

Structuring a Departmental Research Administration Office to Combat a High-Demand Workload and Offset Administrative Burden

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ABSTRACT

Departmental research administrators offer a wide range of support services to research communities, university central offices, and fellow research administrators in other departments and institutions around the world. It is important for department-level research administration offices to function as a unit to provide centralized services that maximize the potential for successful funding and accounting outcomes. The Office of Grants and Contracts in the University of Pittsburgh's Department of Psychiatry established an intra-office structure that operates as a central office proxy designed to offset the impact of a high-volume submission and active grants management portfolio. This reorganization included dedicated pre-award and post-award teams, a data management team, a personnel/purchasing team, and a fiscal team that offer support and infrastructure within the OGC and to the Department of Psychiatry at the University of Pittsburgh. This case study describes pre-intervention challenges and post-intervention outcomes, and how this model may be applied to any administrative setting, regardless of submission or award volume, to help define roles, systemize services, inform best practices, and improve procedures.

BACKGROUND

A notably high submission and active grants management volume prompted reorganization of the Office of Grants and Contracts (OGC) in the University of Pittsburgh's Department of Psychiatry to operate as a proxy for university central offices. The need to accommodate this workload led to the development of a department-level structure with multiple function-specific teams, each of which represents its institutional central office counterpart. Together, these teams support approximately 206 department faculty, 450 research staff, 109 academic trainees, and 114 student employees. Key findings from *A report of the Faculty Standing Committee of the Federal Demonstration Partnership* (Rockwell, 2009) showed that research faculty devoted 42% of time to pre- and post-award administrative activities rather than to active research. The primary hardships cited were grant progress report submissions, personnel hiring, project-revenue management, and equipment and supply purchases (Rockwell, 2009). The central office proxy model aimed to alleviate administrative burden for both the research community and institutional central offices.

In a recently completed federal fiscal year (federal FY2018), the University of

Pittsburgh was the fifth highest funded research institution in terms of total number of National Institutes of Health (NIH) awards ($n=1,127$) and ranked fourth in terms of total NIH funding in the amount of \$536,502,831 (National Institutes of Health, 2018). The University of Pittsburgh's Department of Psychiatry ranked first in primary NIH awards among all psychiatry departments, accounting for \$75,615,049 in NIH federal FY2018 funding, or 14% of the University of Pittsburgh's total funding across 160 primary NIH awards (Blue Ridge Institute for Medical Research, 2018; National Institutes of Health, 2018). If the Department of Psychiatry at the University of Pittsburgh were a stand-alone research institution, it would place in the top 3% of all NIH recipients in both categories (Blue Ridge Institute for Medical Research, 2018; National Institutes of Health, 2018). The Office of Sponsored Programs at the University of Pittsburgh provided data to support reporting on the high volume of outgoing federal submissions (Table 1)—approximately 13% pass through the OGC annually. To combat this high-volume, high-demand workload, a department-level research administration infrastructure modeling those of institutional central offices was developed, implemented, and evaluated over time.

Table 1. Number of Outgoing Submissions, Federal FY18

Federal Submissions*	Pitt	OGC (% Pitt Submissions)
Direct/Primary	1,517	133 (8.8%)
Pass-through/Subcontract	624	144 (26.4%)
Total	2,141	277 (12.9%)

*Federal submissions include both NIH and non-NIH grant applications

INNOVATIVE INFRASTRUCTURE

Prior to the implementation of the OGC model, the organizational structure lacked clear leadership, defined roles, and an understanding of content expertise. Pre-intervention average annual overdraft amounts were greater than \$1 million and year-end write-off amounts exceeded \$100,000. A 1995 case study from the Florida State University showed that a team-based management system improved productivity, communication, and positive outcomes (Whitfield, Anthony, & Kacmar, 1995). In research administration settings specifically, prior studies showed the importance of communication, collaboration, unification, support services provided, and a clear mission (Cole, 2007; Lintz, 2008). In 2004/2005, the University of Pittsburgh’s Department of Psychiatry recruited new leadership who, over the course of two to three years, reorganized

the OGC by applying a team-based model with a defined mission statement. Another study demonstrated how role ambiguity correlated with occupational stressors for university research administrators (Katsapis, 2012).

