

**UNIVERSITY OF CALIFORNIA, SAN FRANCISCO  
AUDIT AND ADVISORY SERVICES**

**UCSF Health  
Transplant Pharmacy Internal Controls Review  
Project #19-056**



University of California  
San Francisco

**Audit & Advisory Services**

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October 15, 2018

Daniel Wandres  
Chief Pharmacy Officer  
UCSF Health

SUBJECT: Transplant Pharmacy Internal Controls Review  
Project #19-056

As a planned internal audit for Fiscal Year 2019, Audit and Advisory Services (“A&AS”) conducted a review of the outpatient Transplant Pharmacy operations. The purpose of this review was to assess the internal controls and processes for cash collections and revenue management.

Our services were performed in accordance with the applicable International Standards for the Professional Practice of Internal Auditing as prescribed by the Institute of Internal Auditors (the “IIA Standards”).

Our review was completed and the preliminary draft report was provided to department management in September 2018. Management provided us with their final comments and responses to our observations in October 2018. The observations and corrective actions have been discussed and agreed upon with department management and it is management’s responsibility to implement the corrective actions stated in the report. In accordance with the University of California audit policy, A&AS will periodically follow up to confirm that the agreed upon management corrective actions are completed within the dates specified in the final report.

This report is intended solely for the information and internal use of UCSF management and the Ethics, Compliance and Audit Board, and is not intended to be and should not be used by any other person or entity.

Sincerely,

Irene McGlynn  
Director  
UCSF Audit and Advisory Services



## EXECUTIVE SUMMARY

### I. BACKGROUND

As a planned audit for Fiscal Year 2019, Audit and Advisory Services (A&AS) conducted a review of the Transplant Pharmacy, assessing internal controls surrounding cash collections and revenue management, including some operations performed by Pharmacy Finance, which owns the process of depositing Transplant Pharmacy's insurance checks and financial reporting. Transplant Pharmacy is a retail outpatient pharmacy providing discharge and outpatient prescriptions to bone marrow transplant patients, solid organ donors, solid organ transplant patients and other patients serviced by UCSF Health. Transplant Pharmacy's customers are mostly UCSF Health transplant patients.

At Transplant Pharmacy, there are four Pharmacists; one staff member is the primary cash handler while the others serve as backup. Its office hours are Monday through Friday from 8AM to 5PM. There are two staff in Pharmacy Finance involved with Transplant Pharmacy depositing and financial reporting.

Transplant Pharmacy uses the QS/1 system, which includes the NRx Pharmacy Management System for filling prescriptions and billing in real time and the Point of Sales (POS) system. Currently, they are not able to enter credit cards into their POS system because of the type of encryption methodology being used by the system. Additionally, QS/1 is a standalone system that does not interface with the Advancing Patient Centered Excellence (APeX) electronic health record system, which is used for scheduling, documenting, capturing charges, and billing of services provided for Transplant Pharmacy patients.

Transplant Pharmacy operates outside of the auspices of UCSF Health Revenue Cycle operations. QS/1 performs real-time online billing at the time the prescription is filled for the majority of prescriptions; a subset of transactions are manually billed by Pharmacy Finance. Copayment collections are performed by Transplant Pharmacy staff and recorded in QS/1 at the time of prescription pick up. Copayment receipts are then sent to Pharmacy Finance, who manually record them in an Access database developed and maintained by Pharmacy Finance. Insurance payment checks received based on the billing from QS/1 are recorded by Pharmacy Finance in Excel spreadsheets

### II. AUDIT PURPOSE AND SCOPE

The purpose of this review was to assess the effectiveness of the internal controls over Transplant Pharmacy and Pharmacy Finance practices and operations, including cash collection, required trainings, background checks, and revenue capture.

The scope of the review covered transactions and activities for the period of July 2017 to August 2018.

