Generating Discretionary Income in an Academic Department of Pathology

David N. Bailey, MD1, James M. Crawford, MD, PhD2, Peter E. Jensen, MD3, Debra G. B. Leonard, MD, PhD4, Susan McCarthy5, and Fred Sanfilippo, MD, PhD6

Abstract
The 2021 Association of Pathology Chairs Annual Meeting included a chairs’ session and a premeeting discussion-group webinar sponsored by the Senior Fellows Group (former chairs of academic departments of pathology who have remained active in the Association of Pathology Chairs) focused on generating discretionary income for departments. Discretionary income was defined as revenue that can be used by the department with few, if any, restrictions. Such income is particularly desirable given limitations on departmental budgets. Four discussion-group panelists presented the funds-flow model in their respective institutions and how they derived and used discretionary income. Discretionary income was obtained from both external sources (eg, philanthropy, indirect cost recovery, partnerships with outside entities, medical education courses, research laboratory agreements, clinical trials) and internal sources (eg, core facilities, institutional programmatic support, institutional incentive programs). Significant departmental variations were associated with differences in institutional financial structure and policies, revenue-generating capabilities of the department and individual faculty, practice plan policies, donor intentions, and geographic market forces. Most finances were dependent upon a robust funds-flow model. Uses of discretionary funds included salary support, recruitment expenses (including start-up packages), research equipment, space renovation, social events, support of academic programs, and travel. Panelists also discussed particular challenges of discretionary-fund generation and use during the coronavirus disease 2019 pandemic. Notably, each institution had its own unique methodology for generating discretionary income, and no obvious standard approach was identified. The 2 moderators emphasized the importance of identifying and understanding opportunities, issues, and institutional culture surrounding generation and use of discretionary funds.

Keywords
academic pathology department, discretionary income, funds flow, revenue sources, uses

Received July 8, 2021. Received revised August 4, 2021. Accepted for publication August 16, 2021.

1 Department of Pathology, University of California, San Diego, La Jolla, CA, USA
2 Department of Pathology and Laboratory Medicine, Donald and Barbara Zucker School of Medicine at Hofstra/Northwell, Hempstead, NY, USA
3 Department of Pathology, University of Utah, Salt Lake City, UT, USA
4 Department of Pathology and Laboratory Medicine, University of Vermont Larner College of Medicine, Burlington, VT, USA
5 Department of Pathology and Laboratory Medicine, University of Southern California, Keck School of Medicine, Los Angeles, CA, USA
6 Department of Pathology and Laboratory Medicine, Emory, University, Atlanta, GA, USA

Corresponding Author:
David N. Bailey, Department of Pathology, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093, USA.
Email: dnbailey@health.ucsd.edu
Introduction

As academic departments face restrictive clinical budgets with less access to marginal funds to support the academic missions of research and education, department leaders have sought other means to generate “discretionary income” (ie, funds that can be used by the department chair with relatively few restrictions). Such discretionary funds often are the only means to support research and scholarship activities as well as costs associated with recruitment, incentives, and travel. Such income is heavily dependent upon institutional funds-flow models involving expense allocation and revenue sharing. Leadership must balance the use of these discretionary funds between the faculty and units that generate the revenue with others that need and deserve support based on department and institutional priorities.1,2 Given the tremendous heterogeneity among academic health centers (AHCs), the funds-flow models and the ability to generate discretionary funds are highly variable from institution to institution.

The Association of Pathology Chairs (APC) Senior Fellows Group (former chairs of academic departments of pathology who have chosen to remain active in APC) sponsored a discussion of this issue at the 2021 APC Annual Meeting Chairs Boot Camp and engaged a panel of discussants at a premeeting webinar to present their views and approaches on funds flow and generation of discretionary income during a pandemic.3,4 The 4 institutions provide a range of strategies for generating discretionary income at the department level.

