Academic Health Sciences Library Design

Best Practices for Space Allocation in Academic Medical Libraries

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In the information age, medical students, faculty, and physicians are more reliant on their computers and other electronic devices to access medical information instead of borrowing books or seeking an issue from a peer-reviewed medical journal. To adapt to the change in behavior of their user population, many academic medical libraries have reduced their collections of physical materials and operate with a smaller footprint that features a flexible information commons, study rooms for group collaboration and individual study, an exhibit space for special events, and a digital media center. With that being said, large collections of physical materials including journals and books are not without value, and several academic medical libraries maintain the collections of physical printed resources. Whatever the circumstances forward looking academic medical libraries prioritize keeping their spaces flexible to accommodate future developments in the field of medicine and the evolving needs of the user population to carry out their dual missions of education and healthcare support.

Design of academic medical libraries—the size and the allocation of said space—begins with the size of their user population and who they are (such as doctors and med students), the preferences and routines (such as the fact that medical students are more likely to use the medical library for study while doctors are more likely to consult digital resources when engaged in the practice of medicine) and what these patrons need to either further their studies, support research, or improve the quality of care to their patients. The size of the user population not only influences the square footage and aspects such as the number of computers needed to serve the population, but also the size of the staff and what staff areas will be required for the smooth operation of the health sciences library. Changes in the allocation of a medical library’s square footage should always be justified by the needs of their population, but considerations of space allocation should be limited to the immediate population of patrons, but also should take into consideration a projection of the institution’s future user population (2).

The heart of an academic medical library is the information commons. An information commons is a flexible space designed to accommodate students as individuals and in groups in their studies and collaborations. Ideally, this inviting space would have a mix of furniture such as tables, carrels, and lounge seating. The information commons of an academic health science library should cater to the digital native by providing access to ample charging stations, public access computers, a robust Wi-Fi network, printing, and other equipment. Forward looking academic libraries will have hardwired infrastructure installed for their information commons to accommodate future technologies. Despite its name the information commons should not be located in the center of the library, but should instead be located along the outer edge of the building and furnished with large, expansive windows to maximize natural lighting and increase the space’s attractiveness (2).

The information commons are not designed to be a quiet area of study, their open layout is designed to foster conversation and support collaboration. To that end, a medical library should have a variety of study rooms of various sizes to accommodate that need for private study, video conferencing, and group collaboration.

Healthcare and medical education are constantly evolving. To help support this, academic health science libraries should have a digital media center to allow med students access electronic course materials. Technologies such as scanning equipment, graphics workstations, and virtual reality tools should be available to help medical students acclimate to the types of technologies they may encounter in their professional career (4). If a digital media center is equipped with a computer lab that may be co-opted as a classroom, then the academic medical library could contribute to the academic community by hosting courses in subjects such as medical informatics (2).

The demands of patient care and the study of medicine require that the facility of an academic health science library to be open at all hours, but academic medical libraries lack the financial support to maintain full staff 24/7. Budgetary realities may even require that the health science libraries go completely unstaffed for several hours each day. For medical libraries to accommodate this reality, their staff areas should be designed in such a way to allow staffers to close their work areas from public access before they leave for the day (4). Also, valuable equipment and physical objects should be safeguarded in rooms that can be locked when proper monitoring is unavailable. In addition, a video surveillance system is absolutely required to safeguard against unruly behavior.

Academic medical libraries will always have to highlight their contribution to the medical school and associated teaching hospital to justify their continued funding. One avenue available to academic health science libraries to do this is through an exhibit space and hosting special events such as inviting key figures in healthcare or hosting a rotating selection of exhibitions to highlight new developments and particular issues in the medical field. By raising the profile of the campus’s medical library, the library director may use such events to garner financial and political support for their institution (2).

Hosting and advertising special events are a way to connect with the local community. Generally, the resources of an academic medical libraries are available to general population, but a lack of basic awareness that the doors of a particular collegiate medical library are not restricted to the associated hospital and academic communities prevents the general public from seeking help to meet their consumer health information needs. Inviting the public to special events presents a unique opportunity to interact with the surrounding community and spread the word that they are welcome to visit and use the library to help answer a medical question.

Another benefit of having an active exhibit space is the prospect of building relationships with other institutions and important persons in a global medical community. This benefit is not limited to the library; but by hosting prominent medical figures and medical associations, students, faculty, and associated medical professionals have the opportunity to network and further their own professional careers. Clearly, an exhibit space is absolutely vital to the operation of an academic health science library.

With so much information available online, many administrators of medical schools see no need to store printed materials. It is true that as the popularity of digital resources increases, the need for stack space in medical libraries has decreased. Also, health science libraries that function primarily as centers of research can function without dedicating space to the maintenance of an expansive collection of physical materials. Newly built academic medical libraries for emerging medical schools often follow this precept, but that is not to say that print materials have no value in a medical library.

Even born-digital libraries are advised to retain a minimal amount of space for a collection of physical print materials. The size and depth of such a collection and the space to store them physically is a judgment made by the library’s director and may largely be determined by the existing library facility, but it is helpful to remember that a portion of a health library’s patrons—med students and medical professionals—will always prefer to use printed materials. In addition, academic medical libraries do not exist in a vacuum. It should not be forgotten that academic health science libraries often have the largest and most thorough collections of medical resources in their respective communities and that local physicians depend on this resource to treat their patients. Also, some materials that may not be available digitally or cost considerations—such as the cost to acquire a digital duplicate—may force retention of a hardcopy as part of a medical library’s collection of resources.

For academic medical libraries that have a large collection of physical materials, it is a best practice to house their collections in moveable shelving. By not bolting shelves to the floor the medical library can more easily repurpose the space to meet the evolving demands of its medical clientele from storage of collections of printed materials to other purposes.

For older parts of an academic health sciences collection, it is best not to forget that archiving is still a part of librarianship even medical librarianship. Such materials can be stored either in compact shelving or stored off site for archival purposes and still remain available to the library’s primary patrons (4).

Weathering emergencies is another consideration for an academic health science library to maintain a sizeable collection of physical hard copies. While libraries of all types are well advised to engage in some form of emergency planning, planning for emergency circumstances takes on special significance for medical libraries as emergency planning or lack thereof has the potential to effect patient outcomes.

In the event of a power outage, backup generators can keep the lights and more importantly the computer stations on. In the event of that a medical library’s connection to the Internet is severed, patrons can rely on their device’s a cellular network to access electronic resources, but what would occur if the internet itself experiences a system failure? How would the medical library and its associated hospital respond to a disruption blocking access to the institution’s digital resources? Ransomware attacks on hospitals are commonplace as hackers profit from the understanding that the moral calculus works in their favor; and while it is difficult to imagine what could take down the Internet, the question that must still be answered is “In the event of a service outage, can a medical library supply the information required for patient care?” Retention of physical materials in print may help in this regard. Born-digital medical libraries are particularly vulnerable to such threats.

The trend of academic medical libraries is towards a born-digital layout, operating a smaller footprint, and featuring flexible information commons designed to accommodate various study habits for groups of all sizes. Academic health science libraries also have multiple study rooms for private study and group collaboration. Two highlights of the twenty-first century collegiate medical library are an exhibit space and a digital media center. In the face of decreasing popularity of printed materials, many academic medical libraries have downsized their collections of physical materials and support their associated academic and medical communities with robust selection of digital resources. With that being said, large collections of physical materials including journals and books are not without value. Whatever the circumstances academic medical libraries should prioritize keeping their spaces flexible to accommodate future developments in the field of medicine and the evolving needs of the user population if they wish to continue to carry out their dual missions of education and healthcare support.

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