University of Minnesota Vision for Academic Health System

December 5, 2023

UNIVERSITY OF MINNESOTA

Driven to Discover®

Crookston Duluth Morris Rochester Twin Cities

Table of Contents

The University's Vision of Minnesota's Academic Health Future

Our Vision

The University's land-grant mission is to serve the people of Minnesota. As the State's only public educational research university, there is no stronger example of this alignment than through the University's comprehensive set of health sciences schools and programs, which prepare more than 70% of Minnesota's physicians and thousands of other healthcare professionals annually. As one of America's leading research universities, the University of Minnesota also conducts pathbreaking biomedical research, as well as innovation partnerships in engineering, business, and public policy, and ultimately contributes significantly to the state's economic development and strength.

Together, State leaders and the University can improve health care for all Minnesotans.

The challenges facing the healthcare sector are impacting all Minnesotans today. As State leaders strive to meet those challenges, the University is fully committed to partnering to shape a future characterized by more equitable and accessible high-quality health care provided by a world-class workforce. The unique role of an academic health system is to bring expertise and innovation: by attracting, supporting and developing world-class talent dedicated to finding better answers for care models, new cures and treatments for diseases and conditions and improved approaches to ensuring healthy lifestyles and wellness across communities. The 2023 Governor's Task Force on Academic Health has provided an opportunity to highlight this differentiated role for academic health within Minnesota's overall healthcare ecosystem.

Now is the Time to Build Strategic Plans for a World-Class Academic Health System.

In early 2023, the University unveiled its aspirations for the next generation of Minnesota's Academic Health System (AHS), emphasizing a commitment to ensuring access to the highest quality care. The foundation of these plans rests on the belief that the integration of health professional education, innovative care models, research results and clinical practice are paramount for the future. An AHS will provide the following critical components of Minnesota's future healthcare ecosystem:

- **Well-trained Physicians**. More than 70% of the physicians now caring for patients in Minnesota were educated or trained at the University's Medical School (UMMS). Because of our high national ranking as a medical school, talented people come here as students and trainees. And they often remain in Minnesota and make their careers here—treating Minnesotans. That strong retention rate does not exist in a number of other states. We need to expand the number of physicians being trained to serve people across Minnesota.
- **A Strong Workforce**. Training Health Professionals. The interprofessional preparation of health professionals will continue to grow as best practice. Minnesota has the distinct competitive advantage of being one of only five states with six health sciences schools preparing the workforce of the future. These schools already actively coordinate to impact care delivery transformation. Our plans must include additional efforts to accommodate this important evolution of the workforce.
- **An Engine of Discovery**. An AHS is a major research engine. Currently, the University conducts more than $1 billion in sponsored research annually. Of that, the University's six health sciences conduct about $500 million in sponsored research each year. Through clinical trials and other efforts, we translate discoveries faster than we ever have and benefit Minnesotans more broadly, saving lives and improving health.
- **A Magnet for Healers**. Our medical school has risen dramatically in national rankings—out of a total of 140 medical schools, we are now ranked #21 in research and #2 for primary care training among all medical schools, both public and private. As a result, we can recruit and retain exceptional physicians from Minnesota but also from across the country and world, to teach, to practice and serve patients in Minnesota. Minnesota can and must build on its reputation as a center for health.
- **An Engine of Job Creation**. Various studies have shown that a high-performing medical school generates many times more economic benefits to its region than the public investment in it. Its positive economic impacts include helping to create a life sciences ecosystem and good-paying, important jobs in the life sciences sphere. Minnesota is recognized nationally as an exceptional example of that "virtuous cycle."
- **Improving Longevity and Health Outcomes**. Health status and longevity increase when populations of people have access to the most specialized, complex care close to home. A next-generation AHS will provide that opportunity in ways that will benefit all Minnesotans.
- **A Critical Resource in Public Health Crises**. During the COVID crisis, we learned once again the critical importance of leading medical and health sciences disciplines, which combine expertise in public health assessment with clinical care delivery, screening and acute care services when needed.

We Must Protect and Grow Minnesota's Investments in Academic Health Facilities.

The University's current Academic Medical Center (the University of Minnesota Medical Center or UMMC) consists of four flagship facilities: the University of Minnesota Medical Center - East Bank and West Bank, Masonic Children's Hospital, and the University of Minnesota Health Clinics and Surgery Center.

The UMMC is operated in collaboration with Fairview as part of the M Health Fairview joint clinical enterprise and in furtherance of Fairview's mission to support academic medicine. The majority of the current UMMC facilities are aging and cannot provide state-of-the-art care at an AHS level into the future; many of the facilities now owned by Fairview date from the 1980s. To operate in the medium-term, Minnesota needs to ensure there are facilities that support the statewide benefits an AHS could make possible.

To truly move clinical and academic medicine forward for the next 50 to 100 years, the University's plans call for new state-of-the-art academic health facilities that we must begin planning now, in partnership with other stakeholders in the healthcare sector.

The path to a top-tier Academic Health System for the future requires planning and investment today to move from the present reliance on existing facilities and partnerships to a future state of increased interprofessional innovation, training and clinical care. Our plan is intended to illuminate that path.