Methodology

The discussion-group webinar included the authors of this report: 2 moderators (DNB, FS) and 4 panelists (JMC, PEJ, DGBL, SM). The group represented individuals who are current or past department chairs (DNB, JMC, PEJ, DGBL, FS), former deans (DNB, FS), a former AHC chief executive officer at 2 institutions and a health system board chair at 1 (FS), a current senior vice president of laboratory services (JMC), a current board chair of a large reference laboratory (PEJ), and a current department administrator (SM). Three institutions represented by the panelists were public while one was private.

Because the information generated for this report was the outcome of a discussion-group webinar, the University of California, San Diego Human Research Protections Program did not require institutional review board review.

Results

Funds-Flow Models and Sources of Discretionary Funds

Funds-flow models varied considerably among each of the 4 institutions represented by the panelists as shown in Table 1.

The department in institution A derives revenue from professional activities (Medicare Part B), institutional support for Medicare Part A activities, Graduate Medical Education, and research contracts. Institution A does not allow departments to carry over any positive operating margin to the next year and does not provide formal recruitment packages as such. Educational support (eg, for grand rounds speakers and pathology resident projects) comes from the interest from an endowment. Research effort of 10% or greater must be supported by external funds, which are usually contracts. Multiyear business plans that draw upon institutional funds must be aligned with the institutional mission and must involve other departments and/or centers. Beyond that one option, the department must be entirely self-funded. Not surprisingly, this department must generate its own discretionary funds, with all discretionary spending being done against a favorable-to-budget variance in any given fiscal year. Net margin generated by a large in-system reference laboratory goes entirely to the institution and is not available to the department. Fortunately, the reference laboratory provides critical infrastructure for the academic mission of the department, yielding a “soft” edge to this particular institutional funds-flow model.

Professional revenue for institution B is largely generated at the department level and is generally fungible except for directed appropriations (eg, state funds, endowment funds, hospital purchased services). Reserves are held at the department level. Institutional mission support accounts for only 9% of department revenue, with limited capacity to cover department budgetary shortfalls. In contrast to institution A, most of the departmental discretionary income is derived from a service agreement with a large national reference laboratory developed under the auspices of the university. Additional discretionary income is derived from royalties, expendable endowment funds, and indirect cost recovery from research grants. Institution C receives a salary pool for clinical faculty plus operating costs from the medical group compensation plan that includes negotiated Medicare Part A funds from the academic medical center, teaching funds, a percentage of research grant indirect cost funds, administrative support from the medical school for use at the discretion of the chair, and hospital support for the clinical laboratories. Each clinical department receives discretionary funds from the medical group compensation plan, based on the number of clinical faculty, the number of house staff, and the percentage research effort of the clinical faculty. The hospitals provide travel and educational support for clinical laboratory staff. Chair start-up funds provide initial discretionary funds used predominantly for research recruitment. Use of interest from invested accrued reserve funds for academic purposes must receive prior fund oversight approval. Philanthropic endowment funds support the Pathology Student Fellowship and several professorships.

In institution D, all clinical income flows through the university to the department. Reserves are held in the medical school, and school approval is required for departmental expenditure of reserves. Several particularly creative methods of generating discretionary income were described for institution D. One involved transfer of the anatomic pathology technical services from the health system to the department, which then assumed responsibility for that service, including billing the health system for all technical services. Another approach was the acquisition of a community dermatopathology practice, the
Table 1. Profiles of 4 Institutions Represented by the Panelists.

Institution A

- No carryover of positive operating margin to the next year
- No formal recruitment packages
- Reserve funds are limited to educational income from endowment
- ≤10% faculty time allowed for unfunded research; specific revenue required for faculty research effort of ≥10%
- Multiyear business plans must be aligned with institutional mission and must involve other departments
- Department is entirely self-funding with no institutional investment
- No formal discretionary funds as such so that discretionary spending must be against a favorable-to-budget variance for each fiscal year
- Opportunities to pursue academic mission are supported by infrastructure of an in-system reference laboratory

Institution B

- Revenue realized at department level
- Reserves held at department level
- Limited support of institution for department shortfalls
- Institutional mission support is only 9% of department revenue
- Discretionary income derived largely from service agreement with national reference laboratory set up under the auspices of the university as well as from royalties, expendable endowment funds, and indirect cost recovery from grants

