VUMC Strategic Directions 2019

The compass is one of our oldest devices to help us find our way. Even when conditions change, a compass lets us orient ourselves. It helps guide us home or to new destinations. That’s why Vanderbilt University Medical Center (VUMC) uses the compass to describe our strategy for the future.

In 2016, people from all parts of the medical center and school of medicine collaborated to develop a new “strategy compass.” This compass unifies our work across patient care, research and education.

These teams looked carefully at where we’ve been. They considered our unique strengths. They took into account all the changes – and opportunities – facing us today.

The compass begins with our aspiration as a medical center:

Through the exceptional capabilities and caring spirit of its people, Vanderbilt will lead in improving the healthcare of individuals and communities regionally, nationally and internationally. We will combine our transformative learning programs, compelling scientific discoveries, and distinctive personalized care to foster the health of all people.

Simply put, we have extraordinary people doing exceptional things. We are leading the way to improve the health of our communities, near and far. We can do this in a way few others can because we combine research discovery, training of healthcare professionals and patient care capabilities.

Our compass also capitalizes on “distinctive capabilities.” These capabilities are strengths we have because we are an academic medical center comprised of a team of over 20,000 people, bi-directionally engaged with the community, and leveraging the strengths of Vanderbilt. These are the strengths we will leverage and grow:

- A collaborative culture
- Leadership in clinical care
- Basic and translational research
- Learning as a core competency
- Personalized medicine
- Population health

Our compass identifies four “strategic directions” or themes. It allows us to adapt as we learn or as things change. It allows us to measure – and speed up – our progress. The four strategic directions are:

- Design for Patients and Families
- Make Diversity and Inclusion Intentional
- Discover, Learn and Share
- Amplify Innovation

For each strategic direction, the compass includes a brief description of the intent and importance, “capabilities to enhance” and “capabilities to develop.” The capabilities to enhance highlight opportunities to build out aspects of VUMC’s distinctive capabilities. The capabilities to develop call out areas where building is required from the ground up. We update the descriptions of the strategic directions annually and include links to examples of the progress to date.
Design for Patients and Families

We will care for people in a compassionate and personalized way, wherever they are, whenever they need us.

**Statement of Importance:**

Historically, the processes of health care have been designed around the health care enterprise. It is clear that engagement and outcomes improve when the processes of health care are designed around the needs of patients and their lifestyles to create memorable experiences. We will iteratively redesign health care to touch our patients and their families continuously, whenever or wherever they need us, with the aim of addressing their needs within the flow of their daily lives. Furthermore, defining personalized care and evoking memorable experiences for our patients offers us a clear competitive advantage—it builds a reservoir of positive memories that over time can generate loyalty.

**Capabilities to Enhance:**

- Our collaborative culture to be inclusive and to express empathy and compassion in all interactions
  - Incorporating empathy mapping into VUMC lean events.
  - Training VUMC community in unconscious bias (UCB) and added UCB-sensitive metrics to patient satisfaction surveys.
  - Developing VUMC-wide climate policies and processes on uncivil behavior and how to respond. Programs rolled out and in process include sexual harassment and Patients’ Rights and Responsibilities.

- Coordination of clinical teams and systems to close gaps in care and set a new bar for safety, reliability and effectiveness
  - Developing and scaling consistent processes to improve quality, experience and cost for defined patient populations. Examples include population health pay for performance (P4P) metrics and adult enterprise value bundles.
  - Developing processes to identify and communicate the patient’s health team, their role in the team, their relationship to one another and their status (on/off).
  - Developing processes to capture administrative and patient reported data digitally in the right workflow, from the right person, at the right time, and make the data accessible with the right context in eStar and My Health at Vanderbilt (MHAV).
o Developing processes to create shared care plans collaboratively with the patient. They may include the patient’s goals, needs and preferences, and track past challenges and future goals for treatment and well-being.

o Developing processes to leverage predictive analytics and artificial intelligence to embed validated, predictive process and decision support into VUMC workflows to improve safety, efficiency, and alter the course of disease or preserve health.

o Developing process to leverage pragmatic effectiveness trials to design, test and deploy interventions in real world operational settings with feedback and update loops.