University of Minnesota's Case for State Consideration in 2024

In Support of the Governor's Task Force on Academic Health

The Case

The current healthcare environment is beset by misalignments between needs and resources. The challenges include underfunded health professional education, Medicaid reimbursement levels that are 30% or more below the cost of providing services, geographically unequal access to care, and social, organizational, and payment barriers to innovation in care models. Current healthcare delivery and reimbursement models do not recognize or reward the kind of work in the overall management of complex, multiple patient conditions that distinguish academic medical center services, incentivize innovation or prioritize the needs of Minnesotans.

The unique role of academic health systems is the preparation of future health care providers, research and discovery to shape future care, and the application of those discoveries in the provision of complex care. The University is fully committed to its role as a partner to the State in enhancing the future of Minnesotans' access to high-quality health care.

At every academic medical center in the United States, academic and professional training costs more than tuition. Preparing future medical and healthcare professionals is costly given the required hands-on training involved, referred to as clinical practice. In addition, medical research requires subsidies even when supported by National Institutes of Health (NIH) and other federal funders. A study by the Association of American Medical Colleges found that for every dollar of research medical schools conduct, they require subsidies of 53 cents, on average. And this is true even at the top-ranked, largest research institutions. There is no way to avoid such subsidies by "being more efficient"—given the limits on NIH and other funders' policies. These unrecovered costs are funded by clinical service revenue, including the work of faculty in their clinical practice.

Clinical services revenue to support academic medicine at the University of Minnesota currently comes primarily through the joint clinical enterprise formed with Fairview Health Services. This academic support equates to about $100 million per year. In return, Fairview receives benefits from the U of M: the ability to recruit top-tier doctors, who require faculty appointments from the University; revenue from clinical trials; federal funding of graduate medical education programs; the pipeline of future providers; and the marketing value of the M Health brand, among other benefits.

Current levels of Academic Support from Fairview will not continue past 2026. We must acknowledge that Fairview's academic support is subject to the same economic challenges that all health systems face today. Fairview has communicated that it has financial challenges affecting its operations, and it has served formal notice to the University that it wants to terminate and renegotiate the current affiliation agreement and payments when they expire in 2026. This means the University must begin to plan for the next generation of its clinical practice model now. Much has been accomplished since 1997, when the University and Fairview partnership began. At that time, the Medical School faculty practiced through over 20 different clinical practices. Those practices were combined through direction of the University, and since 1998, all Medical School faculty practice clinically through UMPhysicians, which operates as the largest independent multi-specialty physician practice in the State. Through UMPhysicians, which employs over 1,700 providers and 2,000 clinical staff, the University is poised to continue to refine its clinical partnership with Fairview and further expand clinical relationships beyond Fairview to advance the University's mission and serve Minnesotans across the region and state.

Minnesota has a global reputation for leadership in health-related research, care, and enterprise. The state's only public research institution, including a comprehensive set of health sciences schools and other disciplines, is a significant part of that reputation. Minnesota must continue to invest in the discoveries, innovation, and training of future generations of healthcare providers that will allow the state to maintain its world-class leadership. The health of our own citizens will benefit, and that continued investment will deliver broader economic and social benefits as well.

We must capitalize on this opportunity to illuminate the differentiated role of the University's academic health enterprise in Minnesota's healthcare ecosystem through the Governor's Task Force. The University deeply appreciates the attention being given to this request for investment.

The Plan

The University of Minnesota proposes a three-stage plan that builds on the University's long history of education, discovery and innovation, and service to all Minnesotans. The Plan advances the future of academic medicine and health sciences, commits to improvements in outcomes for Minnesotans, and is offered in a spirit of full alignment with the public interests of the State of Minnesota.

Near Term Initiatives – 2024

Prioritize the use of State funds to address acute stresses in the health sector and begin to plan for longer-term strategic investments in the next generation of Minnesota's expertise in health.

1. **Secure Academic Health Funding** *We will seek $60 to 80 million annually beginning in Fiscal Year 2025 in funding support from the State for academic medicine and interprofessional programming optimizing the breadth of health sciences at the University.* In partnership with the administration and legislative leadership, the University will develop priority deliverables and pursue funding in the 2024 legislative session for direct, ongoing support of academic medicine's role in improving access and equity in health care, and the University's mission of training, research and clinical care. Program elements *may* include:

    a. Continued support for the University's recruitment and retention of world-class doctors and researchers who are instrumental in ensuring we remain a highly regarded and respected academic health center of excellence now and into the future and contribute every day to the delivery of innovative, advanced clinical care, and the discovery of new treatments and medical devices.

    b. Using the 2015 State investment in Medical Discovery Teams as a model, create interdisciplinary teams across the University's comprehensive health sciences schools and programs to address our most perplexing challenges related to cancer, metabolic disorders, immunology, infectious disease/pandemic response, mental health, and neuroscience.

    c. Provide sustaining and increasing support to expand hours and service of the University's FQHC Community-University Health Care Center (CUHCC),

which is a community clinic in Minneapolis that provides medical, dental and mental health care, legal services, advocacy for domestic abuse and sexual assault, and more.

2. **Stabilize UMMC health system finances** because of high Medicaid volumes.

    a. Expand current intergovernmental transfer (IGT) for the University of Minnesota Medical Center. The current IGT only includes the fee-for-service population and we want to expand to the entire Medicaid program.

    b. Explore higher reimbursements for academic medical faculty providers because of the high Medicaid volumes and low reimbursements. This aims to mimic other state models that pay 175% of Medicaid to ensure academic faculty are able to cover the costs of providing care to complex patient populations while teaching and training the next generation of physicians and advanced practice providers.