Institution C

- Funding sources are:
  - Clinical faculty salary pool plus operating costs from the medical group compensation plan including negotiated Medicare Part A funds from the academic medical center
  - Teaching support, a percentage of research grant indirect cost funds, and administrative support from the medical school for use at the discretion of the chair
  - Hospital support for the clinical laboratories
- Discretionary funds from the medical group compensation plan are based on the number of clinical faculty, the number of house staff, and the percentage research effort of the clinical faculty
- Hospital support is provided for travel and education of clinical laboratory staff
- Chair start-up funds are predominantly used for research recruitment and support
- Philanthropic endowment funds support the Pathology Student Fellowship and several professorships
- Interest from invested accrued reserve funds can be used for academic purposes with prior approval from fund oversight board

Institution D

- All clinical income flows through university
- Reserves are held in the school of medicine
- School approval is required for expenditure of reserves
- Entrepreneurial activities that generate discretionary income:
  - Transfer of anatomic pathology technical services from health system to department including billing
  - Acquisition of community dermatopathology practice with revenue taxation by department
  - Clinical pathology outreach program with department performing marketing, billing, and customer service
  - Transfer of tissue core facility into department
  - Departmental oversight of clinical trial and research protocols involving clinical pathology services with department billing for services (revenue sharing between health system and department)


revenue from which primarily supported that practice group but with a departmental tax that supported department programs. Expansion of the clinical pathology outreach program by partnering with the health system allowed for extensive marketing, competitive pricing, billing by the department, excellent turnaround time, and the development of a customer service unit. In addition, a tissue core facility was transferred from the cancer center into the pathology department, allowing the combination of histology and immunohistochemistry services into a translational pathology core that generated income for the department. The pathology department also provided oversight of clinical trials and research protocols that involved clinical pathology services, for which it billed and split the revenue equally between the health system and the department.

General Categories of Discretionary Income

The discussion group identified 7 general categories for generating discretionary income (Figure 1): philanthropy (eg, unrestricted gifts), external ventures outside the department (eg, partnering with in-system or commercial laboratories), institutional agreements (eg, retention of laboratory reference work income), interdepartmental faculty support (eg, joint appointments with another department), grant indirect cost
recovery, educational programs (eg, continuing medical education, certificate programs), and institutional programmatic funding (eg, direction of institutional revenue to fund specific departmental programs). Each panelist estimated on a scale of 0 (lowest) to 5 (highest), the relative degree of contribution of each category to the overall discretionary income of their department (Figure 1). As previously indicated, there was an extreme degree of variability among institutions with some (eg, institutions C and D) having a fairly balanced portfolio among these sources of opportunity and with others (eg, institutions A and B) having more restricted options for generating discretionary income.

Reference laboratory activities (both internal and external) as well as indirect cost recovery from research grants were identified as being particularly successful strategies in generating discretionary funds. The limited access to grateful patients for philanthropic purposes and myriad university policies regarding funds flow were identified as roadblocks to generating discretionary funds.

**Uses of Discretionary Income**

Panelists used discretionary income for numerous purposes, including, but not limited to, salary support; recruitment expenses; start-up packages; research equipment; space renovation; academic retreats, symposia, and seminars; social events; support of academic programs; seed/pilot grants for junior faculty and trainees; and travel (Table 2).

**Risks to Discretionary Income**

Most panelists agreed that discretionary income is usually at risk with a constant pressure to utilize funds for purposes outside the department. For that reason, some panelists indicated that they spend down their most vulnerable funds first (eg, carry-over funds from the prior year) and use other discretionary funds later. Some suggested that such income might be further protected by sheltering it in endowments. Some panelists expressed the concern that having significant discretionary funds may decrease the likelihood of obtaining other institutional funds. One panelist suggested that a healthy target of no more than 5% to 10% of overall margin should be set for discretionary fund pools.