• The structure of the Patient Care Centers (PCCs) to coordinate multidisciplinary care for conditions managed by VUMC

  o Refined the PCC structure, decisions rights and management processes.
  o Convened stakeholders to develop a strategy and structure for adult Davidson county primary care.
  o Developing a VUMC standard for integrated practice units, patient-centered structures to care for a cluster of conditions that require a multi-specialty team to improve outcomes and reduce cost. Examples include Medicine PCC - Eskind diabetes center; Women’s Health PCC - Fetal Center, Maternal Cardiac Clinic, Coagulopathy Clinic, Polycystic Ovary Syndrome, DNA Diagnostic Center.

• Opportunities for patients to participate in research and learn how to improve their health and engage as partners in their care

  o Developing the Person-centeredness of Research Scale to assess the degree to which research reflects the needs, values and priorities of patients, families and communities.
  o Launching the NIH’s All of Us Research Program Engagement Core to include participants as partners in the oversight, governance design and implementation to ensure it is inclusive, relevant and culturally sensitive to diverse communities and everyday people.

• Personalized medicine to integrate social, behavioral and environmental factors with the full range of molecular characteristics

  o Framing the concepts of The Vanderbilt Inventory, a repository of all data sets needed to support whole person precision medicine, and Whole Person Visual Risk Displays to help clinicians and patients assess options.
  o Convening the Clinical Genomics Strategy Session to identify the path forward toward a vision where all clinicians at VUMC have the ability to counsel and, as needed, refer their patients regarding germ-line risk and drug selection (more – link to summary of session when available).

• Population health by engaging in cross-sector community partnerships to improve community health and well-being

  o The Meharry-Vanderbilt Alliance (MVA) convening the Community Health Worker Collaborative, a group of organizations focused on advancing the Community Health Worker (CHW) profession in Tennessee.
  o Developing the Community Engagement Studio Toolkit.

Capabilities to Develop:

• Self-service tools for health improvement, access to care and engagement in care.
Working to enroll all VUMC patients in MHAV to increase patient engagement with their care teams.

Implementing online scheduling for return appointments.

Launching Vanderbilt Health On Call, a Medical Center innovation that uses a smartphone app allowing patients in Davidson County to order a $99 home visit from a Vanderbilt nurse practitioner.

**Accessible regionally integrated patient-centered health care systems to bring Vanderbilt to people where they are**

- VUMC operating and providing clinical services at 14 retail health clinics within Walgreens stores located across Middle Tennessee on Nov. 14, 2017 (more), and now managing over 120 walk-in and urgent care centers in central Tennessee.
- Expanding the Vanderbilt Health Affiliate Network (VHAN) to more than 6700 clinicians in 13 health systems with 67 hospitals in 5 states, caring for over 350,000 people through partnerships with insurers.
- Implementing telehealth to provide access to care and consultation remotely. Programs include real-time unscheduled visits for acute illnesses or injuries, transmission of still images from the patient’s location to a specialist for diagnosis and treatment, clinician to patient encounter allowing the patient to be in a different location that the clinician, and system to system services for another entity that want to buy VUMC services (more).

**Systems of care with the right levels of clinician, integration of behavioral health and mode of interaction**

- Restructuring primary care teams and roles so that each member practices at the top of their license to improve clinician and patient satisfaction and throughput.
- Gaining agreement to develop infrastructure to provide continuum of Population Health ↔ Primary Care ↔ Specialty Care, leveraging precision medicine and predictive services for automated risk assessment of/early intervention.
- Engaging in strategic planning for behavioral health and gained agreement to embed behavioral health in 1st care, meet the millennial desire for “care now,” align incentives for patients and clinicians, incorporate technology and practice an interprofessional and interdisciplinary approach to care and learning (link to summary of session when available).

**Clinical integration across VHAN, including quality improvement, information technology connectivity and contracting**

- Facilitating clinical integration across the VHAN and provides service to support other networks.
- Developing four Medicare Accountable Care Organizations (ACOs). The Vanderbilt Medical Group is a participant in the Middle Tennessee ACO.

**Systems to measure and respond to social, behavioral and environmental factors; individual values and goals; and outcomes that matter to patients and families**

- Incorporating Patient Reported Outcome Measures (PROMs) into VUMC systems of measurement to include patient patients’ perspectives of their health, enhance real-time shared decision-making and improve the quality, outcomes and value of care.
piloted adult inflammatory bowel disease, Surgery PCC piloted advanced prostate cancer, and Childrens PVV piloted asthma. Each PCC will implement at PROMS as part of the system of measurement for at least one condition by December 2021.

