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Innovative Revenue Streams for Academic Medical Centers—Reaching Beyond Patient Care: Part Two

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As shared in part one of this article series,[1] Academic Medical Centers (AMCs) are commonly known for providing communities comprehensive patient care, extensive research programs, and education for our future health care providers. Yet, continuously increasing costs for such programs are causing AMCs to seek revenue streams outside of their "core services" to generate additional funds and ensure continued success of their programs and charitable missions. The authors conducted a series of structured interviews with clinical and administrative leaders at nationally recognized AMCs in different stages of pursuing innovative revenue opportunities to learn about their successes and reflect on the business and legal challenges of each initiative. In addition to the three opportunities highlighted in part one—ancillary services, branding and affiliations, and consulting services—this article highlights three other opportunities—real estate and energy monetization; drugs, devices, and data; and private equity.

Real Estate Optimization and Energy Monetization Strategies

AMCs typically have a large physical footprint, with main campuses covering several city blocks, potentially extending to encompass several outlying hospitals and numerous clinic locations across multiple cities, or some spanning many states and/or countries. Because of this, AMCs often find themselves in the real estate business—owning a significant number of properties, buildings, or office suites.

The COVID-19 pandemic reduced many AMCs' need for space due to the increased use of remote workers. Entire administrative, patient registration, and patient billing teams, among others, transitioned to the use of virtual workspaces, "hoteling," or other space-sharing arrangements. Rather than leave these floors of previously bustling offices underutilized or vacant, AMCs should look for opportunities to optimize or repurpose their assets to generate revenue.

As an example, a recent health system real estate optimization analysis identified a potential $5 million net present value savings opportunity through space utilization and capital strategies for a single 60,000-square-foot medical office building. Similar savings opportunities often exist within large health system portfolios but may be overlooked and therefore unrealized.[2] Health systems may also sell unused real estate for a profit. Some old and empty hospital buildings have been bought and converted into condominiums or apartments. Real estate developers often find hospitals to be attractive ventures due to their geographic proximity to city centers or near public transportation routes. Such was the case when the Mayo Clinic in Rochester creatively partnered with a development firm in its plan to build a luxury hotel on the roof of a clinic building on its downtown campus. Unfortunately, due in part to the pandemic, the development did not proceed as planned. However, this concept remains an innovative approach to maximizing an AMC's real estate.[3]

AMCs may instead choose to retain space for an alternative use, such as expanding more productive clinical services;[4] renting or subleasing; or converting empty space into ambulatory surgery centers, imaging centers, "centers of excellence" co-located programs, or other profitable ventures. Alternatively, external parties, such as movie studios, might also rent such a space. Some of Hollywood's biggest blockbusters—including "Pearl Harbor" and "Outbreak"—have been filmed in former hospitals.[5]

A new trend in capitalizing on unrealized real estate is creating energy-generating services. AMCs can rent or repurpose unused parking lots or rooftops to use as solar panel space for power plants, generating energy for their communities and allowing AMCs to source this energy at a reduced rate.[6] AMCs are not as active in this sector as other nonprofits, such as universities. For example, Colorado State University (CSU) installed solar technology panels on the roof of its engineering building in 2009. CSU's broader, organization-wide sustainability goals already included the pursuit of energy-generating services. When faced with a projected electricity rate increase, the university administration bought into the concept to reap the associated cost savings. By 2015, the initiative had expanded to several solar panel installations across its main and subsidiary campuses. Though CSU faced financial and regulatory challenges along the way, administrators considered this to be an effective use of unused space while moving their campus toward fully renewable energy.[7] Trailblazing renewable energy sources not only polishes an AMC's brand but affords opportunities to be a market maker in the environmental space.

Another interesting strategy relates to AMCs that own their power generation facilities. These facilities (sometimes co-owned with other local hospitals, AMCs, or universities) sit on valuable real estate, require ongoing investments, and truly are non-core assets. Some hospitals have found energy-production vendors that will purchase these facilities from the hospital and enter into agreements to continue supplying the energy needs of the hospital. Using this strategy, the hospital frees up capital locked into the facility, brings in new management, and ensures long-term energy capacity. An early example of such a transaction is in greater Boston where the Harvard teaching hospitals undertook such a transition.[8]

Repurposing unused space can also be an opportunity for AMCs to partner with community leaders to pursue population health initiatives. Opportunities ranging from food kitchens to stable housing allow AMCs to impact their community and provide full-scale patient management outside of traditional care settings. AMCs can consider researching grant opportunities to obtain funding to support these initiatives. Such investments may also qualify as community benefit deductions in the AMC's financial statements for tax deduction purposes.