Procedures performed as part of the review included interviews with Transplant Pharmacy and Pharmacy Finance personnel; assessment of existing controls and processes for cash handling and charge capture; assessment of physical security

controls for cash; and review of a sample of deposits, documentations, and charges. For more detailed steps, please refer to Appendix A.

Work performed was limited to the specific activities and procedures described above. As such, this report is not intended to, nor can it be relied upon to provide an assessment of compliance beyond those areas specifically reviewed. Fieldwork was completed in September 2018.

### III. **SUMMARY**

Based on work performed, insurance checks are endorsed at time of receiving by Pharmacy Finance, and secured in a locked cabinet. Staff has an organized tracking and documenting method for checks, including the associated batch information, and copies of checks are retained. However, other controls are not in place to allow appropriate accounting of cash receipts collected and revenue monitoring. The review has identified opportunities for improvement in the areas of documentation, revenue capture, and cash handling. The specific observations from this review are listed below.

#### A. Revenue Monitoring and Operational Effectiveness

1. Medications dispensed to donor or bone marrow patients have not been billed for the last five years totaling approximately \$3M.
2. There is no monitoring of insurance payments to identify outstanding receivables balances, negatively impacting revenue.

#### B. Cash, Checks, and Credit Cards Controls

3. Reconciliation of cash, checks, and credit cards is not performed against QS/1 Point of Sale (POS) system.
4. Insurance checks are not processed in compliance with BUS-49 requirements.
5. Hard copies of patients' credit card information were retained on file and may not meet the Payment Card Industry (PCI) Data Security Standards (DSS).
6. Separation of duties are not maintained at Transplant Pharmacy, and sufficient compensating controls are not in place.
7. Required cash handling related training is not complete for all employees.

**IV. OBSERVATIONS AND MANAGEMENT CORRECTIVE ACTIONS (“MCA”)**

**A. Revenue Monitoring and Operational Effectiveness**

No.	Observations	Risk/Effect	Recommendation	MCA												
1	<p><b><i>Medications dispensed to donor or bone marrow patients have not been billed for the last five years totaling approximately \$3M.</i></b></p> <p>Review of the June 2018 QS/1 NRX report showed \$184,344 charges with “unverified” bill status, indicating that these medications had not been billed through the QS/1 system. These transactions included prescriptions for bone marrow transplant (BMT), liver or kidney (Donor) transplant, “Free 2 Patient<sup>1</sup>”, Medicare B<sup>2</sup>, Dialysis Recharge, TIKOSYN<sup>3</sup>, and SACO. Of those payor types, only BMT and Donor medications were erroneously unbilled. Since QS/1 and APeX do not interface with each other, a dispense charge in QS/1 will not create a dispense record and corresponding charge in APeX. Further testing identified that these medications for BMT and Donor transactions were recorded as ordered in APeX, but not dispensed; therefore charges were not dropped for billing.</p> <p>A five-year trend of 9,082 BMT and 113,643 Donors transactions show the estimated missed charges illustrated in the table below.</p> <table border="1"> <thead> <tr> <th></th> <th>Bone Marrow Transplant</th> <th>Liver &amp; Kidney Donors</th> </tr> <tr> <th>FY</th> <th>Total Charges</th> <th>Total Charges</th> </tr> </thead> <tbody> <tr> <td>2017</td> <td>\$651,362</td> <td>\$86,203</td> </tr> <tr> <td>2016</td> <td>\$734,550</td> <td>\$59,462</td> </tr> </tbody> </table>		Bone Marrow Transplant	Liver & Kidney Donors	FY	Total Charges	Total Charges	2017	\$651,362	\$86,203	2016	\$734,550	\$59,462	Revenue opportunities may be missed and continuation of care compromised if not all medications administered are documented centrally and risk of non-compliance with CMS billing requirements.	AA&S worked with Transplant Pharmacy and BMT clinic to verify that billing was not occurring and assisted in providing contacts to work with and submitting an IT ticket to start work on resolving the issue. As such, Transplant Pharmacy is working with Patient Financial Services and Clinical Systems to resolve billing and reimbursement setup.	<p>A workgroup with representation from BMT, Transplant, Revenue Cycle and Clinical Systems will be convened to create billing mechanism or discontinue dispensing of transplant medications.</p> <p>Responsible Party: Chief Pharmacy Officer</p> <p>Target Completion Date: Jan 31, 2019</p>
	Bone Marrow Transplant	Liver & Kidney Donors														
FY	Total Charges	Total Charges														
2017	\$651,362	\$86,203														
2016	\$734,550	\$59,462														

