



Aligning Institutional Research Investment with Clinical Strategy: A Future-Focused Approach

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Forces—from uncertainty in the insurance market and shifting regulatory requirements to the rise of consumer-driven healthcare and an increased focus on value—are placing downward pressure on the operating margins of academic medical centers (AMCs). With shrinking clinical margins, AMCs are increasingly focused on ensuring institutional expenses and investments are tightly aligned with the organization's clinical strategy. For AMCs to strategically manage their institutional investments, they must first understand the full extent of their expenditures, especially with regards to research.

DEFINING THE ORGANIZATIONAL VALUE OF RESEARCH

A study by the Association of American Medical Colleges (AAMC) found that for every dollar of extramural research funding received, research institutions must invest, on average, an additional \$0.53.¹ The prestige provided by world-renowned researchers, the ability to provide patients with access to cutting-edge technology and innovative treatments, and the opportunity to influence how healthcare is delivered provide a tangible value proposition for the organization. However, future-oriented AMCs must understand their current investments and develop a process for evaluating all research expenditures to best position the organization to pursue its long-term strategic vision.

¹ AAMC, "Academic Medicine Investment in Medical Research," 2015.

FACULTY RELATED INSTITUTIONAL RESEARCH INVESTMENT

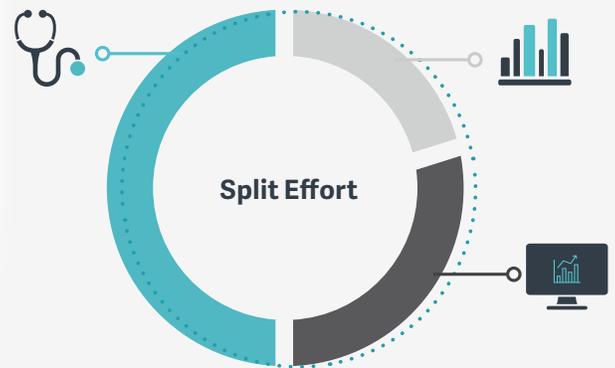
Physicians practicing in AMCs have unique professional expectations compared to many of their community-based colleagues. Specifically, unlike their colleagues, academic physicians typically split their effort across clinical, teaching, and research missions (see **figure 1**). Research-intensive faculty—those with at least 20% protected time for research—often rely on grant funding from the National Institutes of Health (NIH) and other sources to fund their research, support their own and their research staff’s salaries, and cover other expenses associated with operating a research lab or running a clinical trial. Inflation-adjusted total NIH funding has remained relatively flat over the last 10 years, although the 2018 congressional allocation was approximately 11% below the 2003 funding levels.² NIH funding by research focus has shifted significantly over the last decade, and competition for federal research support remains high.

The research efforts of faculty members with less than 20% protected time dedicated to research are not typically eligible or covered by NIH grants. The research of these faculty members, and those research-intensive faculty who are unable to obtain NIH or other extramural funding, is often called “unfunded research.” This term is somewhat misleading, however, because although there may be no external funding to support these projects, and the faculty member’s salary, the expense associated with the research must be funded by the AMC. To ensure these expenses are aligned with their organizational strategies, AMCs must develop an understanding of the true institutional investment.