The OGC model is comprised of multiple function-specific teams with defined roles that embody the services provided by their respective institutional central office counterparts (Figure 1). Leaders from each team meet on a biweekly basis to discuss new policies and procedures, troubleshoot current issues, and implement best practices. Meeting content is then circulated to respective team members, resulting in a constant flow of subject matter. This high level of communication has been effective in disseminating critical information and driving process improvement. Each team then carries out a set of specialized tasks to support daily research operations (Table 2).



Figure 1. OGC Central Office Comparison Chart

Table 2. Summary of OGC Research Administrative Operations by Team

Pre-Award Team (4 FTE)*	Post-Award Team (9 FTE)*
Outgoing Proposals <ul style="list-style-type: none"> Detailed budget development Budget justification guidance Compliance review against sponsor and university policies 	Research Community Partnership <ul style="list-style-type: none"> Knowledge of research study operations Periodic meetings with investigators Forecast and execute spending goals Prevent accounting deficits
Post-submission Actions <ul style="list-style-type: none"> NIH Just-in-Time requests Progress Reports Justification of unobligated funds New award account activation 	Audit Risk Management <ul style="list-style-type: none"> Review of expenditures for budgetary compliance Monitor high-risk subrecipients Foreign subcontracts management
Comprehensive Review <ul style="list-style-type: none"> Grant applications Funding opportunity announcements Submission requirements Budgets with justification 	Grants Management <ul style="list-style-type: none"> Reconcile expenses against general ledgers Subaward negotiation and execution Budget management Financial reporting and project closeout
Personnel/Purchasing Team (2 FTE)*	Data Management Team (4 FTE)*
University Offices Liaison <ul style="list-style-type: none"> Procurement Human Resources/Payroll Payment Processing International Affairs 	University and Department Systems <ul style="list-style-type: none"> Import/export financial data Personnel effort and budget projections Continuous data entry and updates
Employment Consultants <ul style="list-style-type: none"> Manage recruitment Facilitate appointment and onboarding for faculty, staff, and academic trainees 	User Friendly Data Tools <ul style="list-style-type: none"> Design, build, and manage databases Website design and maintenance Electronic filing conventions
Procurement Services	Data Metrics and Reports

<ul style="list-style-type: none"> • Training in expense and travel systems • Draft and negotiate service contracts and agreements • Acquire goods and services to meet spending goals 	<ul style="list-style-type: none"> • Inform department leadership • Facilitate communication between OGC staff and research projects • Drive decision making and process improvement
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**Includes OGC team-specific functions and full-time equivalents (FTE)*

The pre-award team serves as a proxy to central offices of sponsored programs to address high submission volume and ensure proposal demands are met. Although the OGC does not have signing authority, the pre-award team works closely with institutional signing officials to provide error-free applications ready for immediate submission by implementing a two-stage internal deadline policy. The OGC requires research investigators to submit final budgets and justifications 13 business days and final applications or progress reports 8 business days in advance of the sponsor deadline. By providing thorough review of proposal requirements, this team removes a large portion of pre-award administrative responsibilities from researchers, allowing them more time to focus on grant writing and proposal development. Upon receipt of funding, the post-award team assumes regulatory and financial management burden for research projects and central sponsored projects accounting offices over the life of the grant. This team is integral to ensuring that effort allocated to sponsored projects meets the Office of Management and Budget Cost Principles (Office of Management and Budget, 2019). The data management team

mimics centralized information systems and technology offices to support daily operations and drive decision-making within the OGC. They created and oversee an internal database on the Department of Psychiatry’s sponsored projects portfolio (Table 3). All OGC teams rely on this core database to provide vital grants information from inception to completion. The grants tracking database also links with the department’s Research Review Committee, an ancillary service that evaluates and ensures planned proposals meet the highest scientific and ethical standards, to facilitate pre-award approval of proposals for submission (Kupfer et al., 2014). The personnel/purchasing team, serving as a point-of-contact for many university offices, helps research projects reduce time spent on administrative responsibilities and increase concentration on research-related activities. This team also oversees administrative aspects of multiple Ruth L. Kirschstein Institutional National Research Service Award (T32) research programs, including centralized data table preparation for progress reports and competing applications. The fiscal team operates as the OGC internal accounting and overall financial management group. Fiscal

