February 26, 2025

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Perioperative and Procedural Services, UCSD Health
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Subject: ***Surgical and Perioperative Service Billing Report 2024-11***

The final report for Surgical and Perioperative Service Billing Report 2024-11, 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.

Christa Perkins
Digitally signed by Christa Perkins
Date: 2025.02.26 09:23:43 -08'00'

Christa Perkins
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UC San Diego

AUDIT & MANAGEMENT ADVISORY SERVICES

Surgical and Perioperative Service Billing
Report No. 2024-11
February 2025

FINAL REPORT

Performed By:

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TABLE OF CONTENTS

I. EXECUTIVE SUMMARY

Audit & Management Advisory Services (AMAS) has completed a review of Surgical & Perioperative Service Billing as part of the approved audit plan for Fiscal Year 2023-24. This report summarizes the results of our review. The objective of our review was to evaluate whether internal controls for charge capture and billing for perioperative and procedural services provide reasonable assurance that operations are effective and activities are compliant with relevant policies and procedures.

We concluded that the processes related to surgical and perioperative charge capture and billing needed improvement to provide reasonable assurance that processes were effective and in full compliance with relevant policies.

Effective operations were noted in certain areas including OpTime reporting and procedures and supplies catalog assistance by the Perioperative and Procedural Services IS team, and RI processes for charge reconciliation including the review of Surgery Log errors, claim edits, and specific Epic WQs, as well as those to improve coding and charge capture.

However, we identified several opportunities for improvement in our review related to assignment of OR levels. We noted a lack of a consistent documented methodology for assigning OR levels to procedures, and there was no review process to verify that the correct OR level was assigned when a procedure is completed. Also, the OR levels have not been recently assessed to determine if there should be more than the four current levels due to the range of complexities of surgical and perioperative procedures performed at UCSDH. In addition, reports and tools to aid in the charge reconciliation process, such as dashboards and a charge reconciliation report have not been developed, along with Revenue Integrity's charge reconciliation procedures which includes a complete list of workqueues (WQs) used, and their purpose and responsible owner.

We also noted a few areas where UCSDH policy was outdated or did not reflect current practices. Specifically, charge capture timeliness standards within UCSDHP 724.1 Charge Capture and UCSDHP 725.1 Late Charge Policy are not consistent. In addition, while UCSDHP 724.1 does include charge reconciliation procedures to follow, charge capture reports are not available to the Department Managers who are responsible with ensuring that charges are accurately and fully recorded.

A. OR Levels

1. Perioperative and Procedural Services Management, in collaboration with Revenue Cycle, will document a methodology for assigning OR levels to procedures, including consideration of procedure complexity and/or number of surgeons/staff, number of equipment, and OR time. *Estimated completion date: July 1, 2025. Responsible Party: Senior Director of Nursing, Perioperative Services.*
2. Perioperative and Procedural Services Management will determine a review process at the end of each case to ensure that correct OR levels are assigned and in accordance with the actual procedure performed. *Estimated completion date: July 1, 2025. Responsible Party: Senior Director of Nursing, Perioperative Services.*
3. Perioperative and Procedural Services Management will assess the current structure of OR levels to determine if the structure is consistent with the complexity of the surgical and

perioperative services performed at UCSDH. *Estimated completion date: July 1, 2025. Responsible Party: Senior Director of Nursing, Perioperative Services.*

B. Charge Capture Reconciliation

1. Revenue Integrity Management, in collaboration with Perioperative and Procedural Services Management, will develop reports and tools to aid in the charge reconciliation process, such as dashboards and/or a charge reconciliation report. *Estimated completion date: July 1, 2025. Responsible Party: Director, Hospital Coding, Revenue Integrity, and HIM.*
2. Perioperative and Procedural Services Management, in collaboration with Revenue Integrity Management, will document a charge reconciliation process to be performed by the clinical team that to incorporate review for common errors which delay the billing process. *Estimated completion date: July 1, 2025. Responsible Party: Senior Director of Nursing, Perioperative Services.*
3. Revenue Integrity Management have documented their charge reconciliation procedures with a complete list of their WQs, and their purpose and responsible owner. *(Completed)*
4. Perioperative and Procedural Services Management, in collaboration with Supply Chain Services, should explore opportunities to further develop and complete the existing supplies catalog to facilitate entry of these charges concurrent with procedures. This should include a process to confirm that all items are approved for use when a new contract is loaded into UCSDH systems. *Estimated completion date: July 1, 2025. Responsible Party: Senior Director of Nursing, Perioperative Services.*

