September 7, 2016

GENE HASEGAWA
Chief Operating Officer
Vice Chancellor Health Sciences
1306

Subject: *Health Sciences Research Service Core*
Report 2016-22

The final report for Health Sciences Research Service Core Report 2016-22, is attached. We would like to thank all members of the department for their cooperation and assistance during the review.

Because we were able to reach agreement regarding management action plans in response to the audit recommendations, a formal response to the report is not requested. The findings included in this report will be added to our follow-up system. We will contact you at the appropriate time to evaluate the status of the management action plans.

UC wide policy requires that all draft reports be destroyed after the final report is issued. We also request that draft reports not be photocopied or otherwise redistributed.

David Meier
Director
Audit & Management Advisory Services

Attachment

cc: David Brenner
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UC San Diego

AUDIT & MANAGEMENT ADVISORY SERVICES

Health Sciences Research Service Core
Report No. 2016-22
September 2016

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I. EXECUTIVE SUMMARY

Audit & Management Advisory Services (AMAS) has completed a review of the Vice Chancellor Health Sciences (VCHS) Research Service Core (RSC) as part of the approved audit plan for Fiscal Year 2015-16. The objective of our review was to evaluate whether RSC internal controls and processes were adequate to comply with various federal regulatory requirements and University policy for award administration, and facilitate the effective and efficient management of extramurally funded research awards.

We concluded that RSC internal controls and processes were generally adequate to comply with various federal regulatory requirements and University policy, and facilitate the effective management of extramurally funded research awards. We observed that RSC management demonstrated an excellent working knowledge of fund management and ensured that appropriate controls for compliance in post-award administration were in place. However, it appeared that RSC's ability to serve client departments was limited by a staffing shortage and turnover at the fund manager level, requiring RSC supervisors to handle many direct fund management duties. The fund managers are the primary point of contact for PIs on the status of research awards, and continued turnover and staffing shortage in this position can impact the satisfaction of departments participating in the RSC and the overall effectiveness of the unit, if not addressed.

We also noted that RSC did not have formal, documented Service Partnership Agreements with departments to clearly articulate responsibility and accountability for services provided, and formalize service level expectations and performance metrics. The implementation of a cost model where departments provide funding support to RSC will magnify the need for these agreements and accountability for adherence to their terms. Additionally, we noted some internal control activities were not consistently performed as certified. Management Action Plans to address these findings are summarized below:

> **A. Service Partnership Agreements**
> Management will implement service partnership agreements with current clients and establish a plan for new clients.
>
> **B. Control Tracker Certification / Ledger Transaction Verification**
> A standard RSC process will be developed to consistently monitor department completion of research ledger transaction verification in addition to all the key controls being certified. Management will consider including the following:
> 1. Checking the transaction sampling management report or verifying 100% reconciliation on a monthly basis and documenting the completion.
> 2. Setting up all clients in a standard consistent method.
> 3. Including specific terms regarding this issue in the service agreement.
> RSC will ensure that its staff only perform Control Tracker certifications when completed duties have been verified.
>
> **C. Award Allocations**
> RSC will consider requiring all current RSC clients to allow only OPAFS to conduct award allocations, based on OPAFS agreement. RSC will consult with the Controller and OPAFS as appropriate.

Observations and related management action plans are described in greater detail in section V. of this report.

II. BACKGROUND

Audit & Management Advisory Services (AMAS) has completed a review of the Vice Chancellor Health Sciences (VCHS) Research Service Core (RSC) as part of the approved audit plan for Fiscal Year 2015-16. This report summarizes the results of our review.

The RSC was formed in Fall 2012 to provide pre and post award research administration for VCHS departments. The RSC serves the Principal Investigators (PIs), Chairs, Department Leadership, Staff and VCHS Leadership. RSC's main objectives are to:
- Provide excellent standardized fund management practices for all VCHS departments;
- Develop tools, training and systems that produce reliable and consistent measures;
- Provide fund manager staffing to departments based on their interest to transition to the shared services model; and
- Ensure compliance with all sponsors.

The RSC provides research administration services including, but not limited to pre award, post award, reporting, budget & analytics, compliance, communication and training. Departments can work with the RSC in two ways – either as a Partner, or Collaborator. In the Partner relationship, RSC provides fund management staffing and oversight for a department's sponsored research contracts and grants, clinical trials, laboratory service agreements, recharges, and other types of agreements. In the Collaborator relationship, the department retains fund management and staffing, but has access to RSC systems, tools, and training. Departments may "opt-in" for RSC services – there is not a requirement from VCHS that they participate in the shared services model. During our review, departments participating in the RSC were not directly charged for the services provided, although a Cost Model was in development which would require department funding support for the RSC for Fiscal Year 2016-17. The following 12 Departments are Partners with the RSC:

• Anesthesiology	• Neurosciences
• Dermatology	• Pediatrics
• Family Medicine and Public Health (FMPH)	• Radiology
• Orthopedic Surgery	• Surgery
• Institute of Genomic Medicine (IGM)	• Pathology – (pre award services only)
• Radiation Medicine and Applied Sciences (RMAS)	• Emergency Medicine - (pre award services only)

RSC offers a toolkit to Partners that includes experienced Fund Managers who understand how to navigate UCSD systems, training offered to faculty and staff, streamlined processes for pre award, post award and transactions, and systems and tools for award management. Tools offered include the Book of Business (BOB), which offers detailed fund information by PI/division/department, and the Automated Fund Summary Report, which provides specific fund balance information to each faculty member, projections, and recommendations for their entire research portfolio. Document management services are also available via an online repository for research administration documents.

As of May 31, 2016 the total balance of all indexes managed by RSC was $170,348,043. This includes 236 organizations, 5,119 department funds and 11,547 indexes. The RSC has 34 staff members;

including the Director, the Information Technology (IT) Program Manager, and four Fund Manager Supervisors.

III. AUDIT OBJECTIVE, SCOPE, AND PROCEDURES

The objective of our review was to determine whether RSC internal controls and processes were adequate to comply with various federal regulatory requirements and University policy for award administration, and facilitate the effective and efficient management of extramurally funded research awards. In order to achieve our objective, we performed the following:

- Reviewed the RSC intranet; including processes and procedures, tools and systems and training offered;
- Reviewed the RSC organizational chart;
- Reviewed available draft Service Partnership Agreement template and attachments;
- Reviewed the RSC department Welcoming Plan master presentation (August 10, 2014);
- Reviewed applicable University policies and federal regulations pertaining to research contracts and grants including the new Uniform Guidance (UG) 2 CFR Chapter I, Chapter II, Part 200 which combines the previous OMB Circulars (A-21, A-110 and A-133);
- Conducted interviews with RSC management including the Director, the IT Program Manager and the Fund Manager Supervisors;
- Consulted with the UCSD Associate Controller, Director of Office of Post Award Financial Services (OPAFS) and Business Financial Services management;
- Evaluated the current agreements and management of the RSC clients;
- Reviewed at a high level the new cost methodology approved during our review in April 2016, effective retroactively to January 1, 2016;
- Evaluated the allocation process for new awards and tested efficiency;
- Evaluated the process and procedures for validating Department performance of key control activities, including ledger review and Transaction Sampling;
- Tested Transaction Sampling compliance of research transactions for the period January 1, 2016 through March 31, 2016;
- Evaluated the implementation and current process for complying with the Statement of Auditing Standards No. 115 (SAS 115) "Communicating Internal Control Related Matters Identified in an Audit", an accounting standard that establishes guidelines for determining the seriousness of internal control issues;
- Performed detail testing of transactions for five sponsored research awards managed by RSC. This included a detail review of 165 transactions (30 express card, 15 equipment, 15 travel and 105 other non-payroll expenditures) in addition to payroll testing to verify that transactions were processed in compliance with University policy and federal guidelines; and
- Performed additional detail testing of awards for the proper documentation and appropriateness of administrative/clerical salaries charged to federal awards.

Our detailed transaction testing focused on awards issued after the UG effective date of December 26, 2014. However, we did not address sub–award policies and procedures, which are addressed in AMAS Audit #2016-04 *Sub-Recipient Monitoring*.

IV. CONCLUSION

Based on our review, we concluded that RSC internal controls and processes were generally adequate to comply with various federal regulatory requirements and University policy, and facilitate the effective management of extramurally funded research awards. We observed that RSC management demonstrated an excellent working knowledge of fund management and ensured that appropriate controls for compliance in post-award administration were in place. The Management staff provided a strong core for faculty and Department Business Officers by providing useful reports on a weekly and monthly basis. RSC management has developed and implemented the BOB, a web based report suite that is built on the existing financial structure and chart of accounts. This application has both comprehensive and dashboard reports which is designed to satisfy a variety of department and faculty information needs. However, it appeared that RSC's ability to serve client departments was limited by a staffing shortage and turnover at the fund manager level, requiring RSC supervisors to handle many direct fund management duties. The fund managers are the primary point of contact for PIs on the status of research awards, and continued turnover and staffing shortage in this position can impact the satisfaction of departments participating in the RSC and the overall effectiveness of the unit, if not addressed.

We also noted that RSC did not have formal, documented Service Partnership Agreements with departments to clearly articulate responsibility and accountability for services provided, and formalize service level expectations and performance metrics. The implementation of a cost model where departments provide funding support to RSC will magnify the need for these agreements and accountability for adherence to their terms. Additionally, we noted some internal control activities were not consistently performed as certified.