3. **Develop a framework, seek funding and conduct a feasibility study for public facilities** to meet the healthcare needs of current and future generations. Review the metropolitan region's medical facilities and infrastructure via a state-funded facilities feasibility study. The study will include hospitals, efficient or increased use of outpatient facilities, lab space, academic health, research, long-term recovery, and behavioral health including the need for additional inpatient beds for mental health and substance use disorder. Any designs should ensure that new facilities can keep pace with technological advances and changing needs of populations that make for better patient experiences. The study will include University assets as well as the assets and needs of other public health systems.

4. **Develop a plan and identify future funding to enhance Minnesota's healthcare workforce development** through the University of Minnesota's comprehensive health sciences schools and programs, as well as other Minnesota-based post-secondary institutions.

    a. Increase and enhance K-12 and undergraduate pathway programs into health professions, with focus on rural and underserved communities.

    b. Increase funding for existing collaborations between the University's health science schools and other public institutions training health professionals for service across the State, with focus on critical shortages such as licensed practical nurses and long-term care professionals.

5. **Join Health Subcabinet** Advocate for the University of Minnesota and Minnesota State to be added to the Governor's Healthcare Subcabinet. Include Minnesota's premier teaching institutions to help execute the duties of the healthcare subcabinet by using data and research to drive needed healthcare reforms.

Medium Term Initiatives – 2025 & 2026

Prioritize public spending on healthcare based on results from the feasibility study (above) to ensure we meet the healthcare needs of Minnesotans.

1. **Secure State Bonding** In 2025 we will prepare and submit requests for bonding support for academic medicine and research facilities as the considerations of ownership, control, and accountability for facilities on the University of Minnesota campus are addressed with Fairview.

Longer Term Initiatives – 2027 and beyond

Commit to advancing the next generation of healthcare: First by improving health outcomes and access to high-quality care for all Minnesotans, second, by expanding the preparation of healthcare professionals and, third, by driving innovation in the healthcare delivery models serving the state.

1. **Invest in Next Generation Facilities** Position the University's academic health facilities to meet the next generation needs in healthcare training, research, and care delivery. This may include new clinical or hospital facilities, as well as new research facilities on campus. The University will respond to findings in the facilities feasibility study (recommended above) and be informed by innovations related to care models and outcomes.

2. **Incentives for Care Innovation and Transformation** Establish state incentives for statewide goals regarding health outcomes. This includes closing health disparities, improving healthcare access, developing telehealth infrastructure, supporting mental health access and other care innovation.

Appendix

Interim President Jeff Ettinger's Remarks at Task Force #5 November 21, 2023

As prepared for delivery

"Thank you for letting me take a few minutes of your time. I greatly appreciate the effort of this Task Force toward advancing the University of Minnesota's academic health mission.

I know that you have had the opportunity to hear from the University about the alignment of our mission to the interests of the State of Minnesota, and about the scale of our commitment to health sciences. This history and structure have come together to form a strong legacy that today serves Minnesotans through 1.2 million patient visits each year.

But we know that the State of Minnesota is asking for more from the University: leadership in ensuring the health of Minnesotans in the future. As the University's interim president at this critical time, I am grateful to share with you that we have a bold vision for the future of Minnesota's health

We will have near-term, medium-term and longer-term recommendations for the State to consider. We hope that the Task Force will allow us to expand upon these concepts at the upcoming meeting on December 6.

But I do want to take a few minutes today to preview those plans, even as you hear from our health sciences deans and deepen your understanding of the strengths the University brings to this challenge for our State.

In the near-term, the critical priority is bringing stability to the clinical enterprise that funds the academic operations of our medical school. We will be asking the 2024 legislature for support to the academic enterprise.

In the medium-term, our plans will focus on ensuring the State has good information upon which to consider investments in physical infrastructure for health care. Potentially, this may involve bonding to lengthen the lifespan of existing facilities, but also a feasibility

study to better understand the transformation of needs for physical infrastructure of health care service delivery.

In the longer-term, we want to make the case for investment in a next-generation medical enterprise center on campus at the University.

Let me share thoughts with you about this long-term vision. As a business person, I admit I am sometimes skeptical about the need for "new."

But after touring our facilities, and learning from Dr. Tolar and the other health sciences Deans who are here today, there are clear challenges that need our careful attention:

Our University of Minnesota Physicians and other M Health Fairview medical professionals are offering patients outstanding care, but working in outdated facilities;

Space is extremely tight, sometimes with patient crowding that does not promote privacy, recovery and health;

There is a frequent need to turn patients away – particularly troubling when it involves important medical referrals or procedures where we have demonstrated expertise;

There is operational inefficiency, including when patients and staff must go back and forth across the river to our current facilities;

Frankly, it's the wrong approach for Minnesota to support world-class teaching, research, and care – all core to our mission and service to the state – in these aging and outdated facilities.

Our patients deserve better, and as a leading academic health enterprise, we must do better.

The University already owns an on-campus site for a potential new medical center facility, right next door to our innovative Clinics and Surgery Center on the East Bank.

