Library Services for Associated Clinical Organizations:
AAHSL Task Force Report
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Introduction

Academic health sciences libraries' missions historically include providing information resources and services to the faculty, staff and students of their home institution. While on the surface this seems straightforward, the situation quickly becomes complicated because of the interconnected relationship of academic institutions and their associated clinical organizations (ACOs).

For the purposes of this research, ACOs are defined as hospitals, health systems or clinics that have any connection, either ownership, formal agreement, or informal relationship with the academic medical library for collections and/or services. Examples of formal agreements might include clerkship sites, residency sites, and clinical/volunteer faculty appointments. The ACO is often a separate financial entity and only a subset of their employees interact with the academic medical institution. However, both the academic medical institution and the ACO derive benefits from the relationship because of shared goals around patient care and education. Efficiencies and economies of scale are also possible in this relationship and library services are one potential area that is often pursued.

Access to academic health sciences library collection resources are both attractive and provide value to ACOs, who on their own would most likely not be able to afford or manage such extensive collections. However negotiating contracts for the academic and clinical sites can be difficult, with vendors often having different pricing and licensing models for clinical sites. Some hospital employees and community physicians with admitting privileges may not be affiliated with the academic institution, yet still work within the ACO and want access to quality healthcare information. Residents working at the ACO may have access to library subscribed resources due to their affiliation with the academic institution via graduate medical education. Yet nursing staff or other advanced practice care providers working in their clinical department may not, as they are considered employees of the ACO and have no formal affiliation with the academic institution. Others may hold a variety of roles within both the academic institution and the ACO, which influences contract language and vendor expectations. The provision of library information resources is further complicated by hospital administrators' unfamiliarity with the cost, contract restrictions, and technology requirements associated with access to electronic journals and databases[1].

Hospital mergers and acquisitions, driven by value-based care reimbursement models and the subsequent need for cost-containment, efficiency and sustainability, have occurred at an average of 96 per year in the last decade. Factor in a growing trend of cross-state hospital acquisitions in order to expand market share across geography, and an inkling of the challenges involved with providing access to library resources in an increasingly complex healthcare environment emerges.[2,3] Hospital libraries have been on the losing end of this changing landscape for approximately 20 years now, with on-site hospital libraries staffed by a professional librarian being the exception as opposed to the norm today[4].

Academic health science libraries are also under increasing pressure as institutions of higher education adapt to a new reality where changing demographics, shifting funding models, and increased competition forces a re-thinking of how the business of higher education operates. This has led to many colleges and universities looking for ways to contain costs and maximize efficiencies, including mergers of academic and special libraries, cuts in library personnel and resource allocations, and changes in reporting structures.[5] Some of these changes further complicate the provision of library services and resources to students, faculty, and trainees working in the ACO's affiliated with the academic institution.

Access to information that is current, accurate, and based on sound scientific principles has always been important in the health sciences, but has taken on an even greater significance during the conditions caused by the emergence of a world-wide pandemic, Coronavirus Disease 2019 (COVID-19). Many publishers and vendors lifted their paywalls and made their COVID-19 related and other selected content freely available to students, researchers, and clinicians as academic institutions shut down in-person campus operations and went to online-only instructional models. While it is too soon to speculate how this unfettered access to online information will influence user expectations going forward, it may serve to underscore and raise questions regarding the different levels of access that some academic institutions and their ACOs have during "normal" operating conditions.

Background

The task force was convened in July of 2019 with a charge to identify AAHSL libraries that have successfully developed models and policies (including funding policies) for providing library services and collections to their ACOs and to compile successful case studies of these models. Interest in this topic has been ongoing for years. Most recently, in 2018, two library directors polled the AAHSL email list asking libraries to share information about their agreements with ACOs and interest was strong enough that an ad hoc meeting was scheduled for the November 2018 AAHSL meeting, with more than 30 participants attending. Once the task force was launched in 2019, AAHSL members were asked to identify themselves if they had a model they were pleased with and were willing to discuss. The committee reviewed the list of respondents, selected eight academic libraries for follow up and divided them up amongst themselves for phone interviews. The librarians interviewed represent the following institutions: Creighton University, Emory University, Johns Hopkins University, Medical University of South Carolina, University of Nebraska Medical Center, University of North Texas Health Science Center, University of Pittsburgh, and the University of South Carolina.

