way to add the Winchester Chest Center as well as the departments of Infectious Diseases, and Endocrinology to the eConsult and Enhanced Referral programs.

Clinicians at five primary care sites in New Haven are using eConsults to ask questions of YM specialists. The participating primary care sites are Yale Health, Fair Haven Community Health Center, Yale Internal Medicine Associates, Yale York Street Primary Care Center, and Yale Saint Raphael Primary Care Center.

Julie Rosenbaum (left), assistant director of the Yale Saint Raphael Adult Primary Care Center, shows Norin Ansari, a resident in internal medicine, how to order an eConsult with a Yale Medicine specialist.

ROBERT LISAK PHOTO

# Clinical Transformation: Population Health

Since the program launched in June 2018, the Department of Cardiology has received 77 eConsult requests, of which 59 were completed, 10 were declined, and eight were converted to in-person visits with specialists due to their complexity. The majority of the requests came from Yale Health. Since the Department of Neurology joined the eConsult program in October 2018, the department has received 28 eConsult requests, of which 20 were completed, five were declined, and three were converted to in-person visits.

The average time to respond to the eConsult requests was 1.2 days. On average, each eConsult takes a specialist less than 15 minutes to complete.

Julie Rosenbaum, MD, assistant director of the Yale Saint Raphael Adult Primary Care Center and site leader for the eConsult program, said she has found eConsults to be a helpful tool for both clinicians and patients.

“I think it has amazing potential,” Dr. Rosenbaum says. If an eConsult determines that a specialty referral is not necessary, she says, the patient avoids having to wait weeks for an appointment with a specialist, and the primary care doctor can move forward with treating the patient. In addition, the specialist’s schedule becomes less crowded, leaving more time for patients with more serious needs.

Jin Xu, MD, a doctor of internal medicine at Yale Health, also has found eConsults to be a valuable tool. In one case, she had a patient with a thyroid problem who had minor abnormalities on an echocardiogram. Dr. Xu thought the abnormalities were probably related to the thyroid problem and didn’t warrant a referral to a cardiologist, but she wanted to be sure. So she requested an eConsult with a YM cardiologist.

“I got a response back in less than 24 hours, and it confirmed what I had suspected,” Dr. Xu says. “We saved the patient a lot of time and inconvenience and we got an answer right away. Then we were able to go ahead and address the thyroid condition.”

## **PREPARING FOR SHIFT TO VALUE-BASED PAYMENTS**

In addition to launching eConsults and Enhanced Referrals in 2018, the Population Health team has also been preparing for the transition from traditional fee-for-service payment models to a system where payments are tied to value, quality, and outcomes.