**Moderators’ Reflections**

Based on their leadership experience at 4 AHCs as deans and AHC chief executive officers, the 2 discussion-group moderators provided an institutional perspective on the opportunities and issues associated with the generation and use of discretionary funds (Table 3). An important consideration often overlooked by department chairs is that medical school and health system leaders consider all revenue generated in departments and centers as institutional resources subject to institutional priorities for both generation (eg, approaching donors) and allocation (eg, using the revenue in a different unit). Deans and chief executive officers may have better institutional opportunities or higher priorities than those available at a department level and may decide to reallocate some or all of department-based discretionary income for the overall good of the institution. This is analogous to how department chairs expect members of their department to consider the overall benefit to the department when they are soliciting or generating resources. Thus, it is important for departments to create strong “win-win” value propositions for the AHC, so that both benefit appropriately from the use of discretionary income. Likewise, it is essential for department leaders to think strategically to assure that the anticipated use of departmental discretionary income is aligned with both departmental and institutional priorities. Department leaders must also consider having sustainable discretionary income to cover ongoing expenses associated with generating it. Engaging and demonstrating benefits to other institutional leaders and units can be as useful for retaining discretionary departmental resources as it often is in soliciting new institutional resources. Transparency and communication of realistic expectations about the generation and use of discretionary funds is as important for institutional leaders and partners as for department faculty and staff.

Negotiating institutional packages for discretionary funds raises a variety of issues. These include the importance of clearly articulating and communicating the institutional value of the proposed program, profiling and showcasing high-achieving faculty, aligning departmental and institutional missions, investing in the growth of the clinical enterprise, collaborating with other departments, and educating the medical school leadership about the significance of revenue-generating programs.

Many barriers are faced in developing and using discretionary funds. These include the following: resources needed in personnel and expertise to deal with institutional and administrative processes and approvals, potential liabilities and competition, risk assessment and management, operational requirements, and communication. The time, effort, money,
and opportunity costs needed to generate and to expend discretionary funds must be assessed beforehand and accurately weighed against the potential value created. Finally, the culture of the department and AHC should be understood to facilitate engagement and support, as well as to avoid impediments and resistance. The potential impact of discretionary fund generation and use on departmental culture also should be anticipated and managed to mitigate potential unintended consequences.

**Impact of Coronavirus Disease 2019 Pandemic**

The coronavirus disease 2019 (COVID-19) pandemic had both positive and negative effects on the ability of the panelists’ departments to generate revenue. Frequently the clinical laboratory revenue increased due to an influx of COVID-19 testing. One panelist reported a 35% growth in reference laboratory revenue attributable to COVID-19 testing volumes. Likewise, funding from many government agencies and commercial sources increased dramatically for pandemic-related research and development involving COVID-19 diagnostics, therapeutics, and pathophysiology. In addition, the pandemic provided departments with greater visibility and academic resources for publication. Negative impacts affecting, in at least some fashion, every institution represented on the panel included no salary increases for faculty (and, in some instances, salary reductions), disruption of budget planning, reduction/elimination of travel, temporary pause of employer retirement contributions, reduction in dean’s office allocations, loss of professional and technical revenue, loss of continuing medical education funds, and disruption of research laboratory activity (Table 4).

**Table 2. Uses of Discretionary Income.**

| Salary support | Recruitment expenses | Start-up packages | Research equipment | Space renovation | Reinvestment in the clinical enterprise of the department | Academic retreats, symposia, and seminars | Social events | Support of academic programs | Seed/pilot grants for junior faculty and trainees | Travel |
|---------------|---------------------|------------------|-------------------|----------------|----------------------------------------------------------|------------------------------------------|-------------|---------------------------|---------------------------------------------|--------|