Business Challenges and Risks

Long-Term Constraints: AMCs will need to consider the implications of current leasing commitments on plans to convert properties to other uses. Any long-term leases should align with the system's strategic plan and future goals, especially if the AMC is considering transitioning space for alternate use. Otherwise, should an organization decide to sell unused property for immediate profit, it should consider the future buyer's needs and their implications for the AMC campus. Selling properties to hotel chains or large retailers, or even leasing to movie studios on or near the main hospital campus, could result in overcrowding and access challenges that deter patients and their families. AMCs should also consider their long-term expansion goals before selling or transitioning any unused space.

Strategic Alignment: Increasingly, staff today may welcome expanded remote working opportunities. However, AMCs must consider potential impacts on their organizational culture, team building, training, and patient experience for those employees interacting with patients from a remote office. While AMCs have addressed many of these remote working challenges during the past two years of the pandemic, they will need to consider the long-term implications remote work may have related to patient safety, Health Insurance Portability and Accountability Act (HIPAA) compliance, and overall data security.

Tracking and Benchmarking: While AMCs may not have a dedicated real estate department to manage leases and track budgets to ensure real estate investments are performing efficiently, having staff in place to accurately track and benchmark real estate operational expenses is important. Alternatively, AMCs may wish to partner with third-party firms to provide operational oversight of these investments. Benchmarking is also important to confirm full value of the real estate assets is captured for future financing or sale.

Legal Considerations

Tax and Accounting Implications: It is essential to lean on internal legal counsel and accounting personnel for real estate matters. While owning real estate is sometimes a smart investment for AMCs, general counsel must be mindful of separating real estate from the academic and clinical entities. Counsel will understand and be able to advise on any financial implications related to limitations of local zoning, charitable trusts and endowments, tax-exempt bond financing restrictions, or even potential lawsuits. Internal accounting teams should also advise on tax matters to ensure AMCs are not subject to higher taxes or even double taxation resulting from real estate opportunities.

Ownership: AMCs under a university umbrella may not always directly own or control their real estate assets. These AMCs should work with their parent organization to fully understand the implications of current and future assets and collaborate to develop a real estate strategy that is financially beneficial to all parties.

Drugs, Devices, and Data

AMCs are often hubs of clinical innovation and discovery. As such, they should capitalize on this differentiator through the monetization of intellectual property (IP) created by pharmaceutical developments and technology-enabled innovation, such as molecular diagnostics, artificial intelligence, big data, and clinical devices. This is not a particularly new strategy, and some AMCs have generated considerable medical revenue through these projects. The University of Minnesota (UM) has several examples of this, tracing back more than 40 years, including the "sleeping beauty" gene-editing technique it developed. This licensed technique is now used in cancer immunotherapies and has generated approximately $16.2 million for UM.[9]

Specialty pharmacies are typically profitable ventures, as they are designed to distribute complex drugs and compound medicines. AMCs are a destination for complex and chronically ill patients who require such pharmaceutical regimens. Cleveland Clinic (Ohio) has further capitalized on its specialty pharmacy services to develop the Infusion Pharmacy at Home program, extending patient access to and generating greater revenues from both its care models and its pharmacy across eight states.[10]

Harvard Medical School (Harvard) has achieved several successes by monetizing digital, drug, and data-related innovations. It recently developed genetic risk scores, which can aid screening for and, subsequently, prevention of six common diseases in high-risk patients. A group of health care leaders, including Harvard professors and researchers, analyzed the genomes of thousands of patients and developed polygenic risk scores, predicting the likelihood of a patient developing atrial fibrillation, coronary artery disease, Type 2 diabetes, breast cancer, prostate cancer, and/or colorectal cancer. Ultimately, Harvard hopes to monetize this tool and deploy the assessment to clinical providers globally.[11]

Another example comes from MD Anderson (University of Texas) and its progress in the wearable technology space. Specifically, MD Anderson uses Apple Watches to capture health data of cancer patients, with the ultimate goal of improving their quality of life during treatment. The Apple Watch tracks data, such as heart rate and patient activity levels, and reports all information back to MD Anderson. The watch is also used to push notifications and alerts to the patient from the care team.[12] While not specifically a revenue stream for MD Anderson, this advancement innovatively increases the overall contribution margin for these patients. It reduces health care costs and allows clinical staff to work more efficiently by freeing them up to perform other services while the technology passively collects data.