responsibilities include balancing the Department of Psychiatry’s annual operating budget, which is comprised of the departmental allocation generated from sponsored project indirect cost revenue. The operating infrastructure consists of the OGC business unit as well as institutional accounts for research faculty, endowments, faculty start-up funds, and department cost centers. The fiscal team leader role is

assumed by the director of the OGC, who also holds authority to serve as an alternate signatory for the department chair. The fiscal team not only absorbs administrative burden for department faculty by managing their institutional funds, but also for the chair’s office by overseeing voluntary cost-share commitments, indirect costs reductions or waivers, and sponsor correspondence.

Table 3. OGC Data Management System

Grants Tracking Database*
Tracks all sponsored projects <ul style="list-style-type: none"> • Intake system for planned proposals • Generate grants assignment lists • Update review and funding outcomes
Produces team-specific data metrics <ul style="list-style-type: none"> • Pre-award submission rates • Post-award active awards and closeout
Department and OGC operating budgets <ul style="list-style-type: none"> • Snapshot of current funding • Forecast incoming funding
Generates faculty reports <ul style="list-style-type: none"> • Effort and salary distribution panels • Current/pending/previous support pages

**Designed and developed by the data management team*

A custom research brief by the Advisory Board Company defined a central office “hybrid” model found to be “efficient, sustainable, and well-suited to the demands of a growing research enterprise” among a sample of large research university offices of sponsored programs (Advisory Board Company, 2011). The OGC proxy model applies a similar structure at the department level. While each team has a

responsibility to complete specialized tasks that serve their central office counterpart and research community, teams also work collaboratively to foster an effective and efficient research administration environment. The pre- and post-award teams work closely to advance start-up of new awards and ensure seamless continuation of ongoing proposals. This streamlined transition relies on the

personnel/purchasing team to minimize study start-up and replacement/reimbursement delays by meeting hiring and spending demands. The personnel/purchasing team also collaborates with the post-award team to complete salary redistributions and effort certifications for study personnel. The departmental structure entrusts the data management team to provide uninterrupted access of sponsored projects information and technical support. Finally, the fiscal team oversees departmental affairs and infrastructure binding the OGC with the Department of Psychiatry stakeholders. The OGC model cultivates a research setting in which teams function together as a successful unit, resulting in improved pre-award submission and post-award financial outcomes.

RESULTS

The OGC post-intervention grants submission and award management rates have remained constant as captured by the data management team’s in-house database and rigorous grants tracking. The OGC averaged over 500 funding actions annually, including federal and non-federal sponsors (Figure 2) and has provided support to the Department of Psychiatry that helped facilitate positive funding success rates (Figure 3). Over the past 10 years, the OGC managed over \$72 million in average annual total expenditures on over 580 accounts across an average 340 total active awards, including federal, non-federal, and external subrecipient awards.