Our vision is to collaborate with you and those across Minnesota's health care community to ensure the future of academic health and its facilities. The University would intend to be involved in the planning of the scope and function of this new center in collaboration with other stakeholders.

What makes sense to get us there? Is it a partnership with Fairview? Would a new partner play a role in the operation of this center? Would the University bring in experienced professionals and run the on-campus center ourselves? I cannot speak for others but these are options we are actively discussing. But ultimately, the University must have

greater control of the facilities that serve as the primary base for academic health and clinical practice of the next generations of practitioners.

The University does not intend to ask for specific financial support for new facilities in the 2024 legislative session. The near-term need is clearly to stabilize the funding for academic medical programming.

We will be keenly interested in soliciting and receiving your conceptual support for this vision – for a world-class medical center on the Twin Cities campus that fosters our academic health mission, is core to all health sciences, and serves Minnesotans with the best we have to offer.

Thank you for allowing me the gift of your time, and for your attention to this incredibly important issue for our state, the University, and the health of all Minnesotans."

Glossary

Key Terms and Definitions for the University of Minnesota's World Class Academic Health System

Entities & Operations

- **Academic Medical Center** – At an academic medical center, education, research, and clinical care are combined to provide the best possible clinical care, that uses cutting-edge technologies, resources and therapies other community hospitals may not have available.
- **UMMS** – University of Minnesota Medical School is a component of the University with campuses in Minneapolis and Duluth
- **UMMC** – University of Minnesota Medical Center is comprised of three hospitals and dozens of adult specialty clinics on both the East and West banks of the University of Minnesota campus in Minneapolis. UMMC is currently owned by Fairview and operated in partnership under the MHealth Fairview name.
- **Health Science Colleges** – The University operates six health colleges and schools - the Medical School, College of Pharmacy, College of Veterinary Medicine, School of Public Health, School of Nursing, and School of Dentistry.
- **Academic Health Sciences** – organization that reports to the Provost but is responsible for providing leadership and guiding strategic visioning for health science education to meet state and national workforce needs. Management of the Health Sciences Education Center facility and health science-focused classrooms fall under this unit.
- **Academic Health Services** – mission-related activities of UMMS and other University health sciences schools and programs, including teaching, research and service, to support the public interests of the State of Minnesota
- **Academic Clinical Affairs** – centers and units that report to the VP for Clinical Academic Affairs, Dr. Tolar, including the Cancer Center, Community-University Health Care Center (CUHCC), Translational Medicine, Clinical Translational Science Institute, and MN Institute for the Developing Brain
- **UMP** – University of Minnesota Physicians is a multi-specialty academic physician practice established at the University of Minnesota.
- **Fairview** – Fairview Health Services is a nonprofit network of community hospitals, academic hospitals, primary and specialty care clinics, senior facilities, facilitated living centers, rehabilitation centers, home health care services, counseling, pharmacies and benefit management services that offers healthcare services.
- **Fairview Board** – operates as the System Board
- **System** – all hospitals and clinics within the current M Health Fairview joint clinical enterprise, including UMMC

- **M Health Fairview** – an academic health system that is a collaboration among the University of Minnesota, University of Minnesota Physicians, and Fairview Health Services
- **Joint Clinical Enterprise (JCE) structure** – In 2018, the University, UMP and Fairview formed a joint clinical enterprise, embedding University faculty physicians into the service lines throughout the Fairview system and adopting a corresponding brand of M Health Fairview in recognition of the intended creation of an academic health system. The JCE, branded M Health Fairview, includes the services lines led by academic physicians, the hospitals and clinics on the university campus and through the Fairview system, and other shared clinical services. The JCE is managed through co-leadership shared between the University, UMP and Fairview.
- **Model of Care Agreement** – UMMC must be able to provide specialized, complex levels of service; patients must be seen in the most appropriate setting (taking into account timely access, quality, staffing, cost, patient choice and other factors); and patterns of care across the whole Fairview system must support that result.

Facilities

- **UMMC campus facilities** – Fairview-owned medical center facilities on the East Bank and West Bank
- **East Bank** – three medical buildings are located on the East Bank, including the Clinics and Surgery Center, UMMC East Bank hospital, and the Phillips-Wangensteen Building
- **West Bank** – six medical buildings are located on the West Bank, including the West Building (services include pediatric specialty care, emergency, psychiatric services), East Building (services for adults and children, including care at the Pediatric Specialty Care Explorer Clinic and Pediatric Specialty Care Journey Clinic), and Masonic
- **Masonic Children's Hospital** – children's hospital on the West Bank
- **Clinics and Surgery Center (CSC building)** – UMN owned, Fairview operated

Themes

- **Academic Medicine** – the intersection of clinical care, research and education in a medical school
- **Control of UMMC** – this will ensure that all Minnesotans, throughout the entire state, have access to highly trained health care physicians and other professionals, advanced treatments, cutting-edge diagnostics, specialized care and clinical trials, and health care advancements, that is under the control of the state's public University
- **UMMC Clinical Operations Within Larger System** – academic medical centers

thrive when operated as part of a fully integrated health system. Highly specialized academic providers have sufficient patient volume to teach and hone their expertise while also providing students, residents and fellows sufficient exposure to the day-to-day medical concerns of a community based practice.