The task force created a structured guide with questions that each task force member used to interview a library contact. Interviews were completed by December 2019, and each task force member wrote a summary of answers from their interview. The summaries were peer reviewed by a second member for clarity. Each task force member discussed their interview with the entire committee and entered shortened answers from their interview in a summary table highlighting facts for comparison. The final data is presented as a summary table comparing institutions, longer interview transcripts that serve as summary

case reports of the details of the participating library's model of service for their ACOs, and this narrative report, which summarizes findings.

A summary table of the Task Force's findings along with individual interview responses and template reports are located in the AAHSL Member Center. Look for 2021 Associated Clinical Organizations Task Force under "Documents and Past Presentations."

Results

Relationship of academic institution and ACO

One factor that may impact the health sciences library's provision of services and collections to the ACO is the relationship between the library's academic institution and the ACO. These relationships vary among the institutions in this sample. At one institution, the ACO is owned by the academic institution, and although they each operate under a separate nonprofit corporation, there is a clear acknowledgement of the ACO as the clinical enterprise of the academic institution. At three institutions, the ACO and the academic institution are legally separate entities but with close ties. University leaders serve on the ACO's board of directors, and the ACO is part of an academic health center unit of the university. These institutions' websites describe the ACOs as partners in the medical mission.

Of the remaining four institutions, three have contractual relationships and the fourth is mixed. At the three contractual-based institutions, the ACOs are completely separate entities. The academic institutions contract with the ACOs to provide a clinical education environment for medical students and/or residents. At one of these institutions, the academic health center manages residency programs hosted at the ACO hospitals. At the last institution, there are mixed relationships between the library's academic institution and the hospitals of the ACO. At this institution, there is a close relationship with one hospital of the ACO. This hospital is considered to be part of the academic medical center. The relationship with the ACO's other hospitals are more contractual in nature.

The varying nature of the relationships between academic institutions and their ACOs is a significant contributor to the types of agreements in place at the institutions in this sample.

Library support to ACO: Collections

Seven of the health sciences libraries provide the non-University ACO employees some kind of access to the library collections with the eighth HSL sharing only a single platform license with the ACO. There are variations in how much of the HSL's collections are available to the ACO and how many of the ACO employees have the rights to use those collections.

How much of the library collections are available to the ACO varies substantially. Four of the HSLs provide the ACO with broad resource access to all or most of the HSL's collections. The remaining three HSLs provide limited resource access to a select subset of their collections. As mentioned earlier, the final HSL shares just one product license with the ACO, giving the staff of both organizations access to the content via the same license. For the three HSLs that provide limited access to their collections, the resources that are made available are those best suited for clinical support. When limiting the collections provided to the ACO, one HSL provides two specific databases while the other two HSLs have selected a subset of their collections focused on the needs of the ACO.

How many of the ACO staff can access the collections also varies across institutions. For collections provided to the ACO, the HSL library staff generally manage the licensing process for those collections. Some models provide library collection access to all ACO employees while other models limit the number of ACO employees who can access library collections. All employees of the ACOs at six institutions can access the available HSL collections. In the remaining two institutions, only a subset of the total ACO employees have the right to access the available HSL collections. That subset of employees is typically identified as having a business need due to their job title or position.

Library support to ACO: Services

Seven of the eight HSLs provide services to ACO employees and five HSLs provide a broad range of services including reference, instruction, clinical rounding, interlibrary loan, literature searches and consultations. Examples of some of the unique services offered were two libraries providing IT support, one library providing indexing and cataloging, and one library providing access to HSL physical spaces. One library's contract with an ACO is exclusively for staff to provide services. In this instance, the ACO provides funds to the HSL which the HSL uses to hire and supervise two librarians and a staff member. These employees are considered library employees and their work location is the ACO.

In the majority of agreements, all ACO employees can utilize HSL services. In the one arrangement that limits who can access HSL services, only ACO employees that are deemed to have a business need have access to the library services like reference, instruction and consultations.

Financial models: Collections

Models for calculating cost of collections available to the ACOs varied by institution and represented several categories: license cost, in which the ACO pays the exact or estimated license cost; flat fee, wherein the fee is an agreed upon amount that is not tied to a specific formula; formula-based fee, in which the fee is based on some type of formula with variables such as services, resources, licenses, FTE, or a mix of these items; percentage of library budget; or some combination of these models.