- Care systems engineered to provide a consistent high-value experience based upon understanding patient and family
  - Engaging in a collaborative patient-centered process to develop a vision and path forward set a new bar for welcoming patients to VUMC wherever they touch us. The vision is that patients will feel as if each visit flows smoothly from access through the clinic visit, and will experience personalized care regarding technology, mobility and communication (including language, identification, relationships and goals of care), with maximal autonomy and preferences (including proximity); staff and providers will leverage technology, even if behind the scenes, maximizing efficiency and accuracy.
  - Working with the U.S. Centers for Medicare and Medicaid Services to implement an Oncology Care Model that incorporates extended hours to care for patients, patient navigators to help guide patients through the health system, palliative care, psychosocial support and hospice counseling.
  - Broadening the VUMC initiative to ensure dignified, personalized end of life care to include improving communication about goals of care including goals for end of life.

- Ways to engage all stakeholders to improve patient and family experience
  - Engaging VUMC’s patient and family advisory councils in the early stages of planning.
  - Launching “Defining Personalized Care-Elevating Our Culture of Service” to provide the coaching, knowledge and skills we need across the VUMC work force to deliver exceptional service with every interaction. A new learning segment is rolling out each quarter.
Make Diversity and Inclusion Intentional

We will reflect the diversity of the populations and staff we serve in our teams, programs and communications; and be inclusive in our processes and decisions.

Statement of Importance:

The populations we serve are increasingly diverse with growing health disparities, and the people working at Vanderbilt represent growing diversity. Diversity and inclusion are fundamental to our success in reducing health disparities in the populations we serve. Moreover, a workforce that is not only diverse, but also inclusive in nature, is more effective at crafting innovative solutions to the major challenges of health care and in executing on those solutions as a team.

Capabilities to Enhance:

- Our collaborative culture to be inclusive, and to reflect the diversity of the populations we serve
- Development of a VUMC Diversity and Inclusion (D&I) website
- The Creation of the VUMC Community Circle. A Vanderbilt University School of Medicine (VUSM) student-led organization that every quarter brings all elements of VUMC together to discuss, in open forum, societal issues that touch or are germane to medicine. (2018)
- Establishing employee resource groups to support, enhance career development and contribute to personal development among employees who share similar characteristics or life experiences. LGBTQ group is the first to be established. (2018).
- Establishing LGBTQ Health Community Advisory Board to intentionally include community voices in care, services and research (2018).
- Diversity of our teams, faculty and leadership
  - Established the VUMC Chief Diversity Officer position (Andre Churchwell) to provide leadership across mission areas (more)
  - Developing D&I people pillar goals, beginning with inclusion of underrepresented minorities (URM) in applicant pool and retention of URM faculty.
- Strategies to achieve health equity and reduce health disparities in all programs
  - Established the positions of vice president for health equity at Vanderbilt University Medical Center and associate dean for health equity with the VUSM (Consuelo Wilkins) and the Office of Health Equity to connect existing community health and health equity
initiatives from across the organization while scaling system-wide efforts to identify and address disparities in health (more) (2019).

• Over 200 ongoing Health Disparity Research projects in VUMC and Vanderbilt University School of Nursing (VUSN).
• Establishing the Trans Buddy program, which utilizes trained volunteers to support transgender patients during any kind of healthcare visit (2015).
• Creating patient phone line and webpage to direct LGBTQ patients to finding culturally competent care (2016).
• Opening two clinics – one pediatric and one adult – focused on transgender health (2018).
• Performing a full array of gender affirmation surgeries for transgender patients (2019).

• Representation of our diversity in recognition and awards
• Creating faculty and staff awards named after women and URMs.