University of Minnesota Medical School Explainer

The University of Minnesota Medical School was founded in 1888 and we have been leaders in physician and scientist training, innovation and discovery ever since, as well as providing high quality specialty and primary care. We have a deep legacy in "firsts", including the first successful open heart surgery, creation of the first portable, external pacemaker, the first longitudinal clerkship (RPAP), and the first successful bone marrow transplant.

The Medical School is part of the State of Minnesota's land grant institution and the only public Medical School for the state. The University is a top 25 research institution, offering a breadth of health science degrees. We are one of only five Universities that include Pharmacy, Dentistry, Nursing, Public Health, Veterinary Medicine and Medicine. The University also includes a strong College of Science and Engineering and many other allied health professions. This comprehensive institution offers a significant platform for interdisciplinary research and interprofessional training that is unique among our peers.

We are one of the largest Medical Schools in the country. The UMMS includes two campuses (Twin Cities and Duluth) and 27 clinical and basic departments.

The Medical School has 1,469 faculty members. When you include affiliate and adjunct faculty, as well as community instructors, the number rises to 4,990.

Education and Training

Each year we admit 300 new students (235 on the Twin Cities campus and 65 in Duluth), which totals 900 students a year in our School. In general, between 70-80% of our students are from Minnesota.

We also have over 400 graduate students in training, preparing to be the next generation of biomedical scientists, and 56 MD/PhD students.

We currently have 804 residents and 250 fellows training through our programs. This year, 82.5% of our residents are Minnesotans. We train residents in many health systems, including M Health Fairview, HCMC, VA, HP/Regions, North Memorial, Gillette's and Children's.

According to the Board of Medical Practice, 70% of the physicians practicing in Minnesota were trained by the University of Minnesota, through Medical School, residency, or fellowship.

Innovation and Discovery

The Medical School's research portfolio continues to grow, with $356.5 million awarded to faculty in FY 22. Our research strengths include immunology, cancer, transplant medicine, diabetes, genome engineering, neuroscience, and infectious disease. We are also home to the Center for Magnetic Resonance Research, which has pioneered some of the most advanced MR techniques in the world. The world's largest human MR scanner is under

development in this center. In addition, our faculty includes highly renowned researchers in aging, brain development, and Parkinson's disease.

Physician scientists with the University's NCI-designated Masonic Cancer Center have developed NK (natural killer) cells that are proving to be effective at killing tumors and we are one of a few medical centers that can offer CART-T therapy for cancer patients. This is immunotherapy that can supplement or potentially replace chemotherapy.

Surgeons from the Medical School recently performed a liver transplant for the youngest Minnesota patient, at four weeks old. The faculty of this school lead one of the oldest and most successful transplant centers in the world. Since the 1960s, we have completed more than 13,000 organ transplants and restored thousands of patients to health. Our University hospital was recently ranked #1 in kidney paired exchange by the US Health and Human Services Organ Procurement and Transplantation Network. This is possible because of the connection between disciplines (surgery, immunology, pathology) and the innovation and excellence that is part of the culture in an academic medical center.

The University also includes one of the NIH-funded Clinical and Translational Science Awards, with a focus of getting new treatments to patients and populations more quickly and supporting research teams to address challenges relevant to communities and large in impact.

Clinical Care

The Medical School's faculty physicians in 1996 formed University of Minnesota Physicians, with the direction and support of the Board of Regents.

The practice today includes nearly 1,300 physicians and over 300 advance practice providers

We offer care in over 90 specialties and our physicians lead discovery in diagnostic and treatment options through the connection to innovation through hundreds of clinical trials. In 2021, we enrolled 28,331 patients in clinical trials, providing access to the very latest in care options to those who need it most.

These physicians are also training the next generation. This training is of significant benefit in clinical care for several reasons. First the residents and fellows are a valuable and hard working part of the team (working at a relatively low cost). And their presence, questions, and ideas keep physicians and clinicians always on the leading edge of medicine.

M Physicians treat over 1 million patients a year at more than 40 locations across the state of Minnesota and the Upper Midwest.

CentraCare Regional Campus Overview

Saint Cloud, Minnesota

The Medical School is establishing a regional campus in St. Cloud, in partnership with CentraCare. This new program allows the Medical School to increase its class size by 10 percent at a time when the need for physicians is growing. In addition, with its focus on rural and immigrant health, this new regional campus will serve an important role for the communities of Greater Minnesota.

In 2025, the CentraCare regional campus in St. Cloud will welcome 24 medical students in its first class to study and train in CentraCare facilities with faculty credentialed through the University. CentraCare's commitment to the campus is in financing, infrastructure support, and precepting.

The size of the Medical School class on both of its current existing campuses – the Twin Cities and Duluth – has been limited to about 220 students for the past 50 years by the availability of clinical clerkships among the clinics and hospitals that contribute to the training of our students. Since 1973, the population of Minnesota has grown by nearly 50 percent, meaning our program is unable to keep up with growing demand.

Medicine, as with many other health professions, is based on an apprenticeship model where students learn alongside physicians who are in practice. That requires statewide partnerships, or affiliations, with hospitals and clinics who are willing and able to have our students in their facilities. Every health system in Minnesota has some level of affiliation with the Medical School to educate and train our students and residents. It represents a cost to those systems, one that is partially covered by Minnesota's education and research costs funds.