<sup>1</sup> “Free 2 Patient” medications are absorbed costs and not intended to be billed. IN the same five year period, these medications would have generated \$323,320 in charges.

<sup>2</sup> Transplant Pharmacy submitted an application for billing Medicare B that was rejected due to not meeting the physical size of pharmacy requirements; therefore Transplant Pharmacy is unable to bill Medicare B patients.

<sup>3</sup> TIKOSYN medications are received free from the vendor, and so are not billed.

<table border="1"> <tr> <td>2015</td> <td>\$651,415</td> <td>\$46,724</td> </tr> <tr> <td>2014</td> <td>\$450,084</td> <td>\$41,721</td> </tr> <tr> <td>2013</td> <td>\$326,999</td> <td>\$26,816</td> </tr> <tr> <td><b>Total</b></td> <td><b>\$2,814,410</b></td> <td><b>\$260,925</b></td> </tr> </table>	2015	\$651,415	\$46,724	2014	\$450,084	\$41,721	2013	\$326,999	\$26,816	<b>Total</b>	<b>\$2,814,410</b>	<b>\$260,925</b>								
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<p>Upon inquiry, it was discovered that charges for BMT and Donor medications were not setup as recharges to the clinics for the preparation and dispensing of discharge prescriptions at Transplant Pharmacy, leading to incorrectly retained costs for Transplant Pharmacy from the acquisition of BMT and Donor medications in addition to the missed revenue.</p>																				
<p><b>2</b></p>	<p><b><i>There is no monitoring of insurance payments to identify outstanding receivables balances, negatively impacting revenue.</i></b></p>			<p>Without understanding what revenue is expected, checks may go missing without detection and revenue opportunities may be missed.</p>	<p>Pharmacy Finance should include insurance claims reconciliation in their revenue management review as well as evaluating business operations to determine if the current manual entry of patients' co-payment from Transplant Pharmacy is still necessary and if there are any downstream impacts for ending this practice.</p> <p>Pharmacy Finance should consider leveraging the expertise of the UCSF Health Revenue Cycle team to enhance their revenue management efforts.</p>	<p>Transplant Pharmacy will be implementing insurance claims reconciliation to actual payments received to identify denials and outstanding balances through Amerisource Bergen's Elevate program.</p> <p>Responsible Party: Chief Pharmacy Officer</p> <p>Target Completion Date: March 31, 2019</p>														
<p>Transplant Pharmacy operates outside of the auspices of UCSF Health Revenue Cycle operations. Pharmacy Finance does not currently post insurance payments to patient accounts or actively monitor or reconcile their accounts receivable ("AR"). As such, it is difficult to distinguish whether or not the department was fully reimbursed by insurance for the expected payments and to determine causes of non-payment. This may lead to missed revenue opportunities including not billing for services rendered.</p>																				
<p>We acknowledged that in the past, it was a business decision made not to perform AR reconciliation. However, based on the Internal Rate of Return calculation used by Pharmacy Finance, if AR were to be managed actively to not let it exceed 120 days, collections could potentially increase by approximately \$9M (\$13.9 Charges x 65% payment rate) as the current expected payment collection rate is 0% after 120 days.</p>																				
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June 2018	AR Balance	Charges	Pymnt Rate <sup>4</sup>	Expected Payment																
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30-60	\$46,887	\$874,643	82%	\$717,207																

<sup>4</sup> While the IRR calculation uses an 82% payment rate, the actual average collection rate calculated for the time period in scope was approximately 51%

61-90	\$93,263	\$634,962	82%	\$520,669
91-120	\$54,369	\$198,768	65%	\$129,199
>120	\$9,761,835	\$13,920,168	0%	\$0.00
	<b>\$9,957,939</b>	<b>\$16,302,444</b>		<b>\$1,919,676</b>

Typically, an active pursuant of AR will have a decreasing balance over time. However, with the current process, they have a higher balance after 120 days due to not monitoring and collecting balances owed.