IP securitization is also essential for the success of these programs. It enables the capitalization of intangible assets, increasing revenue for business operations, and diversifying the interest of the AMC. IP securitization can apply to a range of services, including device development and drug discoveries, both of which are typically key focus areas for AMCs. Consider the example of the Colorado University Healthcare Innovation Fund (CUHIF), established in 2016. The University of Colorado Anschutz Medical Campus identified an opportunity to collaborate with leading startups, as well as payers, pharmaceutical companies, and technology organizations to establish a pipeline of funding and resources for health care innovation. CUHIF was then formed to capitalize on innovation activities and unique deal flow. The fund allows investors to capture the upside with less risk and affords an opportunity to earn high returns, while positively impacting the state of health care. Ultimately, CUHIF has created strategic partnerships with more than ten multinational health care corporations, and currently has $16 million in assets under management.[13]

Another example includes Memorial Sloan Kettering Cancer Center's (MSKCC's) royalty-bearing license on two highly successful drugs used to prevent side effects of cancer treatments. In the early 2000s, MSKCC sold 80% of these royalties for $400 million, preserving 20% of the royalty streams. These transactions allowed MSKCC to diversify a large financial asset, pull forward cash flows into upfront payment to subsidize immediate initiatives, and benefit from consistent cash flows each year through the retention of a portion of the royalty. Specifically, MSKCC used the $400 million income to supplement research and construct a new cancer research center.[14]

Business Challenges and Risks

Assigning Value: It can be difficult to measure the full return on investment (ROI) of digital innovation, as challenges exist in estimating customer acceptance and associated trickle-down cost savings from improved patient management. However, AMCs must establish compliant ways of assessing the ROI, as technology and digital innovation will only continue to expand in the health care space. After considering the startup costs (including, but not limited to, research and development, devices, and staff), consider the reduction in variable costs from technology implementation. Depending on the technology use, consider possible payer restrictions and how they reimburse for such services, as well as technology's impact on other operational metrics, such as average length of stay. Additionally, AMCs should account for the value of IP and explore licensing and royalty opportunities to retain said value. While challenges in assessing value should not be a deterrent to exploring and pursuing technological opportunities, they should be considered with appropriate caution.

Capacity for Innovation: Identifying and assessing the value of various innovative technologies will require significant time and energy of the AMC's financial, compliance, and legal team, among others. Many institutions have developed departments dedicated solely to reviewing and investing in, or possibly finding, private equity partners to fund such innovations, with a goal of generating significant returns. One such health system developed a "Transformation Office" stating that to be successful, the organization should "ensure its legal counsel is knowledgeable in these new investment areas," such as national/international expertise, data sharing and privacy, and private equity.[15] Assigning an attorney to innovation offices to vet ideas early in development will help avoid pitfalls later in the process.

Technology Breaches: With any technology opportunity comes the risk of data security. Luckily, most AMCs have well-equipped information technology teams dedicated to protecting the privacy of personal health information (PHI). However, new technologies and modes of using and/or sharing data introduce new and potentially unfamiliar risks. AMCs must keep data security top of mind and consider all compliance considerations when working with PHI.

Legal Considerations

Compliance Implications: AMCs must consider how to compliantly share data and technology with outside entities. Important laws for consideration include HIPAA and the Privacy Rule. Legal counsel should also be involved in the IP securitization process to ensure the AMC capital is properly protected.

Private Equity and Venture Capital

The majority of AMCs, including those interviewed for this article series, have entered or plan to enter the private equity markets. This may be of value for pursuing IP licensure, making large strategic transactions, identifying sponsors to fund project development, or even engaging in passive investing. Private equity affords an opportunity for AMCs to pursue and capitalize on the ideas of their leading physician-scientists, while retaining long-term value of intellectual capabilities. There are multiple ways to pursue private equity opportunities, including, but not limited to, developing internal innovation centers, seeking funding from external private equity companies, and/or providing board service to existing private equity firms. For example, one AMC developed a "health care innovation center," with ownership held by a separate, but closely affiliated entity. This center brings in various sponsors to fund its own or other projects of interest. The AMC affiliation gives the sponsors ready access to faculty know-how, data, participation, and other added value. The AMC has not needed to invest its money in this center, and it charges a minimal sponsorship fee. Any resulting revenues generated from the ideas are brokered between the AMC and the sponsor for each deal.[16]

Capital investments in private equity projects at AMCs do not have to be health care-related, though they should align with the AMC's mission and strategic goals. Non-health care-related opportunities may include technology, digital platforms, or data-sharing organizations.

Business Challenges and Risks

Resource Constraints: Developing an internal private equity department will require significant time and effort. Be sure to consider whether your organization has enough staff and resources to successfully pursue this venture. AMC leadership must ensure these opportunities provide additional margins, rather than dilute funding resources. For example, one of the AMCs interviewed spoke of its challenges initiating a for-profit company to pursue startup ventures. Citing a lack of expertise in the areas pursued, it stated, "If it isn't what you do well, you need to partner with someone who does."[17] Hiring staff with venture capital experience to lead the department is essential for an internal private equity department's success.