Capabilities to Develop:

• Welcoming and inclusive environment where diverse cultures see themselves within the fabric of the organization
  • Adding portraits that reflect and celebrate the diverse nature of our community, faculty, students and staff.
  • Creating an Honor Wall of Hidden VUMC Figures that is updated each year that has this picture and a description of each Hidden Figure’s contribution to the VUMC culture and history.
  • Adding the LGBTQ community to the Community Health Needs Assessment (2019).
• Weave and integrate a consciousness to elements of diversity, equity and inclusion
  • Training the entire VUMC enterprise on how to identify and respond to UCB, and developing patient satisfaction metrics sensitive to UCB training.
  • Developing D&I people pillar goals, beginning with inclusion of URMs in applicant pool and retention of URM faculty, and continuing with patient satisfaction metrics sensitive to UCB training.
• Processes that ensure diverse voices and perspectives are included in decision making and communication at all levels
  • Creating the Executive Diversity Council that includes VUMC leadership with the intent to educate all on our ongoing VUMC D&I activities and to catalyze all senior leaders to own D&I as part of their office function. (2016)
  • Developing the Diversity & Inclusion Intentionality Planning Tool for use in formation of VUMC committees and insuring multiple perspectives in decision making. For example, VUSM Marketing is using the Intentionality Tool to insure the Epic-MHAV portal message and use is promulgated to all races, ethnicities, people of color, LGBT couples, etc. (2017/2018)
• Resources and coaching to help academic and clinical units promote and improve diversity and
inclusion in all of their activities

- Developing VUMC-wide workforce climate policies and processes on Uncivil Behavior and how to respond. Programs rolled out and in process include those on Sexual Harassment and Patients’ Rights and Responsibilities. (2018)

- Creating Diversity Liaison teams that connect to the ODA that embed the best practices of diversity and inclusion into the culture of clinical and non-clinical departments. (2018)

  Diversity Liaison Teams

- Establishing LGBTQ health internship as a pipeline for underrepresented sexual and gender minority health science students (2015).

- Building an ODA website that organically updates VUMC D&I activities. (2019)

- Creating an organic VUMC Diversity Timeline that in a linear fashion notes when key positions and events occurred that add to the richness of our D&I experiences. (2018)
Discover, Learn and Share

Our collaborative learning environment ensures we will remain nimble and distinctive as a national leader in biomedical discovery, health care and training. As we integrate expertise and data, we will expand and create new research capabilities to make discoveries of value and translate them quickly to patients and our community.

Statement of Importance:

Vanderbilt is leading the charge in ushering in a new era of health and prevention, detection and treatment of disease. Progress that could not have been imagined a decade ago is now being realized with our research and reality for our patients and individuals in the community. We are transforming interventions away from a model in which we see people for the first time when they begin experiencing symptoms to one that detects, manages and perhaps eradicates disease before individuals even know they have them. The work is being driven by our pioneering discoveries in basic, translational, clinical and population research, as well as learning systems. VUMC is engaging in new ways with our patients and community through new prevention and treatment modalities in the form of interventional trials, as well as with new models of engagement, health care implementation and outcomes assessment—both here and through our affiliate hospitals and community in the VHAN. Vanderbilt leads in developing innovative and effective education and training programs for all learners across the continuum of educational phases and across health professions.

Capabilities to Enhance:

- Our collaborative, inclusive and trans-disciplinary culture that promotes interactions across Vanderbilt and the community
- Since the start of Strategic Directions, many trans-disciplinary partnerships and collaborations have been formed that catalyze new directions and accelerate our ability to deliver our mission, including partnerships with GE Healthcare, Bayer, IBM Watson and Burroughs Wellcome
- Efficiency of the overall research enterprise through improved capture and exchange of expertise, reagents and technologies
- Neuroscience and behavioral health research and translation
  - Leveraging new commitments and leadership in Vanderbilt Kennedy Center, Vanderbilt Brain Institute, Departments of Neurology, Psychiatry & Behavioral Sciences, Pediatrics, and Pharmacology, and Vanderbilt University Institute of Imaging Science.
  - Launching the new trans-disciplinary inaugural Alzheimer’s Disease Research Day, a Vanderbilt-wide academic event to showcase Alzheimer’s disease and related dementia research from multiple clinical and basic science departments across campus
- Institutionally-supported research cores, facilities and tools
  - Ongoing design of new shared resources that address immunophenotyping, biospecimen repositories and animal models of infection and immunology
• Footprint and functionality of research space
  o Development of a dashboard to track research space and associated extramural support