**Table 3. Opportunities and Issues.**

Create a “win-win” value proposition with AHC and partners
Dean/CEO: it’s their money; you lead part of their enterprise; they may have better opportunities and higher priorities
Engage institutional partners to demonstrate shared value; analogous to your own expectations of department faculty
Be strategic before tactical and align with institutional priorities
Anticipate how revenue sources will be tied to uses
Ensure uses are aligned with department and AHC priorities
Think long term; determine sustainability
Be transparent; communicate realistic expectations
Identify barriers and unintended consequences
Administrative: processes, approvals (departmental, AHC, external)
Evaluate competition: internal, external
Determine liabilities: legal, donor/partner commitments
Determine costs in time, effort, funding
Resources needed: financial, personnel, expertise
Know when and how to say “no” to other opportunities for resources and uses
Compare expenses (net present value) to return on investment
Be mindful of opportunity costs (focusing on one priority to the exclusion of others)
Consider organizational culture
Know your departmental and institutional culture as supportive or resistant
Anticipate and manage the impact on department and institutional culture

**Table 4. Impact of Pandemic.**

| Positive | Negative |
|----------|----------|
| Revenue increases from COVID-19 testing | No salary increases (and, for some, salary reductions) |
| Increased research funding for COVID-19 related projects | Disruption of budget planning |
| Greater visibility for department | Reduction/elimination of travel |
| Academic material for publication | Temporary pause of employer retirement contributions |
| Greater visibility for department | Reduction in dean’s office allocations |
| Academic material for publication | Loss of professional and technical revenue |
| Greater visibility for department | Loss of continuing medical education funds |
| Academic material for publication | Disruption of research laboratory activity |

**Discussion**

The importance of discretionary funds cannot be overemphasized in this era of increasing pressure on departmental budgets. Options for generating such funds have been published and include partnering with commercial laboratories, consolidation of laboratories that coexist in a health care system, marketing direct-to-consumer testing, redirection of health system dollars to departments, philanthropy for education and research programs, and institutional support for education and research. Important to all of these ventures is appreciation of the value proposition of pathologists, whose services can drive better outcomes for patients, health care personnel, and financial stakeholders alike. Additional contemplated sources of discretionary income include privatizing the clinical laboratory and contracting with the health system for services with an income-sharing
agreement, purchasing of medical director time by other institutions through a clinical services agreement, marketing unique research laboratory assays through laboratory service agreements, performing veterinary laboratory work, serving as a beta-testing site for biomedical technology firms, participating in clinical trials, and creating an incentive arrangement with the affiliated health care system and medical school, so that increases in revenue and/or cost savings attributable to the laboratory are shared with the department. Examples of such arrangements have been discussed elsewhere.16-20

Although the onset of the pandemic had both positive and negative effects on each of the 4 institutions, they emerged successfully and, in many respects, became even stronger. The availability of discretionary funds mitigated the financial impact of the pandemic in several instances and emphasized the importance of these funds.

As shown in Table 1 and Figure 1, there was a large variation in the sources of discretionary funds among the 4 institutions. Such variability should not be surprising, given a number of institution-specific factors: differences in access to potential donors for gifts, university regulations on gift receipt and use, practice plan restrictions on generation and use of nonrelated income, structure of funds flow in the institution, type of university (private vs public), geographic market forces, and the unique capabilities of departments and faculty.

In summary, discretionary income is important to the success of an academic department, imbuing it with degrees of freedom to plan and to develop its future. Fortunately, there are many ways to generate such funds but, in reality, the actual opportunities and issues available to each department vary dramatically by institution and in some cases are quite limited. It is likely that the observations articulated by this discussion-group webinar are applicable to other academic units and departments as well.

Acknowledgments
The authors thank the Association of Pathology Chairs (APC) Senior Fellows Group for sponsoring this discussion group. They also thank Madeleine Markwood, Mel Limson, and Priscilla Markwood of the APC office for support of this activity.

Declaration of Conflicting Interests
The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding
The author(s) received no financial support for the research, authorship, and/or publication of this article.