The relationship with CentraCare presents a brand-new model of educational, or academic, affiliation by offering built in clinical capacity for students to learn alongside practicing physicians in its network of hospitals and clinics.

This is a unique model nationally, with a private health care system partnering with a public medical school to open a regional campus of that medical school to allow for an expanded class size that includes a commitment from the system to fund its operations and costs above the amount earned through tuition.

UMN Presentations to the Task Force

Public Investment Towards Excellence in Academic Health
Peter Crawford, MD, PhD Vice Dean for Research, Medical School
Mark Rosenberg, MD Vice Dean of Education and Academic Affairs, Medical School
link to presentation
Task Force #2, October 11, 2023

University of Minnesota Five-Point Plan for the Future of Academic Health
Doug Peterson, General Counsel
link to presentation
Task Force #2, October 11, 2023

Medical School Financing and Funds Flow
Timothy Schacker, Executive Vice Dean, Medical School
Bevan Yueh, CEO, University of Minnesota Physicians and Vice Dean for Clinical Affairs
William Sibert, Senior Associate Dean and Chief Financial Officer for UM Physicians
link to presentation
Task Force #3, October 25, 2023

Health Sciences Overview
link to presentation
Task Force #3, October 25, 2023

University of Minnesota Health Sciences Overview
Interim Dean Timothy Beebe, School of Public Health
Dean Lynda Welage, College of Pharmacy
Dean Laura Molgaard, College of Veterinary Medicine
Dean Keith Mays, School of Dentistry
Dean Connie Delaney, School of Nursing
Dean Jakub Tolar, Medical School
link to presentation
Task Force #5, November 21, 2023

Funds Flow in Academic Medical Centers

Cliff Stromberg

Presentation to Task Force #3, October 25, 2023

A Basic Overview

The flow of funds among components of academic medical centers ("AMCs") are notoriously complex – and different across institutions. A common refrain is "If you've seen one AMC, you've seen one AMC." This is for several reasons:

- An AMC consists of three key components: medical school (teaching and research), health system (hospitals and outpatient facilities), and a faculty group practice ("FGP"). But across AMCs nationwide, these components are owned and controlled in many different structures. In some AMCs like Michigan, Penn State and Miami, the University owns/controls all three components. In others like Virginia and Duke, the University owns the medical school and health system –but not the FGP. In others like Indiana and Northwestern, the University owns only the medical school. And in still others, like Minnesota, Colorado, Columbia and Washington University, the University owns or controls the medical school and FGP ("UM Physicians") – but not the affiliated health system. Also, a small number of institutions like the University of Minnesota ("UMN") operate a more comprehensive "Academic Health Center" – adding schools of nursing, pharmacy, dentistry and public health.

- Obviously, funds flows must vary based on these different structures. If (as at UMN), the health system does not own the FGP, then there is a major flow of funds as the health system must purchase doctors' clinical and supervisory services in the hospitals and clinics from the FGP. In an AMC where the health system owns the FGP—this would be invisible internal budgeting, i.e. zero on the "funds flow" chart.

- Likewise, funds flows vary because at some AMCs, the medical school manages the residency (graduate medical education or GME) programs, employs the residents and pays their salaries and benefits (though this is becoming more rare). Then, the hospitals that receive the residents' services reimburse the medical school. But at most AMCs, the health system employs the residents directly, so again, there is no associated "funds flow" to the medical school for resident salaries.

- Many other structural differences also matter, like who owns research buildings, which components purchase utilities or rent space from the other, whether State funds flow to the University, medical school or health system, and so on.

- Beyond these structural differences, funds flows differ across AMCs due to unique features of their history, level of research commitment, size, competitive situation and other factors.

The Key Take-Away

The key to understanding overall AMC funds flows is to bear in mind that all medical schools need net inflows or subsidies from the health system –whether that system is University owned or independent but affiliated. Hence, major financial support for the medical school is virtually always received via "mission support" payments from the health system, and a "Dean's Tax" on faculty clinical practice. At an AMC the size of the University of Minnesota, this net support usually runs several hundred million dollars each year, year after year. That is in addition to services the health system purchases at fair market value.

Why Do Medical Schools Need Net Subsidies?

Every medical school – even the most successful and efficient like that at the University of Minnesota – require such subsidies from the AMC's clinical enterprise (health system and faculty practice). Why? Simple answer: because all their missions/activities except for one are destined to lose money. This is just the nature of the latent costs and funding processes.

- Medical school education keeps getting more expensive due to technology, complexity, the need for simulation labs, and accreditation requirements. There is enormous public pressure not to raise tuition –because it is already high and leaves many graduates with substantial debt. But tuition covers only a portion of the actual costs of educating physicians –so medical schools incur a loss on education.

- Medical school research also always incurs a loss, usually a substantial one. A study by the Association of American Medical Colleges in collaboration with Price Waterhouse Coopers found that for every $100 of sponsored research a medical school conducts –it loses $53. That means that one could predict that a medical school like the University of Minnesota Medical School ("UMMS") –which has risen dramatically in the research rankings and is now about #21 of 140 medical schools in the nation, and conducts about $300 M of research/year –must find some sources of funding for perhaps $150 M in research losses year after year. The "return on investment" is new treatments and cures, improved health and saved lives. But the costs are real. Thus, paradoxically, the more research a medical school conducts, and thus the more eminent it becomes and the more able to recruit top students, residents, faculty and other health professionals – the more reliant it becomes on support from the clinical enterprise.