During the review, we identified opportunities to strengthen controls in selected business processes, which are discussed in detail in the remainder of the report.

V. OBSERVATIONS REQUIRING MANAGEMENT ACTION

A.	Service Partnership Agreements
There were no documented service agreements executed to formalize accountability and responsibility for RSC services.	
Risk Statement/Effect	
Lack of agreements and inadequate oversight can lead to loss of revenues, non-compliance with University and federal policies, and may potentially impact relationships between the RSC and client departments.	
Management Action Plan	
A.1	Management will implement service partnership agreements with current clients and establish a plan for new clients.

A. Service Partnership Agreements – Detailed Discussion

RSC developed a template for the Service Partnership Agreement (SPA) in April 2015, however with long-term negotiations on the cost methodology and determination of how the RSC's shared service model will be implemented, the SPAs were never formalized. There is some documentation of agreed-upon services maintained in emails and notes, but not a signed documented official plan. Thus there is no formal agreement of specific roles, responsibilities and accountabilities.

When a new department joins the RSC, RSC management and the client department discuss services and department needs, and define the indexes, funds or organizations will be monitored by the RSC versus what will the department continue to manage. There is a wide variance in types of services provided for each department, to allow flexibility on how the RSC is used. RSC does have some documents outlining parties who are "responsible, accountable, consulted, and informed" of service items, but the accountability is shared between Department and RSC for each item, making the ultimate accountability unclear. This can lead to misunderstanding about who should be performing what duties, and what the lines of responsibility and authority are. Without a written agreement, standards for performance expectations and metrics are not formalized, and Department ability to hold RSC accountable for its service on the department's research administration portfolio may be limited.

At a minimum the Service Partnership Agreements should define the following:
- Services to be offered
- Specific roles & responsibilities for services (pre-award and post-award)
- Service level expectations / Hours of availability
- Performance metrics and monitoring
- Management reporting processes and timelines
- Methods for feedback, and structured escalation process for dealing with concerns
- Expected communication between Service Delivery Partners and its clients

As the Cost Model is implemented and departments begin financially supporting RSC, the need for formalized service agreements will be magnified. The formalization of these agreements will also amplify RSC's need to retain knowledgeable fund management staff and maintain consistent staffing levels to meet the service needs of the departments which will be funding the RSC operation.   The impact of continuing to operate without such agreements are poor service, loss of clients and lack of confidence in the ability of RSC to provide effective research administration services.

B.	Control Tracker Certification / Ledger Transaction Verification
RSC did not consistently verify ledger review for of all research transactions of RSC clients, yet certified in Control Tracker that these activities were performed.	
Risk Statement/Effect	
Lack of compliance with University policy and SAS 115 for documenting key internal controls increases the likelihood that errors, irregularities or inappropriate charges could go undetected.	

	Management Actions Plans
B.1	A standard RSC process will be developed to consistently monitor department completion of research ledger transaction verification in addition to all the key controls being certified. Management will consider including the following: 1. Checking the transaction sampling management report or verifying 100% reconciliation on a monthly basis and documenting the completion. 2. Setting up all clients in a standard consistent method. 3. Including specific terms regarding this issue in the service agreement.
B.2	RSC will ensure that its staff only perform Control Tracker certifications when completed duties have been verified.

B. Control Tracker Certification of / Ledger Transaction Verification – Detailed Discussion

Control Tracker is a web-based application developed by UCSD to document the performance and certification of control activities within a Unit in compliance with SAS 115. The department's key controls must be documented to demonstrate that review and follow-up activities were performed. In the absence of documentation, it appears that controls are not in place. The Ledger Transaction Verification key control certifies review of ledgers to assure expenditures, liens, and revenues are correct, accurate and reasonable. When performing and certifying the ledger transaction verification key control the performer and certifier check one of the following two boxes to document what has been verified:

1. <u>Financial Link Tools-Ledger Reviewer and ENPET</u> – All sampled items are reviewed monthly and problem codes recorded and corrected on a monthly basis. Follow up activities were performed timely.
2. <u>Non-Financial Link Process</u> – Documentation that monthly revenue, budget and expenditure transactions were reviewed and verified. Correcting entries were processed in a timely fashion.

The RSC has agreed with their clients that the client department will conduct the Ledger Transaction Verification. The departments, as the office of record, are responsible for, checking of all of the transactions pulled for the sample if they are using Transaction Sampling, or conducting 100% ledger review if they are not enrolled in the program. The RSC is performing and certifying the Control Tracker for all research funds they manage. The performers are responsible for completing the functions described on the form. Certifiers verify that the function has been performed appropriately and within the prescribed accounting period.

We noted inconsistent RSC processes with Ledger Transaction Verification and the certification of Control Tracker. RSC signed off as performer and certifier on the Control Tracker for Ledger Transaction Verification in addition to other key controls. However, there was not sufficient evidence to confirm the departments were conducting the key control activities that RSC was certifying.