ORCID iD
David N. Bailey https://orcid.org/0000-0001-6396-4200

References
1. Miller JC, Andersson GE, Cohen M, et al. Follow the money: the implication of medical school’s funds flow models. Acad Med. 2012;87:1746-1751. doi:10.1097/ACM.0b013e3182713b77
2. Itri JN, Mithqal A, Krishnaraj A. Funds flow in the era of value-based health care. Am Coll Radiol. 2017;14:818-824. doi:10.1016/j.acra.2017.01.008
3. Bailey DN, Crawford JM, Jensen PE, Leonard DGB, McCarthy S, Sanfilippo F. Generating discretionary income for your department. Presentation at: Association of Pathology Chairs Annual Meeting; May 25, 2021; virtual meeting.
4. Sanfilippo F. Departmental effectiveness, discretionary income, and faculty productivity in the context of COVID-19. Presentation at: Association of Pathology Chairs Annual Meeting; July 26, 2021; virtual meeting.
5. Sanfilippo F, Powell D, Folberg R, Tykocinski M. Dealing with deans and academic medical center leadership: advice from leaders. Acad Pathol. 2018;5. doi:10.1177/23742895178518765462
6. Paxton A. Fresh options fuel lab asset reshuffle. CAP Today. May 2016. Accessed May 24, 2021. https://www.captodayonline.com/fresh-options-fuel-lab-asset-reshuffle.
7. Paxton A. All for one, one for all? Laboratory consolidation. CAP Today. June 2016. Accessed May 24, 2021. https://www.captodayonline.com/one-one-laboratory-consolidation/
8. Jensen KJ, Stallone R, Eller M, et al. Northwell health laboratories—the 10-year outcomes after deciding to keep the lab. Arch Pathol Lab Med. 2019;143:1517-1530. doi:10.5858/arpa.2018-0569-SA
9. Food and Drug Administration. Direct-to-consumer tests. https://www.fda.gov/medical-devices/vitro-diagnostics/direct-consumer-tests. Accessed October 16, 2019
10. Gao Z-H, Zorychta E, Karamchandani J, et al. Revitalizing an academic Pathology department: lessons learnt. J Clin Pathol. 2019;71:213-220. doi:10.1136/jclinpath-2018-205516
11. Haslam RHA, Walker NE. Alternative funding plans – is there a place in academic medicine? Can Med Assoc J. 1993;148:1141-1146.
12. Ohman EM, Douglas PS, Dean LB, Ginsburg GS. Philanthropy for science – is it a viable option? Circ Res. 2016;119:1057-1059. doi:10.1161/circresaha.116.3096
13. Weisman JS, Saglam D, Campbell EG, Causino N, Blumenthal D. Market forces and unsponsored research in academic health centers. JAMA. 1999;281:1093-1098. doi:10.1001/jama.281.12.1093
14. Crawford JM, Shotorbani K, Sharma G. Improving American healthcare through “clinical lab 2.0”: a project Santa Fe report. Acad Pathol. 2017;4. doi:10.1177/2374289517701067
15. Ducatman BS, Ducatman AM, Crawford JM, Laposata M, Sanfilippo F. The value proposition for pathologists: a population health approach. Acad Pathol. 2020;7. doi:10.1177/2374289519898857
16. Mrak RE, Parslow TG, Tomaszewski JE. Outsourcing of academic clinical laboratories: experiences and lessons from the Association of Pathology Chairs laboratory outsourcing survey. Acad Pathol. 2018;5. doi:10.1177/2374289518765435
17. Rogers BB, Adams JL, Carter AB, et al. The impact of disruption of the care delivery system by commercial laboratory testing in a children’s health care system. *Arch Pathol Lab Med*. 2018; 3:65-78.

18. Sussman I, Prystowsky MB. Pathology service line: a model for accountable care organizations at an academic medical center. *Human Pathol*. 2021;43:629-631.

19. VanNess R, Swanson KM, Grenache DG, et al. Leveraging longitudinal clinical laboratory results to improve perinatal care. *Am J Managed Care*. 2021;27:60-65.

20. Browning L, Colling R, Rakha E, et al. Digital pathology and artificial intelligence will be key to supporting clinical and academic cellular pathology through COVID-19 and future crises: the PathLAKE consortium perspective. *J Clin Pathol*. 2021;74:443-447.