- Faculty practice can break and sometimes earn a small margin, but it is burdened by several public missions too. In addition to trying to be productive in clinical work,

faculty must teach medical students, mentor residents, oversee research, serve on hospital committees—and often staff community outreach and services to the underserved that are sure to incur losses. Many FPGs around the country incur massive losses year after year. The UM Physicians is more financially sound and usually at least breaks even.

- Hospitals and ambulatory sites are the main component of an AMC that is capable of earning a profit—and some earn large profits. There are a number of distinguished, major AMCs whose hospital systems earn 4% -6% or even 10%-12% operating margins, yielding many hundreds of millions each year. A few years ago, Indiana University's affiliated hospital system was so profitable, it gave $416 million to the medical school. BJC system gives Washington University's Medical school 45% of all its operating margin – usually hundreds of millions. There are other examples as well. Unfortunately, UMMS' major affiliate, Fairview, has not been financially successful. Its operating margins have declined for eight years—and it incurred losses beginning in 2019, continuing today, and cumulating to about $1 Billion.

What Are the Major Elements of the Funds Flow in an AMC?

As noted, AMCs all differ, but here are some of the main recurring funds flow elements:

1. Hospital Payment for Physician Services. These include payments for 24 x 7 staffing, medical direction of programs, supervising residents, and other services.
2. GME Administration. These are payments for the costs of Program Directors, Clerkship Coordinators and accreditation compliance.
3. Resident Costs. These are payments (e.g. from hospital to medical school where the latter is the "Sponsoring Institution" for residency programs) for resident salaries, fringe benefits and insurance.
4. DME and IME. These are payments for Medicare and Medicaid to the hospital only, for two kinds of costs of GME programs. Direct medical education payments ("DME") reimburse formulaically for the costs of residents in relation to the portion of total care provided to Medicare or Medicaid patients (rather than to privately insured patients). Indirect medical education ("IME") funds pay hospitals for part of the increased costs due to residents ordering more tests or creating the need for administrative work. The formula is based on a ratio of residents to beds. But for both IME and DME, the Centers for Medicare and Medicaid Services ("CMS") pays only for a numerical level of residents up to a "cap."
5. GME Costs Above the Cap. These are borne by hospital alone. But most teaching hospitals choose to employ residents above the cap because of their lower cost compared to nurses (residents often earn about $60,000/year and work 80 hours/week. Nurses may earn $80,000- $120,000 and work less than 40 hours/week). Also, more residents enable physicians to be to be used more productively.

6. Sponsored Research. Much medical school research is supported by research grants from the National Institutes of Health ("NIH"), other federal agencies or the National Science Foundation (or private foundations). The grantee (medical school) may pay the hospital for use of equipment or other direct costs. Also, the federal agencies usually pay an "indirect cost rate" on top of the direct costs of the research project. This is to reimburse (hence "indirect cost recovery" or ICR) the medical school for some of the costs of University facilities and administration required for a research enterprise beyond an individual project.
7. Distribution of ICR. ICR may be paid in part by the University to other components, depending on which provided the facilities or other elements.
8. Unfunded Research. Medical schools often recruit promising researchers, who conduct research work before or in addition to that which receives grant funding. This work is sponsored/funded by the medical school itself.
9. Philanthropy and Restricted Funds. Generous people often fund gifts to the medical school, the health system, the faculty group practice or all of them. Sometimes the activity the gifts fund traverses missions, so there are funds flows under the gifts. Restricted funds are used as per the donor instructions.
10. Tuition and Fees. These flow to the medical school.
11. UPL/IGT. These "upper payment limit" programs are complicated and controversial, but extremely common. In essence, a state or local governmental entity can provide support to the state Medicaid program, which then draws down federal matching funds under a formula, and such total additional funds are used to pay increased Medicaid rates ("supplemental payments") to certain providers essentially to increase access to the underserved. These are all defined under varying state Medicaid programs, and in Minnesota are called "directed payment".
12. Faculty Recruitment Packages. Medical schools recruit Department Chairs, Division Chiefs and other physician leaders—who will perform services as Academic Chair and leader of a Department, and perhaps Service Chief at a Hospital, and perhaps academic/clinical/research leader of a program. Funding of these packages is often shared by the medical school and hospital.
13. Faculty Academic Work. This is funded by the medical school. Faculty are usually paid explicitly or implicitly under a "CARTS" methodology, where their 100% of work effort is allocated among Clinical, Academic, Administrative, Research and Service elements. Funds flows among medical school, faculty practice and hospital occur in order to accord with the planned effort distribution.
14. Faculty Clinical Practice. Money for the direct patient services provided to patients by faculty flows into the FGP (in UMN's case, UM Physicians). However, in some cases such as capitated or other "population health" arrangements, a bolus of funds is paid to the health system, and then funds flow down to the FGP based on a formula or mutually achieved savings.