Of the eight institutions interviewed, one institution's agreement does not include collection resources in its contract with the ACO and only covers library staffing at the ACO. Two institutions use license cost as the basis for their model for funding collections. At one institution the ACO contributes a percentage of the library's total budget in a manner similar to how the schools also served by the library make contributions. One institution uses a formula-driven fee based on the number of FTE who will gain access to the collections. The remaining three institutions use a combination of models. Of these, one charges license cost and a formula-driven fee, the second uses a formula that includes license cost, a flat fee, and a formula-driven fee, and the third uses license cost for selected resources but also receives an indirect allocation from the ACO to the university's budget that is not clearly delineated.

Financial models: Services

Payments from ACOs to the academic health science libraries to compensate for service provision are uniquely structured at each institution. In a few cases, the link between payments and service provision is clear but more often than not, it is difficult to untangle and trace how lump sum payments specifically or uniquely support services to the ACO. A few patterns emerge, however, when one considers the data.

A model in use at two institutions is for payment to be solely based on a formula that results in a set amount of funding being transferred to cover the cost of activities such as interlibrary loan, literature searching, instruction, IT support, and clinical rounding. The formulas vary among institutions but are typically based on direct service cost analysis, volume of patient care activity in the ACO (beds, admissions, etc.), and number of authorized users. The parties involved normally conduct yearly reviews of the arrangements with adjustments being made as necessary. One of the two institutions using the "formula model" also supplements the calculated payments with funds intended to directly support the personnel costs of staff providing library services.

In addition to the model discussed above, a common practice is for compensation from the ACO to be made in the form of direct payment for all or part of the salary costs of librarians and staff from the academic library whether those individuals work in the academic library or on the ACO's premises. This is a feature of the arrangement at four institutions with each of the organizations varying slightly in whether or not additional funds are paid based on a formula or a flat fee. Two institutions receive compensation for providing services solely in the form of payments covering the salary and benefits of applicable staff. One of those institutions receives funds to cover the entire salary and benefits cost of three librarians and a staff member who physically work in the ACO while the other institution receives a payment for staff time that first filters through the main library. One institution receives both salary support payments and a separate flat payment to support service provision while another receives direct salary support payments, a flat fee, and funds from a formula driven assessment of services.

Two institutions fund services as a percentage of their budget. One academic library receives financial support as determined by a percentage charge applied to the total cost of collection resources it provides to the ACO. Another library receives financial support for services based on a percentage of the library's total budget.

Financial models: Library staffing

Pay and personnel systems vary widely across academic and clinical organizations and that variance is on full display in how the institutions participating in this study handle payment for staff time. There is little commonality in how ACO funds to cover salaries and benefits are determined and then applied to cover the efforts of library staff whose duties include providing remote and in-person services to ACO staff. A few ACOs make payments to HSLs to cover the payroll costs of specific individuals ranging from 1 to 4 FTE. These individuals directly serve the ACO's users, even to the point of working on-site in ACO facilities. Other HSLs or their university libraries receive funding to cover a portion (<100%) of the cost of one or two employees whose work identifiably serves the ACO. Still other ACOs pay a fee (fixed or percentage of collection cost) that ostensibly supports HSL staff time but that funding is not traceable to a specific staff member.

Challenges in Providing Collections and Services

Interviewees identified numerous challenges in providing access to library services and resources to ACOs. They are four broad areas that these challenges relate to: publishing industry business models, technical limitations of resources, health system organizational challenges, and scalability.

Publishing industry business models

While many publishing industry practices may seem standard to librarians accustomed to them, it is important to note that many create difficulties when licensing for ACOs. Pricing models can vary widely by publisher, with some using FTE, locations, or even hospital bed count as a means for establishing price. When pulling together digital collections across publishers, multiple models may be in play, which may create difficulties for libraries in applying a consistent model or explaining potential costs to the ACO. In addition, publishers and health systems may interpret variables like locations and FTE differently. For example, for locations, contiguous hospitals, such as a children's hospital and a cancer center, may appear to be separate locations to a publisher even though they are considered as one location by the health system. Similarly, publishers may want to count FTE as a pure count of all health system employees, rather than focusing on the FTE numbers of potential likely users.

Publisher pricing models often rely on annual price increases that may be different from other negotiated contracts of health systems. Health systems and ACOs may not consider annual price increases as acceptable practice when negotiating contracts with libraries for services and resources. Even if annual increases are acceptable, the annual inflation rates may vary with other contracts the health system negotiates on a regular basis. Libraries are advised to consider annual price increases in their contracts with ACOs and strive for alignment with publisher contract negotiation when possible.

Finally, some publishing practices make transparency difficult, specifically non-disclosure agreements. It is evident from the interviews that data and transparency facilitate relationships between the ACO and the library, so any practices that hinder this transparency represent potential challenges.