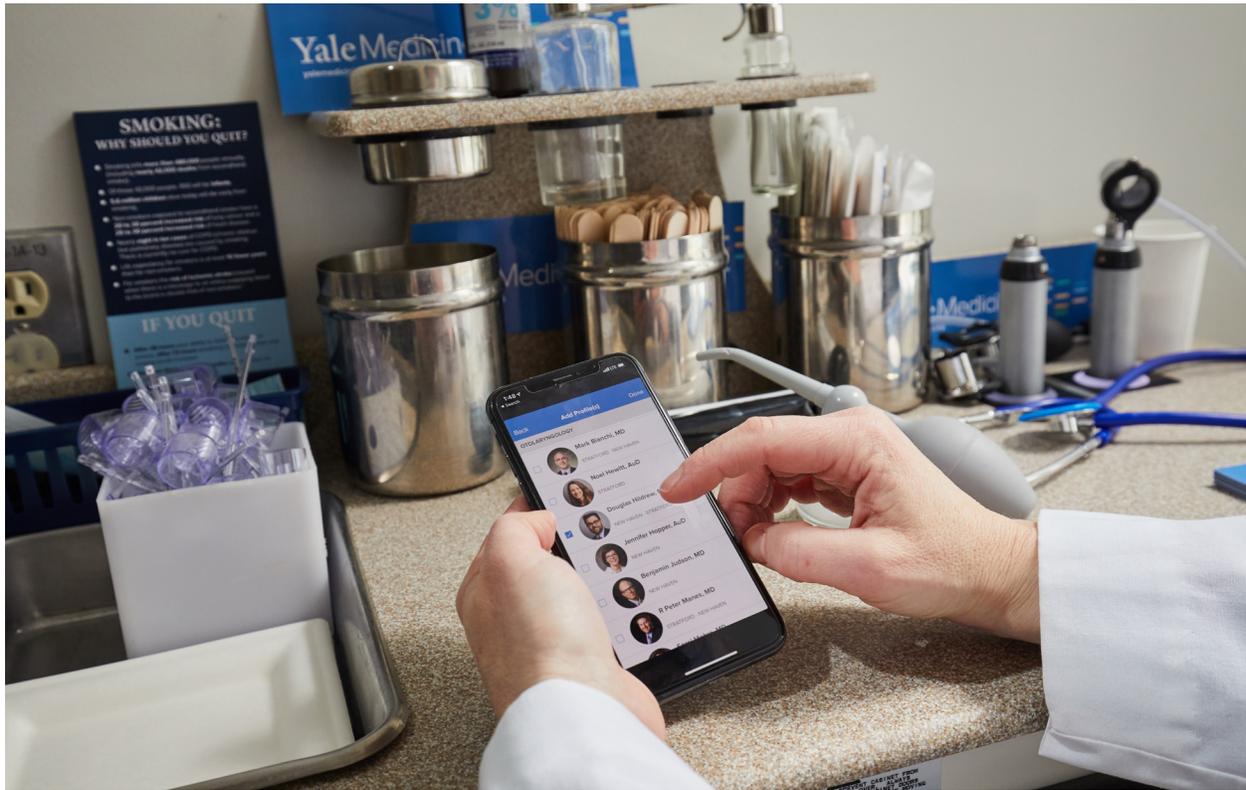
YM entered its third year in the Centers for Medicare and Medicaid Services’ (CMS’s) Transforming Clinical Practices Initiative (TCPI), continuing to learn with a network of peer institutions that are similarly preparing for the shift in health care payment systems from those that reward volume to ones that reward value.

As part of this initiative, in 2018, YM launched its first Patient and Family Advisory Council as well as an integrated primary care/behavioral health program. We shared innovative care models that enhance the value of health care delivery developed by several of our practices – including general pediatrics, radiology, and cardiology – with our national TCPI network.

Finally, we continued to make progress in our efforts to excel in CMS’s Merit-based Incentive Payment System (MIPS) – a program that benchmarks our performance on clinical-quality outcomes and cost nationally. We shared data on relevant MIPS clinical quality metrics with several practices and have begun to help them adjust workflows to improve performance on these measures. YM was awarded the maximum number of points in the MIPS program based on its performance in 2017, resulting in the maximum positive payment adjustment, and we expect our 2018 performance to rank high as well.

**For more information on population health, please contact Brita Roy, MD, director of YM Population Health, at [brita.roy@yale.edu](mailto:brita.roy@yale.edu).**

# Network Development and Strategy



## New Ways of Reaching Out to Patients and Referring Providers

The new YM Referral App makes it easy for community physicians to find the right Yale Medicine specialists to refer their patients.

ROBERT LISAK PHOTO

Yale Medicine continually works to extend the reach of its world-renowned care through a variety of strategic growth initiatives. In 2018, the Network Development and Strategy (NDS) team developed new ways of reaching out to potential patients and referring providers, and continued to develop and expand existing initiatives.

### INTRODUCING THE YM REFERRAL APP

The YM Referral App was launched in June 2018, offering a new tool that makes it easy for community physicians to find the right YM specialists to refer their patients.

The new mobile app features a searchable, easy-to-use directory of YM specialists, with detailed profiles of each physician that mirror the profiles on the YM website. Referring providers can search the directory by name, specialty, or clinical interest. Once they find the right specialist, they can send the physician's profile and appointment information to the patient securely by text message, to help the patient follow through on their care plan.