**B. Cash, Checks, and Credit Cards Controls**

No.	Observations	Risk/Effect	Recommendation	MCA
3	<p><b>Reconciliation of cash, checks, and credit cards is not performed against QS/1 Point of Sale (POS) system.</b></p> <p>Transplant Pharmacy’s current cash procedures are limited to preparing and depositing credit card/cash/check. Reconciliation of end of day close out of cash and credit card receipts against the QS/1 POS end of day report is not performed to identify any anomalies.</p> <p>Currently, the credit card (“CC”) terminal settlement tape is processed overnight and Transplant Pharmacy staff verify patient CC receipts totals match against CC settlement tape totals the next morning. However, this verification will only detect missing patient receipts, not any potential over/under charges between CC terminal and POS system or gaps between cash deposit slips and the POS system.</p>	<p>Insufficient monitoring of cash may delay notice of missing cash or allow fraud to go undetected.</p>	<p>Transplant Pharmacy should update current procedures to include End of Day Close Out procedures to be performed daily by a staff member who is separate from the primary cash collector, such as a backup Pharmacist.</p> <p>The feasibility of using QS/1 POS for processing CC transactions should be reassessed periodically as technology and business operations change to determine if manual reconciliation processes can be reduced.</p>	<p>Transplant Pharmacy management will implement policy and procedures for end of business close out to include reconciliation of cash and credit card receipts based on QS1 report by pharmacy manager.</p> <p>Responsible Party: Chief Pharmacy Officer</p> <p>Target Completion Date: Jan 15, 2019</p>