Strategic Alignment: While private equity may be a chance for forward-thinking physician leaders to sharpen their business acumen, AMCs must be cautious not to stray too far from their core mission. Moving too far away from the clinical values and goals of the AMC can cause dilution of the AMC's mission to help patients through clinical research and education. Further, it is necessary to continuously assess the organization's risk tolerance and maintain a level of risk with which the AMC and board of directors are comfortable. As the AMC is not a private equity firm, its risk tolerance should reflect that of a health system, not of a true private equity firm. But this is also one reason AMC investment vehicles have been less successful in seizing opportunities than their nimbler competitors, who are purely financially (rather than strategically) driven. For this reason, health-system-affiliated venture funds and other investment entities are often intentionally located outside of hospital governance structures.

Legal Considerations

Competition: Competing in the venture capital space means competing with other seasoned private equity firms. Though AMCs may bring the same financial support for investments, companies may pursue opportunities with established private equity firms because of their track record supported by experienced and tenured staff. If an AMC chooses to pursue private equity opportunities, it should hire experienced venture capitalists who can guide the hospital's portfolio and investment strategy. In establishing an internal private equity department, it is also important to set guardrails that align with the system's goals and objectives, yet allow this department to operate autonomously. This will alleviate having to seek continuous approval from the AMC's board of directors, which can slow the process and may limit partnership opportunities.

Brand Tarnishment: It is essential to invest wisely and actively monitor the progress of capital investments. As these can be high-profile opportunities, it is important to clearly define the AMC's involvement in the investment to avoid reputational risk on the clinical side of the AMC. This may be a more prominent risk in the future as prosecutors, Congress, and other oversight authorities continue to explore perceived compliance risks arising from private-equity-backed health care entities.[18]

Closing Thoughts

In addition to ancillary services, branding, and consulting services, as described in part one of this article series, other opportunities that include real estate and energy monetization; data, drugs, and devices; and private equity are potential innovative drivers of increased revenue and/or capital generation. They also allow an AMC to expand its mission and strategic plan and afford opportunities not only for clinical AMC leaders, but also for other areas of the organization, such as legal, accounting, and administration. Empowering all staff to perform at the highest level of expertise will push AMCs to become "market makers" in the respective fields, leveraging the AMC brand and skill, and potentially creating the next great clinical or technological innovation to change the course of health care. Ultimately, these opportunities will provide additional funding sources for AMCs to continue the pursuit of improved health care and outcomes.

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[1] *Innovative Revenue Streams for Academic Medical Centers – Reaching Beyond Patient Care*: *Part One* was published on February 9, 2022, by the American Health Law Association's (AHLA) Academic Medical Centers and Teaching Hospitals Practice Group.

[2] Realty Trust Group, Inc., *Healthcare Real Estate Optimization* White Paper, https://info.realtytrustgroup.com/white-paper-healthcare-real-estate-optimization-advisory?__hstc=119825431.0557b9ddf32894311ddaf4cf8ee89add.1651151794443.1651234663169.1654804323028.3&__hssc=119825431.3.1654804323028&__hsfp=67369463 (accessed on June 9, 2022).

[3] Jeff Kiger, *Heard on the Street: Rochester Developer Supportive of Mayo's Hotel Plans*, Assoc. Press, Nov. 2, 2018, https://apnews.com/article/20df07afd1084f4e83019c34bd626d05 (accessed on Apr. 29, 2022).

[4] While not within the scope of this article, it should be noted where administrative space on-campus is being reevaluated, adding provider-based clinical services is now an important option since the site-neutrality regulations flowing from, *inter alia*, Section 603 of the Bipartisan Budget Act of 2015, are not implicated for on-campus services. Consequently, providers have an incentive to relocate non-revenue-generating administrative usages off-campus and develop or locate clinical services on-campus.

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[15] Based on the author's confidential interview with the health system, located in the South-Central United States.
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[18] *See, e.g.,* Victoria Knight, *Private Equity Ownership of Nursing Homes Triggers Capitol Hill Questions—And a GAO Probe*, KHN, Apr. 13, 2022, https://khn.org/news/article/private-equity-ownership-of-nursing-homes-triggers-federal-probe/; Robert King, *Private equity firms in Congress' crosshairs with legislation calling for transparency*, Fierce Healthcare, Feb. 12, 2020, https://www.fiercehealthcare.com/practices/private-equity-firms-congress-crosshairs-legislation-calling-for-transparency.