Technical limitations of resources

Technical limitations can hinder the provision of library resources to ACOs from both the product side and the institutional infrastructure. From the product side, the primary limitation that hinders transparent licensing and cost sharing is the lack of adequate usage data. It is rarely possible to get usage data by site or by role, yet, having this data would greatly simplify cost allocations for both libraries, ACOs, and budget officers. In some cases, this limitation is based on the kind of data that the publisher collects and shares. In others, this is related to the messy realities of information technology infrastructure at academic health centers and clinical organizations.

From the institutional infrastructure side, there are many variables that, while not necessarily negative or positive on their own, present challenges in licensing and providing access to library resources. For example, due to HIPAA and other privacy regulations and policies, ACOs may employ stringent firewall protections that impact resource access and tracking. Also, some clinical organizations use floating IP addresses across locations, clinic types, and cities such that any site could potentially use any of the IP addresses at the institution. This effectively prevents libraries and publishers from the standard practice of using IP addresses to differentiate between sites that may have different levels of access to resources.

In addition, the ACO's identity management system and use of academic affiliation might also create challenges to how libraries can provide access to resources. Identity management systems of the ACO might not be comprehensive or granular enough to be used as an authentication system for resources that may need to differentiate by role, site, or other variables. It is possible to use a single authentication system with user roles provisioned for access to different resources and services; however, this creates a need for staff to handle the identity management process and often the HSL or ACO does not have that skill set or permission within their staff.

There are user experience issues related to technical limitations. Academic affiliation, which is often given to certain roles within an ACO, frequently allows those individuals access to an academic authentication system that may be used to access library resources. If other individuals within the ACO are covered by licenses but do not have academic affiliations, then an alternate authentication system must be used at the ACO. This frequently creates a poor user experience at the ACO because different employees might access the same resources different ways. There can also be technology conflicts between the ACO's IT system and the academic institution's authentication system.

Organizational factors of ACOs

Other challenges in licensing and providing access to resources come from organizational factors common among many health systems and ACOs.

One of the largest relates to the recent uptick in mergers and acquisitions among health systems. These mergers and acquisitions result in a changing user base. With licenses defined by locations or FTE, this can result in wildly different costs if the health system acquires a new hospital or clinical organization. However, many administrators expect that mergers will result in cost savings, not additional costs and do not plan for library resource costs when negotiating mergers and acquisitions. Even if there are no large acquisitions, academic health organizations experience regular turnover, not only in administrative roles, but also among clinical staff, who are the primary target users for the resources.

ACOs place authority for managing library services in a variety of organizational areas. Examples of areas within the ACO that interviewees worked with included Chief Medical Officer, Finance, and Research Affairs. From the interviews, it appears it is less important what functional part of the ACO manages library resources and more important that the relationship between that functional area and the library is strong.

Finally, the ACO may have financial practices that can complicate the development, understanding, or implementation of a funding model. ACOs that have other relationships with their academic organization may have a comprehensive funding model that involves many factors including library resources. There may not be a specific line item for library resources and services in this funds transfer. Additionally, ACOs may have a different fiscal year, which can make billing and licensing schedules challenging, particularly when the library must cover the cost of resources that could expire before a fiscal year begins.

Scalability

Another common experience expressed in multiple interviews was the difficulty of offering services with limited library staff to large ACOs where there are diverse information needs. One institution noted that even when additional staff can be hired, it is still difficult to offer high touch services such as clinical librarianship and systematic reviews. Many interviewees noted that transactional services, such as resource access, interlibrary loan, and access to space are much simpler to offer than high touch and time-intensive services.

Libraries considering service models that incorporate librarian effort should be mindful of the scalability of services, the development of new services, and librarian professional development to offer advanced services.

Observations

The health sciences libraries interviewed for this study came from both private and public institutions of varying sizes. A notable commonality is that most of the libraries in the study report up to the health sciences sectors of their respective universities with only one HSL reporting to a university librarian and another temporarily reporting to an IT department due to ongoing restructuring.

Within these examples of successful agreements, the genesis of the library / ACO partnership came from a variety of sources within the organizations. For one institution, the ACO hospital librarians saw a need for additional services/resources, while at another, it was a library advisory committee that saw the need. As the underlying rationale for the service and resource agreements was not just for better clinical support but also for financial cost efficiencies, finance offices were often the ones to ultimately develop successful cost models and formulas.