C. Charge Capture Policies and Procedures

1. Revenue Cycle Management will formalize the charge capture timeliness standard and update the related UCSDHP 724.1 Charge Capture policy for consistency with the revised UCSDHP 725.1 Late Charge Policy. *Estimated completion date: July 1, 2025. Responsible Party: Director, Hospital Coding, Revenue Integrity, and HIM.*
2. Revenue Cycle Management will develop charge reconciliation procedures and reports/tools for monitoring, and formalize roles and responsibilities between Revenue Cycle and departments. *Estimated completion date: July 1, 2025. Responsible Party: Director, Hospital Coding, Revenue Integrity, and HIM.*

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 Surgical & Perioperative Service Billing as part of the approved audit plan for Fiscal Year 2023-24. This report summarizes the results of our review.

University of California San Diego Health (UCSDH) performs surgical and perioperative services throughout its facilities. The surgical and perioperative charge capture and billing process has been designed to ensure that all services, supplies, and procedures are captured accurately and documented in each patient's Electronic Health Record (EHR). As part of the process, UCSDH utilizes the Epic OpTime module (OpTime) for surgical and perioperative cases which includes case scheduling, preference card[1] assignments, and Operating Room (OR) levels. OpTime includes a catalog of procedures and supplies with associated charge codes.

As noted above, OR levels are assigned to surgical and perioperative procedures within OpTime. UCSDH has four OR levels (OR Level 1-4), with OR Levels 1 through 3 generally assigned for simple, moderate, and complex cases, and OR Level 4 assigned for robotic surgery. When a procedure is added to the catalog within OpTime, a staff member determines the level and enters it for that procedure so that when a procedure is scheduled, the OR Level has already been assigned. For the purposes of charge capture, the OR time is calculated and charged at a per minute rate based on the OR Level assigned. The following table summarizes the billing rates per minute for each level before and after adjustments in September 2023.

Table 1: Operating Room (OR) Levels and Rates

		Billing Rate per Minute	
Level of Surgery	**Type**	**Through September 2023**	**After September 2023**
Level 1	Simple	$150	$170
Level 2	Moderate	$210	$230
Level 3	Complex	$275	$295
Level 4	Robotic	$350	$375

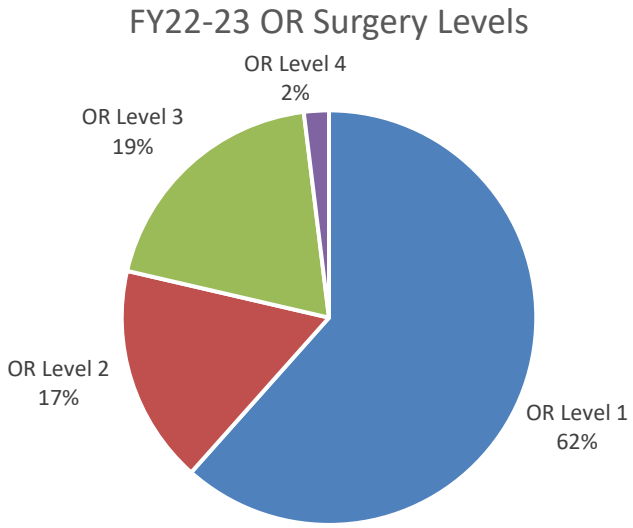
Source: Perioperative and Procedural Services

Different functional areas are responsible for ensuring the recorded accuracy of each case and monitoring performance. The surgeons are responsible for ensuring that each case's designated OR Level is accurate[2]. The Perioperative and Procedural Services clinical roles are responsible for ensuring that supplies, times (including OR, anesthesia, and post-anesthesia care unit (PACU)), and the status of the case (completed, cancelled, and discontinued) are accurately recorded in OpTime. The Perioperative and Procedural Services Information Services (IS) team assists with OpTime reporting and the procedures and supplies catalog. The Revenue Integrity (RI) area of Revenue Cycle Management is primarily focused on opportunities for improved coding and charge capture, reducing the risk of non-

[1] Preference cards are a set of instructions that detail the supplies, tools, and equipment needed for specific surgical procedures kept on file for each surgeon.
[2] If there is a change in the complexity of a specific procedure, it is the physician's responsibility to change the OR Level for that case.

compliance, optimizing payments, and reviewing claim edits. RI performs a charge reconciliation process by reviewing errors in the Surgery Log, claim edits, and Epic workqueues[3] (WQs). The posting and review of charges for some clinical areas is completed independently directly by the responsible department, including the Catheterization (Cath) Lab and Interventional Radiology (IR).