• Transparency of data-sets and methods; reproducible research
  o Launched and tasked working group with developing draft guidelines and recommendations for Vanderbilt research rigor, reproducibility and transparency toolkit

• Programs and tools to advance learning opportunities and workforce engagement
  o Launch of the Catalyst Leadership Program and Defining Personalize Care Program; continued investment in Research Administration Development, Programs in Frontline and Mid-level Leadership Development.
  o Development and implementation of the Medical Innovators Development Program (MIDP) is in its third year (more)
  o Implementation of novel interprofessional working-learning student team model at Mercury Courts.
  o Launch of Addiction Medicine Fellowship

• Personalized/precision medicine
  o Precision Medicine Strategy Planning with a goal of implementing a system-wide approach to identifying and appropriately managing subsets of patients with distinct genetic causes for common disease and/or adverse drug reactions
  o Continued discovery and translation enabled by BioVU, Center for Precision Medicine, Vanderbilt Genetics Institute and Office of Personalized Medicine

• Focus on health disparities, outcome and policy; and implementation research
  o Appointment of Vice President for Health Equity and Associate Dean for Health Equity and establishment of the Office of Health Equity (more)

Capabilities to Develop:

• Dynamic process to develop, share and recognize the contributions of individuals and teams to discovery and learning
  o Institutional recognition of high impact and high citation publications
  o “Celebrate” presentations at SOM Executive Faculty meetings
  o Creation of the Office of Research social media presence via twitter @VUMCResearch
  o Launching annual StrategyShare events

• Trans-institutional framework for infection, immunology, and inflammation research
  o New investments and launch of two new entities to accelerate advances in immunology infectious diseases and our understanding of the role of the microbiome in prevention and treatment of diseases: Vanderbilt Institute for Infection, Immunology and Inflammation and Vanderbilt Center for Immunobiology

• Systems that enable co-registration and bioinformatics mining of all forms of data across the research and clinical enterprise

• Plan for computational science, information technology and data storage as required to meet the demands and advance basic, clinical and population research
• Data science strategic planning efforts underway
  • Acquisition and oversight of the data and coordinating center for All of Us in the Center of Precision Medicine

• Pragmatic trials using broad scope clinical operations as a platform
  • Successful completion of several trials leveraging Vanderbilt Institute for Clinical and Translational Research (VICTR) resources and clinical teams
    ▪ Balanced Crystalloids versus Saline in Noncritically Ill Adults
    ▪ Balanced Crystalloids versus Saline in Critically Ill Adults

• Systems to access and leverage clinical specimens at scale with appropriate database capabilities; specimens representative of a diverse population

• Workplace-based systems for Continuing Professional Development
  • Launch of Discovery Scholars Program (more)

• Systems to support learning-working teams
  • Development and launch of QuizTime, an innovative learning tool that provides an asynchronous learning paradigm for Educators and Learners

• Population health and discovery platform across the VHAN enabling research, community engagement and collaborative partnerships
  • Deployment of Lung Cancer Screening
  • Advances in smoking cessation

• Health forecasting system; knowledge engine

• Launch of Master of Genetics Counseling Degree Program

• Launch of the Health Equity Graduate Certificate for medical students

• Develop integrated interdisciplinary experiences for post-graduate trainees

• Develop approach to competency-based progression from UME to GME using multi-source assessment data.
Amplify Innovation

Innovation is essential to the future of academic medicine. We will develop a culture of innovation where discoveries, products, and services are converted into meaningful value.

Statement of Importance:

VUMC has a long history of innovation in research, education, and clinical care. **By embracing innovation across these missions, we can remain a leader in academic medicine.** Seeking input from the Vanderbilt community—patients, trainees, staff, and faculty—as well as external partners, will enable us to develop innovative solutions to unmet needs.