AMAS review of the eight departments that were set up in the Control Tracker application for research activity only is shown in the table below. In all cases a fund manager supervisor was the performer and the RSC Director was the certifier.

Department	Control Tracker – Ledger Verification Key Control Certified and performed	
	January and February 2016	*March 2016*
FMPH	Non-Financial Link Tools	Non-Financial Link Tools
IGM	Non-Financial Link Tools	Non-Financial Link Tools
RMAS	Non-Financial Link Tools	Non-Financial Link Tools
RADIOLOGY	Non-Financial Link Tools	Non-Financial Link Tools
DERMATOLOGY	Non-Financial Link Tools	1 - Financial Link Tools
ORTHOPEDIC SURGERY	Non-Financial Link Tools	1 - Financial Link Tools
SURGERY	Non-Financial Link Tools	1 - Financial Link Tools
ANESTHESIOLOGY	Non-Financial Link Tools	1 - Financial Link Tools

*Pediatrics and Neurosciences are not set up in control tracker

Four of the eight are relying on the transaction sampling verification in the month of March 2016. AMAS review of transaction sampling management reports for the same time period January 1, 2016 through March 31, 2016 for RSC departments research organizations (prefix 41) documented the following results:

Transaction Sampling Management Reports 1/1/16-3/31/16				
Department	Total Sampled [1]	Total Reviewed	Total Not Reviewed	Total % Not Reviewed
FMPH	655	600	55	8.4%
RMAS	189	14	175	92.6%
RADIOLOGY	512	121	391	76.4%
DERMATOLOGY	217	14	203	93.5%
ORTHOPEDIC SURGERY	215	190	25	11.6%
SURGERY	1045	1036	9	.9%
ANESTHESIOLOGY	314	226	88	28%

*IGM did not have any organizations identified in BOB.

With the exception of Surgery, the departments did not appear to be reviewing all the sampled transactions in the ledger reviewer. For those departments set up to use Non-Financial Link Tools, RSC did not consistently receive conformation from departments that the control activities were completed. However, RSC was certifying monthly they were conducting this key control. Lack of compliance with University policy and SAS 115 increases the likelihood that errors, irregularities or inappropriate charges could go undetected.

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[1] This may include some departmental funds. AMAS looked at organization numbers that started with 41 only to obtain the most accurate estimate.

C.	Award Allocations
Departments were allowed to process their own award allocations, which has led to issues with effectiveness of the RSC resources and services.	
Risk Statement/Effect	
Untimely or inaccurate award allocations can lead to loss of revenue, potential mis-charging of research expenditures, and other non-compliance with University and Federal policies and procedures.	
Management Action Plan	
C.1	RSC will consider requiring all current RSC clients to allow only OPAFS to conduct award allocations, based on OPAFS agreement. RSC will consult with the Controller and OPAFS as appropriate.

C.   Award Allocations – Detailed Discussion

When a funding agency grants a sponsored project award, the amount must be recorded in the operating ledger. This is done by creating a budget allocation for the amount the University is authorized to spend based on the Notice of Award (NOA). This does not reflect actual cash received, rather a budgetary allocation to spend against the award. With completion and approval of the journal online, the journal entry will automatically be forwarded to the department approver and then to OPAFS, who will either approve it or request corrections. If approved, the journal entry will be uploaded to the operating ledger the day after approval and it can be reviewed in the ledger. If any piece of this process does not happen the award allocation will not be complete.

Initial allocations are currently conducted by OPAFS for most RSC client departments with the exception of two. Allocations processed by the RSC clients instead of OPAFS contribute to problems with timeliness and accuracy and usefulness of the RSC tools and reports. The allocations made by the departments tend to be untimely either due to staff turnover or lack of prioritization of this task. The RSC reports were not accurate without these allocations.

AMAS review of all the award allocations from January 1, 2014 through April 30, 2016 for the two RSC departments that conducted their own allocations is shown in the table below. We looked at 54 allocations in total.

Time period allocation was processed after award granted	Number of allocations reviewed	Percent of allocation reviewed
‹ 1 month	17	31.5%
1 ≥ 2 months	8	15%
2 ≥ 4 months	17	31.5%
› 4 months	12	22%
TOTAL Reviewed	54	100%

Per discussion with the OPAFS Director, OPAFS is working with the Campus Controller to develop and implement an automated allocation process for all campus departments. In the future, this would eliminate issues with the initial award allocation being processed untimely by departments. In the interim, RSC could better ensure allocations are performed timely so that management reporting and tools are accurate by making this a condition of department participation in the RSC services. Inaccurate or untimely allocations can lead to loss of revenue, inaccurate reporting and even loss of the award funds completely.