Continuation of the successful agreement is often the result of strong, professional relationships between individuals on the library staff and individuals within the ACO. As one interviewee noted "probably the most surprising thing in working on this over the decades is the realization of the fact that individuals make all the difference in the plan being successful or not."

Successful agreements often include language regarding options for re-negotiation or opt-out from both sides. Since many library resource licenses are multi-year and agreements between ACO/HSLs tend to be yearly there is a chance that an ACO may request to opt-out at the mid-point in the library's resource license. This has not happened to any of the interviewees, however, librarians should be cognizant of this possibility and consider adding language into resource licenses to address potential changes in user numbers due to an ACO choosing to opt out of access to a resource.

Conclusions and Best Practices

The variety of organizational structures between academic institutions and their ACOs have a direct impact on how the models in place were developed at the institutions interviewed by the task force. While what works for one institution may be inappropriate for another, awareness of the variety of models can be helpful for health science libraries engaging with ACOs and point toward new solutions for issues encountered in the evolving and complex landscape academic and healthcare organizations are currently facing. Flexibility in model options and relationships between key stakeholders at both the academic institution and ACOs will be increasingly important in navigating forward, as well as comprehensive awareness of how institutional factors influence your particular situation.

While there may not be a best model that can be singled out, there are clearly models that are working well and best practices for working with ACOs that can be learned from the libraries that have instituted them.

1. Understand the environment.

ACOs have different priorities and operate differently than academic institutions. Appreciating these differences can enable library leadership to effectively negotiate and manage agreements with the ACOs. The organizational and decision-making structures will likely differ from those of the academic institution. It is crucial to understand who will be responsible for making decisions about a library agreement, as well as who holds the most influence over those decisions. ACO financing relies substantially on revenues generated by clinical care and CMS funding for graduate medical trainees. The ACO will likely place a low priority on physical space for a librarian's office or a library, as these are not considered revenue-generating uses. ACOs operate on a relatively small margin between revenues and expenses, resulting in a focus on

containing costs. Also critical is an understanding of the ACO's information technology environment, including priorities for IT resources and processes for approving and implementing new applications. Finally, learn the processes and policies regarding negotiation and management of contracts. This can impact any licenses the library administers for the ACO population.

2. ***Identify and develop partners in the ACO and the School of Medicine, or other appropriate level of the academic institution.***

These relationships are critical to establishing and sustaining the agreement. As one participant stated, "individuals make all the difference in the plan being successful or not. Some people in the ACO 'get it' and some others don't." It is important to identify those with final approval authority and ensure that they appreciate the value of the services and resources the library provides. The individual with final approval may or may not involve themselves in the details of negotiating an agreement for library services, so learn who at the ACO would negotiate and/or recommend an agreement proposal to the final approver. Cultivate a relationship with this individual(s). Also identify partners in finance, information technology, and departments or groups representing users with clout, such as providers, nursing, and quality. In the academic institution, identify individuals with connections at the ACO or who negotiates other agreements with the ACO. Ensure that partners appreciate the value of the library to the missions of the ACO and medical education. Library directors may need to inform new administrators about previously negotiated contracts.

3. ***Communication must be strategic in timing, audience, and message****.*

Communicate to partners and review the agreement at least on an annual basis and at any time there is discussion of a merger or acquisition. Customize communications as appropriate for different partners, using terminology, examples, and data that helps them to understand how the library's services and resources contribute to the AOC's mission. Use written agreements that clearly explain what the ACO is paying for and which ACO staff have access to resources and services. Librarians should regularly remind the ACO administration of the cost effectiveness of the agreement through usage data, reports on service activities and other return on investment metrics. For example, one library shares an "Investment Report" that attempts to document all of the instances the library has interacted with someone from the hospital. HSLs should be cognizant of the time needed to create these types of reports. The library will also need to regularly provide outreach and education to new clinical staff about what resources and services are available so that incoming groups of residents, nurses, or other clinical staff are knowledgeable about what is available. Ideally, communication should be bi-directional, and if not otherwise updated by their ACOs, libraries should regularly seek current information about changes to ACO's clinical priorities, FTE, bed count, and IT infrastructure. Library directors should also carefully follow business news and plans for the ACO and educate administrators about pricing models and user expectations for library services and resources when new locations are acquired. If the ACO or a newly acquired location includes a hospital library, the academic library should work carefully to complement and not replace the existing hospital library staff.

4. ***Be thorough in identifying costs.***

Consider costs for managing the agreement with the ACO, negotiating licenses, and administering access for users.

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