Capabilities to Enhance:

- Our collaborative culture to convert ideas, discoveries and services into meaningful innovation
  - Launch of drug discovery company, Ancora Innovation, in partnership with Deerfield Management (more)
  - Awarded $500K National Science Foundation grant for establishment of I-Corps site at the Wond’ry (more)
  - Collaborations with Bayer, GE Healthcare and IBM to develop and commercialize new health care technology
  - Capital investments in nPhase and IDBiologics
  - Launch of Southeast Executives-on-Roster (SEC XOR) collaboration entrepreneurship start-up company matching program, and joining the similar AVX matching program (more)
  - Launch of Nashville Biosciences (NashBio) and support the organization’s commercialization efforts (more)
- Methods and tools that improve quality, outcomes and health
  - Developed the Person-centeredness of Research Scale to assess the degree to which research reflects the needs, values and priorities of patients, families and communities.
- BioVU and bi-directional methods to connect fundamental discovery to health and disease
  - Drug repurposing initiative (more)
  - Received $7.7 million grant from National Institutes of Health Center for Advancing Translational Sciences to study potential new therapy for C. diff infection (more)
  - Participation in the National Institute’s of Health’s All of Us national research program (more)
  - PredixVU gene-based association electronic catalog (more)
• Systems that promote customized, asynchronous learning
  o Integration of QuizTime, a smartphone application developed at VUMC, to provide continuing medical education to physicians. In 2018, VUMC partnered with the Tennessee Department of Health to roll out workplace-based education using QuizTime to health care providers across the state for proper utilization of opioid and non-opioid therapies in managing pain (more)
• Interventional trials in population cohorts
  o Completion of enrollment in the Southern Community Cohort Polypill Study. This study, led by Tommy Wang and Bill Blot, randomized 303 individuals in a study to determine if a polypill-based approach to primary cardiovascular disease prevention is feasible in a low socioeconomic status population. The study met its enrollment goal and completed enrollment in 2018. Data is being analyzed.

Capabilities to Develop:

• Alternate revenue streams leveraging our leading business services thereby growing our reputation and financial flexibility to support education and research
  o Vanderbilt Health Professional Solutions (VHPS) was formed in late 2017. VHPS is the holding company for VUMC that houses our pharmacy, genomics and GPO businesses. These businesses have added a significant client base since launching in 2018. A few examples of the new clients are Dartmouth, Pfizer, Ono, University of Mississippi Medical Center, University of Nebraska and many others. These businesses are growing rapidly and projected to have approximately $80MM in revenue by 2024 and approximately $10MM+ in EBIDA. These businesses represent significant new revenue streams and earnings.
• Relationships that strengthen VHAN clinical programs, including joint ventures with clinicians and hospitals and next-generation insurance products
  o VUMC began operating and providing clinical services at 14 retail health clinics within Walgreens stores located across Middle Tennessee on Nov. 14, 2017 (more)
  o The VHAN implemented VUMC’s transparent PBM solution a couple of years ago, resulting in significant drug spend savings for all the VHAN network. The savings is in the double-digit millions. Note: VHAN team would have exact numbers.
• Transdisciplinary teams to innovate learning, research and healthcare
  o The Vanderbilt Institute for Surgery and Engineering opened a dedicated lab space in Medical Center North, equipped with mock operating rooms, surgical robots, imaging devices and tracking and surgical guidance systems, to foster trans-institutional
interactions designed to result in new ideas and technologies to advance health care

• Platforms for innovation incubators and accelerators
  o The Department of Radiology launched RadX, a health care innovation and entrepreneurship incubator. In 2017 it hosted the inaugural RadX Innovation Challenge pitch event, which awarded three teams $10,000 each towards the design and implementation of the ideas presented (more)
  o The Wond’ry developed PreLaunch and PostLaunch course programs designed to give entrepreneurs the resources and skills necessary to successfully launch and operate a business venture

• Crowd sourcing methods and tools
  o IdeaShare
    ▪ First launched in 2017 to crowdsourcing ideas addressing common challenges at VUMC. More than 2,300 people participated in IdeaShare in the form of voting, commenting or liking the nearly 250 ideas that were submitted (more)
    ▪ A second IdeaShare campaign was launched in 2018 around the use of artificial intelligence and predictive analytics to transform health care, which generated 140 ideas. Top ideas participated in an AI Day Innovation Challenge. The top three ideas each received $30,000 from the Eleby Selby Stead Fund for Innovation for project implementation (more)
    ▪ A third campaign was launched in March 2019 to test patient-driven steering of the vision and roadmap for patient-facing HealthIT. The campaign solicited responses from 439 participants in the Advise Vanderbilt community. The top three design challenges that resulted, included full access to health records, testing close to home and virtual visits.