The app also allows for direct communication between referring providers and YM specialists, thereby enhancing patient care and coordination. YM physicians are encouraged to download the app and customize their settings, to ensure that they receive cases that are in the scope of their practice. The app can be installed directly from a Mobile Heartbeat phone or downloaded to a personal mobile device using the search term "Yale Medicine Referral" in your phone's app store.

# Network Development and Strategy

Use of the YM Referral App continues to grow steadily. In its first six months, 437 providers (including YM, Yale New Haven Health (YNHHS), and community providers) downloaded the app. Of those, 257 providers have been using it on a regular basis.

## **A NEW MEMBER OF THE NDS TEAM**

In July 2018, Henry S. Cabin, MD, joined the Network Development and Strategy team on a part-time basis, filling the newly created position of medical director, network development. Dr. Cabin's appointment marks the first time that a physician has been part of YM's network development efforts.

In this inaugural role, Dr. Cabin works closely with Chief Strategy Officer Kimbirly Moriarty to expand and enhance our physician relations, bringing the perspective of a clinician and clinical program builder to YM's ongoing efforts to develop and strengthen relationships with community providers and hospitals. Among his duties, Dr. Cabin evaluates and pursues opportunities for new physician partnerships, works with North-east Medical Group leadership to establish effective arrangements for collaboration, and assesses existing physician relationships to identify needed improvements and new service opportunities consistent with YM's mission and strategic business objectives.

"It's been tremendous to have a physician resource that can speak to clinical practice at Yale," Moriarty says.

Dr. Cabin, an interventional cardiologist, is medical director of the YNHHS and YNHHS Heart and Vascular Center and associate section chief, cardiovascular medicine, and he continues to serve in those capacities while working in Network Development.

## **TELEHEALTH PROGRAMS CONTINUE TO GROW**

Telehealth continues to be a top strategic priority and an area of continued expansion for YM. Telehealth programs take a variety of forms, including video visits between patients and physicians, eConsults between providers, and remote device monitoring. One of the top priorities at YM has been the implementation of post-op video visits to follow up with patients after surgery and other procedures. Video visits save patients and their families time and disruption to their daily lives, as they don't have to take time off from work or school and they don't have to drive to New Haven for routine follow-up appointments.

In fact, YM leaders, working with YNHHS, are hoping to expand post-op video visits to all surgical and procedural areas, says Moriarty.

To date, there have been about 200 video visits between providers and patients throughout the health system. Six YM entities – the departments of Surgery, Pediatrics, Internal Medicine, and Orthopaedics, as well as Yale Cancer Center, and the Center for Musculoskeletal Care – are currently participating in video visits.

YM is expanding other telehealth services as well. In December 2018, YM and YNHHS launched their first clinic-to-clinic video consultation model, with specialists from Smilow Cancer Hospital in New Haven providing video consultations to patients at the Lawrence + Memorial Hospital in New London. Also in 2018, YM launched its first inpatient video consult model, providing video consultations with neurology specialists to patients at Westerly Hospital in Rhode Island.

In 2018, the executive committee overseeing telehealth was redesigned to include joint representation from both YM and YNHHS. After extensive meetings with departments to determine their telehealth goals, the committee developed strategic priorities for telehealth for the next few years, along with a business plan and funding plan to support those priorities.

"Telehealth is changing the way health care is provided," says YM Program Development Manager Nikki DeLucia. "It is exciting to be part of an initiative here at YM that improves access to our specialists as well as provides a high level of patient satisfaction. As one of our telehealth patients stated, 'The concept is truly awesome, easy to use, and extremely convenient.'"

## **PHYSICIAN LIAISON PROGRAM**

The Network Development and Strategy team also has continued to develop its Physician Liaison Program, which has been very successful in cultivating new referral sources throughout the state. YM's physician

# Network Development and Strategy

liaisons connect community physicians and their staffs with YM specialists, provide them with information on new programs and services, and assist in resolving service-related issues.