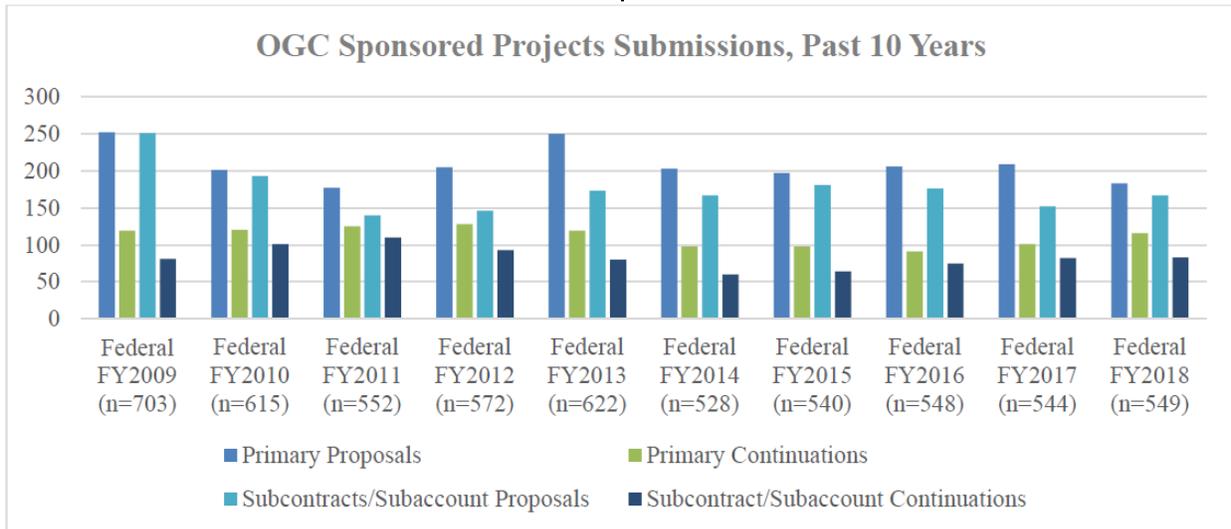


Figure 2. Number of Outgoing Primary and Pass-Through, Federal and Non-Federal Submissions

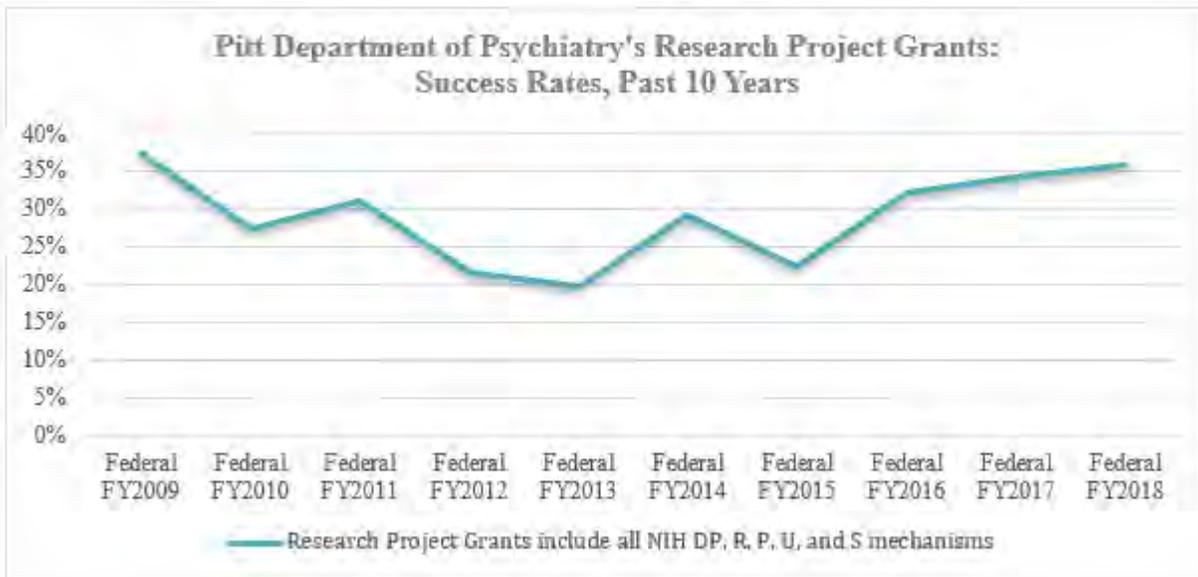
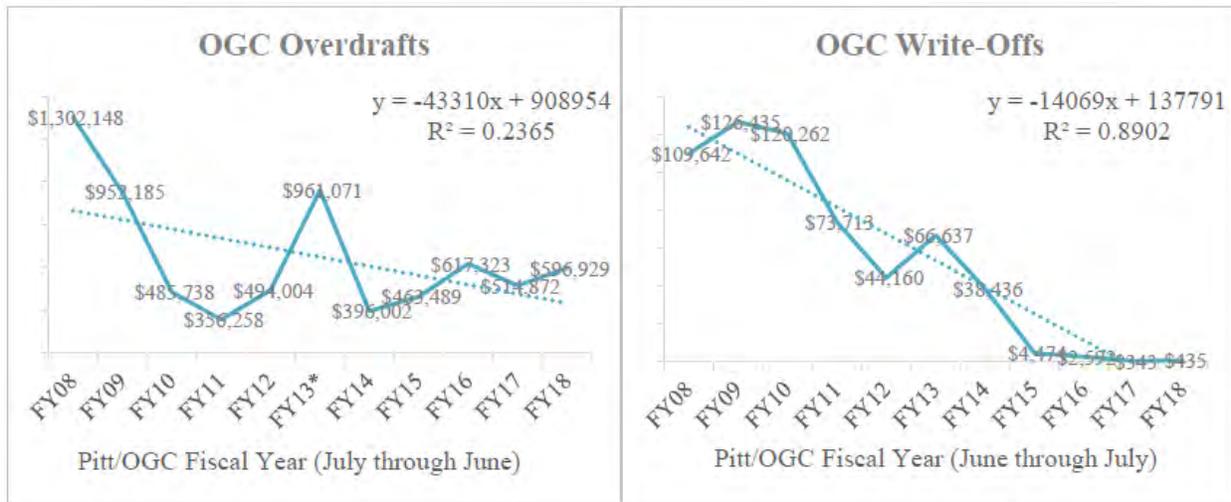