During Fiscal Year (FY) 2022-2023, UCSDH had 65,749 reported surgical cases, with Level 1 representing 62% (40,321) of the total number of cases as illustrated below.



Source: Perioperative and Procedural Services

III. AUDIT OBJECTIVE, SCOPE, AND PROCEDURES

The objective of our review was to evaluate whether internal controls for charge capture and billing for perioperative and procedural services provide reasonable assurance that operations are effective and activities are compliant with relevant policies and procedures. The scope of the review includes surgical and perioperative cases with a date of service between July 2022 and June 2023, excluding Ophthalmology. The new East Campus location was also not included in the scope of this review since it did not fully transition to the UCSDH license until May 2024. In order to achieve our objective, we performed the following:

- Reviewed the applicable UCSDH and departmental policies and procedures;
- Obtained an understanding of the Catheterization Lab and IR billing process and evaluated their billing workflow;
- Interviewed the following from UCSDH:
    - Directors and Analyst, Perioperative and Procedural Services;
    - Director, Assistant Director and Managers, Health Information Management (HIM) / Revenue Integrity, Revenue Cycle;
    - Director, Manager and Analysts, Analytics and Continuous Monitoring, Revenue Cycle;

[3] Epic WQs drive workflow from patient access through the revenue cycle stages and capture exceptions where intervention is needed.

  - Directors, Patient Financial Services (PFS), Revenue Cycle;
  - Manager, Charge Description Master (CDM), Revenue Cycle;
  - Director and Provider Educator, Provider Education & Risk Adjustment;
  - Director, Billing and Coding Compliance, Office of Compliance & Privacy (OCP); and
  - Supervisor and Clinical Technicians, Catheterization Lab.
- Analyzed the following for the full set of data provided in the scope period:
  - Duplicate charges, with a probe sample of 10 results to evaluate if the supplies and/or items were documented within the OpNote and time was documented accurately;
  - Surgery cases and OR level distributions; and
  - Charge lag;
- Judgmentally selected a sample of 14 cases (7 robotic and 7 non-robotic cases) to assess the following:
  - If the level appeared to be consistent within the sample and evaluate the methodology used;
  - If the OR and PACU time was inputted; and
  - Validation that the charge calculations were accurate based on the OR level and PACU acuity level;
- Reviewed the associated WQs for purpose, responsible owner and balance and judgmentally selected a sample of three WQs performing the following:
  - Selected 3 accounts in each with large balances or were in the WQ for a long period of time, and determined the reasonableness of the account's inclusion in the WQ; and
  - Evaluated the aging for reasonableness; and
- Evaluated the following UCSDH processes:
  - Methodology for assigning OR level and determine best practices with other UC campuses and other healthcare organizations;
  - Review process to ensure that the OR and PACU times are inputted and billed accurately; and
  - Charge capture reconciliation process to determine if there are any opportunities for improvement.

IV. CONCLUSION

Based on our review, we concluded that the processes related to surgical and perioperative charge capture and billing needed improvement to provide reasonable assurance that processes were effective and in full compliance with relevant policies.

Effective operations were noted in certain areas including OpTime reporting and procedures and supplies catalog assistance by the Perioperative and Procedural Services IS team, and RI processes for charge reconciliation including the review of Surgery Log errors, claim edits, and specific Epic WQs, as well as those to improve coding and charge capture.

However, we identified several opportunities for improvement in our review related to assignment of OR levels. We noted a lack of a consistent documented methodology for assigning OR levels to procedures, and there was no review process to verify that the correct OR level was assigned when a procedure is completed. Also, the OR levels have not been recently assessed to determine if there should be more than the four current levels due to the range of complexities of surgical and

perioperative procedures performed at UCSDH. In addition, reports and tools to aid in the charge reconciliation process, such as dashboards and a charge reconciliation report have not been developed, along with Revenue Integrity's charge reconciliation procedures which includes a complete list of workqueues (WQs) used, and their purpose and responsible owner.

We also noted a few areas where UCSDH policy was outdated or did not reflect current practices. Specifically, charge capture timeliness standards within UCSDHP 724.1 Charge Capture and UCSDHP 725.1 Late Charge Policy are not consistent. In addition, while UCSDHP 724.1 does include charge reconciliation procedures to follow, charge capture reports are not available to the Department Managers who are responsible with ensuring that charges are accurately and fully recorded.

These opportunities for improvement are discussed in greater detail in the balance of this report.