In 2018, YM's four physician liaisons traveled throughout Connecticut, visiting 950 practices and 1,800 community physicians.

“Our success is built on the strength of relationships with physicians. Without that, there is no growth,” says Frank Mennone, manager of the Physician Liaison Program. “Our team of physician liaisons remains the most effective way to create and maintain meaningful connectivity with community physicians.”

## YM Physician Outreach Overview – CY 2018



### FIRST CLINICAL PRACTICE MOVING TO WEST CAMPUS

Network Development and Strategy was instrumental in 2018 in securing approvals from Yale University and the YM Board for the relocation of the Reproductive Endocrinology & Infertility (REI) section from Long Wharf Medical Center in New Haven to Yale West Campus in Orange. The move is scheduled for late 2019. For more information, please see page 23.

For more information, please contact Chief Strategy Officer Kimbirly Moriarty at [kimbirly.moriarty@yale.edu](mailto:kimbirly.moriarty@yale.edu).

## Yale Medicine

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### In Utero Laser Surgery Saves Twins

By CARRIE MACMILLAN NOVEMBER 19, 2018

When a rare condition put a set of twin girls at grave risk, Yale Medicine Fetal Care Center specialists came to the rescue.



Mike Spielman and Shelby Scanlon enjoy their twin daughters, Savannah (left, with Spielman) and Sarah (right, with Scanlon) in their Waterbury, Conn., home. During her pregnancy, Scanlon learned that the twins had a rare but serious condition requiring immediate attention. She was referred to experts at the Yale Medicine Fetal Care Center for treatment.

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## Yale Medicine Significantly Expands its Digital Footprint

The YM content marketing team produced many compelling feature articles and videos for the Yale Medicine website in 2018.

From a digital marketing perspective, 2018 was a good year for Yale Medicine .

The practice has dramatically expanded its digital footprint, not only in terms of traffic to the YM website ([yalemedicine.org](http://yalemedicine.org)) but also in achieving huge SEO growth. SEO stands for “search engine optimization,” a measure of online visibility. Many complex factors affect SEO rankings, only some of which we can impact. A rise in rankings takes time, especially in areas where competition is intense.

In addition to achieving tremendous SEO growth, the YM content marketing team produced many highly successful feature articles and videos for the YM website, and is making strong progress on the project to produce video profiles for all YM physicians who see patients.

Here are some highlights from the year:

- Monthly traffic to the YM website has quadrupled – from 37,501 monthly visits as of January 1, 2018 to more than 165,000 as of January 1, 2019.

# Digital Marketing

- The number of YM keywords “ranked” (meaning that Google has deemed our content as a worthy destination for search traffic) has nearly tripled, from 55,412 at the start of 2018 to more than 141,985 at the start of 2019.
- In 2018, 1.1 million visitors came to the YM site as the result of an organic search (suggested by Google or another search engine), a fivefold increase over previous years.

Going forward, the YM content marketing team (in the YSM Office of Communications) will continue to focus on enhancing our online visibility and will work closely with departments and sections to gain insights into how the YM website and social media platforms can best serve their needs.

**For more information, please contact Executive Editor  
Nicole Wise at [nicole.wise@yale.edu](mailto:nicole.wise@yale.edu).**

## Facilities



## New Clinical Facilities Put Patients at the Forefront

Improving the patient experience – by providing easier access to services, more welcoming environments, and enhanced technology – is the primary goal behind a wide range of facilities projects that moved forward in 2018.

The projects include a consolidation and relocation of the Yale Child Study Center's clinical services, plans to relocate a Yale Medicine clinical operation to West Campus, ongoing renovations to the Yale Physicians Building, and a renovated dermatology clinic.

The investments in these clinical sites are designed to enhance the patient experience, improve efficiency for physicians and staff, allow for program growth, and ensure that our outpatient facilities are contemporary and consistent with YM's commitment to excellence.