Figure 1: Physician Effort Expectations



Non-Academic Physician
versus
Academic Physician




Clinical Effort


Research Effort


Teaching Effort

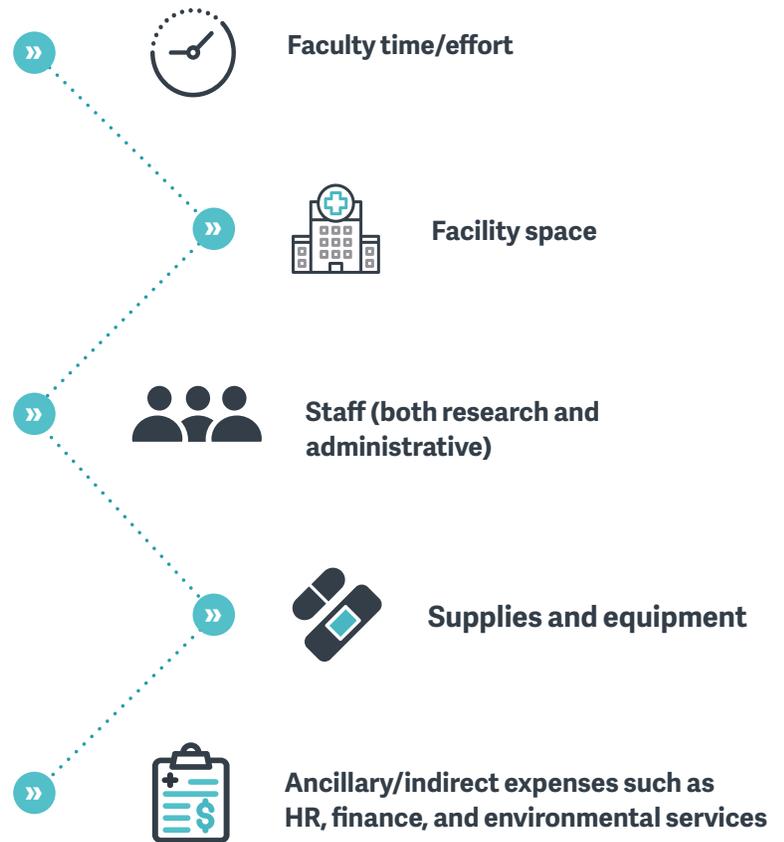
² American Association for the Advancement of Science, Historical Trends in Federal R&D, <https://www.aaas.org/page/historical-trends-federal-rd#Agency>.

UNDERSTANDING THE MAGNITUDE OF THE INSTITUTIONAL INVESTMENT IN RESEARCH

AMCs often lack a true understanding of the scope of their institutional investment in research. While the direct line items charged to grants and contracts are generally well tracked by an AMC's financial systems, many other expenses associated with research may be buried in other cost centers or complex funding algorithms.

Typical components of research costs include:

- **Faculty time/effort.**
- **Facility space.**
- **Staff (both research and administrative).**
- **Supplies and equipment.**
- **Ancillary/indirect expenses such as HR, finance, and environmental services.**



For the purposes of this article, we will address the most pressing components of research costs.

Faculty time/effort dedicated to research is one of the highest costs of the research enterprise, yet most AMCs do not conduct regular analyses to determine how much they spend annually to support faculty researchers. To determine the institutional investment in a faculty member's research effort, the research FTE is multiplied by the faculty member's total compensation and compared against the extramural sources of funding available to offset their salary, as shown in the equation below.

$$\text{Research FTE} \times \text{Total Compensation} - \text{Extramural Salary Support} = \text{Institutional Investment in Faculty Research Effort}$$

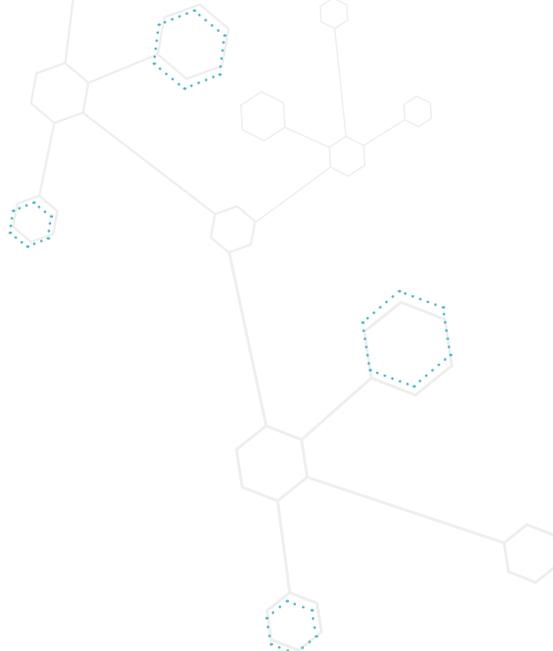
Ensuring that the effort categorization for each faculty member is valid and consistently defined across departments is an important first step in ensuring the calculation is a true reflection of the AMC's investment in faculty research effort.

Organizations set different targets for the level of extramural support that individual faculty members are expected to generate. While early-career faculty may receive guaranteed support from the institution to enable the researcher to develop their research program and provide time for obtaining grant funding, established faculty are typically expected to pursue extramural funding to support at least 50% of their research-related salary.

One complicating factor in the analysis of an organization's investment in faculty research effort is the cap the NIH has placed on the amount of salary support investigators may claim from an NIH grant. The 2018 NIH salary cap was set at \$189,600, although a proposal released by the White House would reduce the salary cap to \$153,800 if approved. For many investigators, an NIH grant does not fully cover the portion of their compensation related to research effort (i.e., research FTE × total compensation); the portion of research-related compensation not covered by the NIH grant due to the salary cap must be considered as part of the institutional investment in research.