15. Dean's Tax. The Deans tax exists at almost every medical school. It is the source of funds for basic medical school functions – the research and administrative infrastructure that enables a faculty to function as such.
16. Hospital/Health System Mission Support to the Medical School. This is a subsidy to the medical school's teaching and research programs –which attract more patients to the health system and thereby add to its profits.
17. Clinical Joint Ventures. Sometimes the FGP and health system create joint ventures to provide care in a shared faculty or service. At UMMC, the largest of these is the Clinics and Surgery Center ("CSC")—a major ambulatory facility that is in many ways the 'front door" to UMMC. Its construction was funded and it is owned by UM. It is leased to a joint venture of UM Physicians and Fairview, and there are funds flows between them relating to it.
18. Hospital Inpatient Revenue. Third party payers and patients pay the health system for inpatient hospital services.
19. Hospital Clinic and Ambulatory Revenue. Clinics can be "hospital based" and then receive payments for both a "facility fee" and the physician services, or they can be "physician office based" and are paid only the latter. In the case of UMMC, most of the clinics are hospital based, and UM Physicians authorizes Fairview to bill and collect for both fees, and then pay funds to UM Physicians for their services.
20. University/Medical School Funds Flows. In AMCs generally, there can be many kinds of further payments such as: University budgeted funding of the medical school; allocation of endowment earnings; University charges to the medical school; agreed splits of ICR; payments for utilities; payments for use of "core" facilities such as IT systems and telecom; costs for space; and allocations of University overhead.
21. State Funding. Some states provide direct funding to the medical school, or there is "flow down" funding through the University. States also have funded medical school buildings.
22. Technology Transfer Related Funding. Technology transfer administration costs are usually borne by the medical school and/or University. Licensing revenue, or equity interest revenues are then usually shared based on University policy among inventors, their Department or unit, their school and the University. Each AMC usually has various other funds flow elements that are an accretion of "special arrangements" made at a given time and cumulated over the years.

Conclusion

AMC funds flows are not simple, rational and easily replicated across institutions. They are artifacts of complex health and education financing systems in the US, and the accumulation of historic arrangements in a given AMC. But they have funded important functions over many decades. So when they are modified, one must always consider the long term, second-and-third order impacts of the changes. And there is no doubt that the cost of excellence continues to rise.

Academic Health Programs Overview

Minnesota is fortunate to have an academic health enterprise at the University that is distinguished by strength in six disciplines - Dentistry, Medicine, Nursing, Pharmacy, Public Health, and Veterinary Medicine - which allows for leveraged excellence unlike public universities in other parts of the country.

Why important?

- Experts in pain management from the School of Dentistry partner with bone cancer specialists on new treatments.
- The College of Veterinary Medicine has faculty focused on cancer that are influencing treatments in the Medical School.
- The School of Public Health is partnered with the Medical School on a new Center for Learning Health Systems Science - focused on using new models of collaboration to build continuous improvement into care delivery.

The University is strongly committed to delivering on its core missions of educating the next generation of health professionals, conducting leading edge research to promote better health and care while delivering health care that is compassionate and personalized, using the latest new knowledge of what works best.

- And the University delivers.
- In fact, 70% of practicing physicians, 73% of dentists, 69% of public health professionals, 70% of veterinarians, and 60% of pharmacists in Minnesota graduated from U programs.
- The School of Nursing graduates most nurse educators in the state, and is developing innovative programs with other colleges and universities to address shortages in the profession.

Our Medical School works with affiliated partners throughout the state to provide the hands-on clinical experiences required for our students, and has begun an innovative partnership with central Minnesota's primary healthcare system, CentraCare, to expand its class size through a 4-year regional campus in St. Cloud.

- First class size increase in 50 years (since opening of Duluth campus), despite MN population increase of nearly 50% in that time span.
- A first of its kind in the nation model that provides sufficient clinical opportunities and investments from the private partner.

This new partnership will help energize expansion of Duluth campus to a 4-year program as well.

- Current proposals for Duluth could move the Medical School and College of Pharmacy programs to the Medical District of Duluth to leverage clinical opportunities from both Essentia Health and St. Luke's.
- Longer term vision is to add other health sciences programs to the site.

History of the four Fairview-owned Buildings on Campus

In 1997, Fairview became stewards of the University's facilities via a complex set of interrelated transactions with Fairview integrating its healthcare duties with the clinical service mission of UMP and the land grant mission of the University.

EAST BANK HOSPITAL
(included Variety Children's Hospital)
The hospital was built in 1986. The University transferred ownership of the building to Fairview in 1997. The University retained ownership of the land.

WEST BANK HOSPITAL
(formerly known as Riverside Medical Center)
Building and land owned by Fairview. As part of the 1997 East Bank Hospital transfer, Fairview agreed to operate both East Bank Hospital and West Bank Hospital as the flagship facilities for the University's academic health mission (research, training and clinical services).

MASONIC CHILDREN'S HOSPITAL
In 2011, the pediatric services then located at the East Bank Hospital were relocated to the new hospital facility constructed adjacent to the West Bank Hospital. The building and land are owned by Fairview. Significant fundraising by the University of Minnesota Foundation supported the new hospital

(East Bank Hospital, West Bank Hospital and Masonic Children's Hospital are all operated under a single hospital license.)

CLINICS AND SURGERY CENTER (CSC)
The building and land are owned by the University. CSC opened in 2016. The University leases space in the building to the CSC joint venture owned 50/50 by UMP and Fairview and to Fairview for hospital-based services.