### A NEW HOME FOR THE CHILD STUDY CENTER

A major renovation and construction project is under way at 350 George Street, New Haven, where the Yale Child Study Center's clinical practice will relocate in the summer of 2019. Until now, clinical services have been scattered over three different sites in New Haven; this move will consolidate those services in a single location that is designed to provide warm, welcoming, patient-centered spaces for children and families.

The mission of the Child Study Center (CSC) is to improve the mental health of children and families, advance understanding of their psychological and developmental needs, and treat and prevent childhood mental illness through the integration of research, clinical practice, and professional training. The CSC's research and training functions will continue to be housed at 230 South Frontage Road.

TOP LEFT A number of renovations were completed on the fourth floor of the Yale Physicians Building in 2018, including the reception area for Plastic & Reconstructive Surgery and Infectious Diseases.

ABOVE This architectural rendering shows the second-floor reception and waiting area in the Child Study Center's new clinical facility at 350 George Street. The facility is expected to open in the summer of 2019.

BOTTOM LEFT Reproductive Endocrinology & Infertility will be the first Yale Medicine clinical practice to move to West Campus in Orange, Conn., providing patients with easy highway access, plentiful parking, and picturesque surroundings.

MICHAEL MARSLAND PHOTO

# Facilities

Approximately 200 people will work in the CSC's new clinical facility at 350 George Street, including physicians, psychologists, social workers, and staff. In addition to providing general outpatient services, the new building will house the Center for Emotional Intelligence, the MOMS Partnership (serving mothers with mental health needs), the Parent and Family Development program, and in-home services. The CSC serves about 3,000 families annually, with about 60,000 clinical visits per year.

Consolidating clinical services at 350 George Street will significantly improve the patient experience and access for families, promote collaboration and innovation among clinicians, and accommodate future program growth. In terms of design, the new facility will maximize the use of light and will feature colors and artwork that replicate such natural settings as rivers, lakes, and beaches. The facility will be very family-oriented, with family waiting areas, lactation rooms, and child-friendly spaces. There will also be "huddle spaces" throughout the building, where clinicians can get together to talk and collaborate.

## **REI RELOCATING TO WEST CAMPUS**

In 2018, Yale University and the YM Board approved a plan to relocate YM's Reproductive Endocrinology & Infertility (REI) section from Long Wharf Medical Center in New Haven to West Campus, located right off Interstate 95 in Orange. The move is scheduled for late 2019.

REI will be the first clinical practice to be located at West Campus. YM plans to relocate other clinical programs to West Campus over the next few years, offering patients easy highway access and plentiful parking, and providing the practice with room for future growth.

Part of the Department of Obstetrics, Gynecology and Reproductive Sciences, REI specializes in infertility and IVF treatments. The new, state-of-the-art facilities on West Campus will include procedure rooms with anesthesia, which was not available at the Long Wharf location.

## **YALE PHYSICIANS BUILDING**

In 2017, the lobby of the Yale Physicians Building (YPB) underwent a dramatic makeover, creating a warm and inviting new space. The large, outdated reception desk was removed and replaced with two large digital directories, and new carpets and furniture were also added.

In 2018, the YPB makeover continued with new artwork and greenery in public spaces throughout the building to provide a soothing and aesthetically pleasing environment for patients and visitors. In addition, renovations were performed on the fourth floor of YPB, providing enhanced facilities for Plastic & Reconstructive Surgery and Infectious Diseases. The improvements include a renovated reception desk to accommodate two check-in and check-out staff instead of one; updated finishes in the waiting room; new artwork; and a larger clinical workroom for physicians.

## **MIDDLEBURY DERMATOLOGY**

Middlebury Dermatology recently moved to a different suite within the same building at 1625 Straits Turnpike. The newly renovated suite features additional clinical space to accommodate more physicians and patients and includes six exam rooms, a phototherapy room, and a procedure room as well as a new staff break room. This follows the opening in 2017 of a new YM Dermatology Center in Branford.

For more information, please contact Chief Operating Officer  
Maryam Saeri at [maryam.saeri@yale.edu](mailto:maryam.saeri@yale.edu).

# Yale Medicine Leadership



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