No.	Observations	Risk/Effect	Recommendation	MCA																					
4	<p><b>Insurance checks are not processed in compliance with BUS-49 requirements.</b></p> <p>Insurance payment checks for Transplant Pharmacy may arrive either at the Transplant Pharmacy or Pharmacy Finance. For checks that arrive at Transplant Pharmacy, cash collectors open the mail without dual custody, and forward the checks via interoffice memo to Pharmacy Finance, who also do not open the mail in dual custody, leading to checks that may arrive at Pharmacy Finance already having been opened and/or late. Additionally, instances were described where insurance payment checks were paid to the order of the depositor, rather than UCSF or Regents of the University of California. These processes reduce the ability to assign accountability.</p> <p>Deposits are also not prepared in dual custody. Review of deposits in April and May 2018 shows that checks were not deposited timely.</p> <table border="1" data-bbox="331 773 989 1040"> <thead> <tr> <th>Total Deposited</th> <th># of Checks &amp; Date Range of Checks Received</th> <th>Date Deposit</th> </tr> </thead> <tbody> <tr> <td>\$126,991.50</td> <td>6 (4/7/18 – 5/2/18)</td> <td>5/11/18</td> </tr> <tr> <td>\$182,798.27</td> <td>8 (4/27/18 – 5/10/18)</td> <td>5/18/18</td> </tr> <tr> <td>\$200,155.53</td> <td>11 (5/11/18 – 5/25/18)</td> <td>6/1/18</td> </tr> <tr> <td>\$146,670.64</td> <td>6 (5/23/18 – 6/4/18)</td> <td>6/13/18</td> </tr> <tr> <td>\$102,251.32</td> <td>9 (5/24/18 – 6/15/18)</td> <td>6/22/18</td> </tr> <tr> <td>\$217,771.94</td> <td>13 (6/2/18 – 6/25/18)</td> <td>6/29/18</td> </tr> </tbody> </table> <p>UC Business and Finance Bulletin BUS-49, Policy for Cash and Cash Equivalents Received requires that checks be deposited at least weekly or whenever collections exceed \$500, deposits must be validated and prepared under dual custody at all times in a safe and secure area, and that mailed remittances shall be verified and processed by two employees.</p>	Total Deposited	# of Checks & Date Range of Checks Received	Date Deposit	\$126,991.50	6 (4/7/18 – 5/2/18)	5/11/18	\$182,798.27	8 (4/27/18 – 5/10/18)	5/18/18	\$200,155.53	11 (5/11/18 – 5/25/18)	6/1/18	\$146,670.64	6 (5/23/18 – 6/4/18)	6/13/18	\$102,251.32	9 (5/24/18 – 6/15/18)	6/22/18	\$217,771.94	13 (6/2/18 – 6/25/18)	6/29/18	<p>Redundant/ inefficient process and lack of accountability may increase risk of fraud or loss checks in the mail or delays in receiving, processing, and posting payments.</p>	<p>Pharmacy Finance should consider establishing a lockbox with the bank for direct deposit of the insurance checks and have Explanation of Benefit statement to be sent directly to Pharmacy Finance.</p> <p>Pharmacy Finance should contact their payors and validate that addresses and titles for payment checks are accurate in the payors' systems.</p>	<p>Transplant Pharmacy will implement direct electronic fund transfer of all insurance payment via Amerisource Bergen's Elevate program for contracts included in the program. Transplant Pharmacy will also implement lock box for all other check deposits.</p> <p>Responsible Party: Chief Pharmacy Officer</p> <p>Target Completion Date: March 31, 2019</p>
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5	<p><b>Hard copies of patients' credit card information were retained on file and may not meet the Payment Card Industry (PCI) Data Security Standards (DSS).</b></p>	<p>Non-compliance with PCI DSS puts the University at risk</p>	<p>Transplant Pharmacy should work with the PCI Compliance Workgroup to get an assessment on</p>	<p>Transplant Pharmacy will no longer store hardcopies of</p>																					

No.	Observations	Risk/Effect	Recommendation	MCA
	<p>Noted hard copies of certain patients' credit card information were maintained on file, including name, credit card number, expiration date, and verification code. While there is a business need for this file to enhance patient experience as some patients have recurring co-pay collection for on-going delivery of prescriptions, such practice is prohibited per PCI requirements. There are controls in place to secure the credit card information and the files are stored in a locked cabinet with the key stored in Pyxis, which has user access tracking mechanism including timestamp. Currently, there are three staff with access to this key.</p> <p>Per PCI DSS Requirement 3.2, retention of card verification codes/values is prohibited. Additionally, the PCI Compliance Workgroup requires departments to contact them for an assessment of the method of storing credit card to ensure compliance with all physical security requirements.</p>	<p>for credit card fraud.</p>	<p>whether they can continue to store credit card on hardcopy for recurring transactions.</p>	<p>patients' credit card information on file. All current information on hand will be shredded.</p> <p>Responsible Party: Chief Pharmacy Officer</p> <p>Target Completion Date: October 31<sup>st</sup>, 2018</p>
<p>6</p>	<p><b><i>Separation of duties are not maintained at Transplant Pharmacy, and sufficient compensating controls are not in place.</i></b></p> <p>Due to limited staff in Transplant Pharmacy, the same pharmacist is responsible for filling prescriptions, collecting payments, processing refunds, voiding transactions, and reviewing/submitted CC settlement tapes, leading to inadequate segregation of duties.</p> <p>Currently, Transplant Pharmacy's departmental refund procedure does not include voided transactions as required by BUS-49 requirements. In practice, voided CC receipts are not attached to the receipt log and void reasons were not documented; therefore no reconciliation against QS/1 could be performed. Review of the POS Transactions Log from May through July 2018 identified nine voided transactions totaling \$9,247.</p> <p>Additionally, Transplant Pharmacy's current refund procedure does not require a supervisor's signature unless the refund is \$50 or more, as there is a business need to complete transactions and release patients timely.</p>	<p>Without sufficient documentation of voided transactions and monitoring, fraud, discrepancies, and errors may not be identified timely.</p>	<p>a. Back-up staff should be considered to perform the end of day close-out review while the primary staff does cash collection. If it is not feasible to institute separation of duties at Transplant Pharmacy, external resources for reconciliation and end-of-day closeout should be assessed.</p> <p>b. Transplant Pharmacy should update procedures to include retaining copies of voided transactions from CC terminal (and reference to corresponding POS</p>	<p>a. Transplant Pharmacy management will implement policy and procedures for end of business close out to include reconciliation of cash and credit card receipts based on QS1 report by pharmacy manager.</p> <p>b. Establish policy and procedures for voided transactions</p>