Additionally, AMCs may offer bridge funding to support faculty salaries and/or research operations in short-term periods between grants; this funding can represent millions of dollars in research-related investment.

While federal grants and industry research contracts typically carry overhead allocations to defray the costs of facility space, supplies, and other indirect expenses associated with their respective studies, calculations of the cost of unfunded research often fail to account for the costs associated with these items. To fully inventory an organization's institutional investment in research, these indirect expenses should be included based on an allocation from the departmental or general operating budget. Developing a detailed research cost accounting methodology will enable the organization to track both the direct salary expenses of the research faculty and staff and the indirect institutional expenses required to operate the research enterprise.



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Figure 2: Sample Decision Criteria



Alignment with Organizational Strategic Priorities



Coordination with Federal and NIH Funding Priorities



Historical ROI of the Research Team

- » **Grant Funding Success Rates**
- » **Publication Acceptance Rates**
- » **Journal Prestige**



Research Team Composition

- » **Career Level of Primary Investigator**
- » **Involvement of Other Faculty**
- » **Staffing Demands**

ALIGNING RESEARCH INVESTMENTS WITH CLINICAL STRATEGY

As AMCs develop long-term strategic plans, they must ensure that internal investments align with these strategies. While major capital projects such as the development of a new cancer center or build-out of a subspecialty service line are generally well planned and executed, the extensive annual investment an AMC makes in unfunded research is often disconnected from the organization's strategic planning processes and therefore may be unmanaged. Once an AMC understands the full scope of its current research-related investments, it can, if necessary, take steps to reallocate internal research funding to areas that support the organization's overall clinical strategy.

“ To determine how internal investments are prioritized, AMCs should develop a decision-support framework and defined oversight structure.”

Forward-thinking AMCs are focusing their research investments into their centers of clinical excellence and other research areas that will position them to provide the care of the future, such as personalized medicine and health analytics. To determine how internal investments are prioritized, AMCs should develop a decision-support framework and defined oversight structure. Sample criteria to consider in such a framework are shown in **figure 2**. The framework should be used to conduct a thorough assessment of the organization's current research enterprise, and a process should be developed to regularly review research investments in an ongoing manner to enable the management of future investment requests.

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AMCs moving to more strategically manage their institutional research investments may encounter several issues in the process. For example, the AMC may be contractually obligated to provide guaranteed salary support to some tenured faculty and others who are engaged in research. Due to the tenure review process, it can often take several years to adjust this salary support. However, a careful review of institutional investment in the research staff and lab space allocated to nonproductive faculty may indicate a more immediate opportunity to reallocate expenditures from areas that do not align with organizational strategy. Many AMCs make significant financial investments in unfunded research on an annual basis. Organizations should develop a more rigorous approach to reviewing unfunded studies and suspend them if they are not aligned with the hospital's strategic goals; however, the impact of reducing unfunded research on faculty's ability to meet the research requirements to attain and maintain tenure status should be evaluated.

AMCs may also determine that they receive short-term external funding in support of research that is not aligned with the organization's clinical strategy. While reducing the amount of external funding flowing into the AMC would not be fiscally responsible, leadership should take steps to articulate the AMC's future vision and strategy and ensure buy-in from faculty so that future grant applications and research efforts are aligned with the long-term strategic objectives of the organization.

A well-managed, ongoing planning process, inclusive of input from key stakeholder groups, and tied to the broader strategic planning cycle of the organization, is necessary to ensure the alignment of institutional investments in research with the strategic goals of the AMC. Organizations should undertake a thorough assessment of the current state of their research investments to provide a foundation for the long-term planning required to position the AMC for future success.

About ECG

ECG is a national healthcare consulting firm that has worked exclusively in the healthcare provider sector for more than 45 years serving AMCs, hospitals and health systems, children's hospitals, and physician organizations. Since our founding, ECG has maintained a dedicated practice of professionals exclusively devoted to working in the subsector of academic healthcare. Our clients include the leading medical schools and teaching hospitals, as well as related academic and nonacademic physician organizations. We help a wide array of AMCs, ranging from small, community-based medical schools typically with three separate component entities to large, fully integrated, single-CEO AMCs. Our experts in ECG's Academic Healthcare practice who subspecialize in each mission of the AMC, including medical education (undergraduate and graduate), research, and the clinical enterprise.

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