Figure 3. NIH Research Project Award Success Rates, Department of Psychiatry, University of Pittsburgh

Since the implementation of the central office proxy model, the OGC reduced average monthly overdraft and annual year-end write-off amounts (Figure 4). The post-intervention overdraft data are utilized to implement corrective action to prevent deficits at project closeout. Delays in receipt of executed subawards and staff turnover caused some fluctuation in recent overdraft amounts; however, the long-range monthly averages have declined. Approximately

90% of the reduction in write-off amounts can be explained by the OGC model ($R^2 = 0.89$), relieving the Department of Psychiatry from absorbing over \$100,000 to less than \$1,000 in annual overspending. Overall, the OGC structure had a positive impact on both overdraft and write-off amounts, resulting in a downward trend. Additionally, write-offs have stabilized at optimal levels that have been sustained under the OGC model.



*Artifact: High overdraft in FY13 due to institution-imposed one-time mass closeout of NIH accounts for federal salary cap reduction accounting

Figure 4. OGC Annual Year-End Write-Off and Average Monthly Overdraft Amounts

CONCLUSION

Over time, the OGC has improved the quality of new applications, contracts, and continuation reports by assuming a greater role in the development and compliance review processes. The department-backed internal deadline policy also has increased efficiency in meeting institutional and sponsor deadlines. The OGC strives to be the first point-of-contact for all department-related sponsored project queries, thus strengthening relationships and promoting reciprocal appreciation with research community stakeholders. This organizational structure supports multi-disciplinary collaboration, effective communication and dissemination of critical information, and a continuous flow of process improvement. Functioning as a full-service liaison to the research community also strengthens the research

administrator-investigator and administrator-administrator relationships by developing trust and mutual respect. By providing a seamless transition from pre-proposal to post-award management, the OGC model benefits research communities by streamlining services and relieving administrative burden.

Benefits of the OGC model include adaptability and scalability to fit any research administrative setting, advancement of cross-team collaboration, and training to expand and improve content expertise and retention. The qualification and comprehension of well-rounded research administrators enables staff promotion from within. In the event of staff turnover, this model facilitates and expedites position replacement and/or office reorganization. A potential barrier in providing such services is a lack of

department resources and stakeholder support. To promote faculty and research community buy-in, this model increases administrator exposure, assumes shared responsibility of sponsored projects management, and incentivizes advanced submission of budgetary and administrative requirements. The OGC model successfully

exhibits and encourages a research administration setting that provides numerous services and resources to research communities and central offices, ultimately alleviating the administrative burden of a high-volume grants submission and management portfolio.

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