No.	Observations	Risk/Effect	Recommendation	MCA
	<p>UC Business and Finance Bulletin BUS-49, Policy for Cash and Cash Equivalents Received requires that voids/refunds must be supported by all copies of the document involved and explained and approved in writing by Cashier’s supervisor at the time of occurrence where practical, but no later than the end of the day.</p> <p>As these voided transactions were credit card related, the risk for misappropriation of actual dollar is lower. However, Transplant Pharmacy has been advised to treat medication like cash and establish procedures to secure the return of medications to reduce loss.</p>		<p>transaction) and implement a validation process for voids as part of their Refunds Logs.</p> <p>c. If it is still not practical to get signatures from a supervisor at end of the business day, then Transplant Pharmacy should implement a process for witness signatures and have a supervisor review the refund/void logs quarterly to identify trends.</p>	<p>Responsible Party: Chief Pharmacy Officer</p> <p>Target Completion Date: January 15, 2019</p>
7	<p><b>Required cash handling related training is not complete for all employees.</b></p> <p>Four Pharmacy Finance staff and one Transplant Pharmacy staff have not completed the required annual Cash and PCI DDS trainings.</p> <p>UC Business and Finance Bulletin BUS-49, Policy for Cash and Cash Equivalents Received requires that:</p> <ul style="list-style-type: none"> <li>• “At least once per year for all cash handling employees to refresh knowledge concerning policies, procedures and techniques and to provide updated information on internal and external policies.”</li> <li>• “All units processing cards are required to review these standards annually and receive training annually on card security through their Credit Card / Internet Payment Gateway Coordinator.”</li> </ul>	<p>Staff without completion of cash training increase risk of errors and unintentional non-compliance with BUS-49 policy.</p>	<p>Transplant Pharmacy and Pharmacy Finance staff involved in cash handling should complete required cash and PCI compliance training.</p>	<p>Pharmacy management will ensure that all staff involved in cash handling have completed cash and PCI compliance training.</p> <p>Responsible Party: Chief Pharmacy Officer</p> <p>Target Completion Date: Dec 31, 2018</p>

**APPENDIX A**

To conduct our review the following procedures were performed for the areas in scope:

- Interviewed Transplant Pharmacy and Pharmacy Finance personnel to gain an understanding of revenue capture processes, cash handling, and cash related trainings;
- Assessed physical security and controls over cash and cash equivalents;
- Assessed processes for receiving and depositing cash and cash and accountability;
- Evaluated monitoring processes for Transplant Pharmacy revenue and outstanding receivables;
- Reviewed order, dispense, and charge records in APeX for a sample of transplant medications;
- Researched PCI DSS requirements and UCSF implementation requirements for POS systems;
- Reviewed co-pay payments posted in QS1 NRX and POS;
- Reviewed frequency and justifications documented for transactions voided by cash collectors; and
- Reviewed records of background/fingerprinting verification for cash collectors and depositors.