V. OBSERVATIONS REQUIRING MANAGEMENT ACTION

A.	**OR Levels**
There was not a consistent documented methodology for assigning OR levels to procedures, nor a review process to verify that the correct OR level was assigned when a procedure is completed. In addition, the OR levels have not been evaluated to determine if utilizing more than four levels may be appropriate, due to the range of complexities of surgical and perioperative procedures performed at UCSDH.	
Risk Statement/Effect	
Inconsistent surgery level methodologies and assignments could result in inaccurate and/or non-compliant billing and lost revenue.	
Management Action Plans	
A.1	Perioperative and Procedural Services Management, in collaboration with Revenue Cycle, will document a methodology for assigning OR levels to procedures, including consideration of procedure complexity and/or number of surgeons/staff, number of equipment, and OR time. *Estimated completion date: July 1, 2025. Responsible Party: Senior Director of Nursing, Perioperative Services.*
A.2	Perioperative and Procedural Services Management will determine a review process at the end of each case to ensure that correct OR levels are assigned and in accordance with the actual procedure performed. *Estimated completion date: July 1, 2025. Responsible Party: Senior Director of Nursing, Perioperative Services.*
A.3	Perioperative and Procedural Services Management will assess the current structure of OR levels to determine if the structure is consistent with the complexity of the surgical and perioperative services performed at UCSDH. *Estimated completion date: July 1, 2025. Responsible Party: Senior Director of Nursing, Perioperative Services.*

A. OR Levels – Detailed Discussion

UCSDH OR levels are assigned to surgical and perioperative procedures within Epic OpTime module. UCSDH has four OR levels (OR Level 1-4), with levels 1 through 3 for simple, moderate, and complex cases, respectively, and level 4 for robotic surgeries. When a procedure is added to the procedure catalog within Epic OpTime, a staff member determines the level and enters it for that type of procedure. As a result, when a procedure is scheduled, the OR level is automatically assigned. If there is a change in the complexity of a specific procedure, it is the surgeon's responsibility to change the OR level. The OR level assigned determines the billing rate of the OR time per minute. For charge capture, the OR time is calculated based on the OR level assigned and charged a rate per minute and is summarized in **Table 1** below.

Table 1: OR Levels and Rates

Level of Surgery	Type	Billed Per Minute prior to 9/23	Billed per Minute after 9/23
Level 1	Simple	$150	$170
Level 2	Moderate	$210	$230
Level 3	Complex	$275	$295
Level 4	Robotic	$350	$375

Source: Perioperative and Procedural Services

We noted there was a lack of a documented methodology with clear criteria for each level to guide the selection of the level at the time of scheduling. The current system is based on the judgment of an individual to assess the complexity of the procedure when adding the procedure to OpTime but lacks clear criteria on how to make that determination.

We reviewed a sample of 14 cases (7 robotic and 7 non-robotic for similar/same types of procedures), and noted the following inconsistencies:

- The non-robotic cases had a similar number of surgeons/staff, number of supplies, OR time to robotic cases, and, in some cases, the OR Level 3 exceeded Level 4 in these factors for the same type of case. However, based on the above schedule, the rates charged for Level 3 are less than 4.
- One case had an OR Level 2 but had a similar number of surgeons, supplies and OR time to an OR Level 3 case. However, based on the above schedule, the rates charged for Level 2 are less than 3.

We also noted that there was no periodic review process in place to ensure that correct OR levels are assigned and in accordance with the actual procedure performed, in case the complexity or time needed varies from what was originally anticipated.

Based on our review of similar healthcare organizations and best practices, other organizations have additional OR levels of up to six levels with a documented clear set of criteria to assign the levels, which includes the number of surgeons/staff, amount of supplies used, OR time, and other case-related criteria. A consistent, documented criteria for assigning levels with a periodic assessment of the surgery levels and would provide increased assurance that they are being appropriately assigned to maximize cost recovery.

B.	Charge Capture Reconciliation
Several opportunities were noted to improve the charge reconciliation processes to better ensure timely and accurate billing.	
Risk Statement/Effect	
Inconsistent charge reconciliation processes could result in missing or invalid patient charges, non-compliant billing and lost revenue.	
Management Action Plans	
B.1	Revenue Integrity Management, in collaboration with Perioperative and Procedural Services Management, will develop reports and tools to aid in the charge reconciliation process, such as dashboards and/or a charge reconciliation report. *Estimated completion date: July 1, 2025. Responsible Party: Director, Hospital Coding, Revenue Integrity, and HIM.*
B.2	Perioperative and Procedural Services Management, in collaboration with Revenue Integrity Management, will document a charge reconciliation process to be performed by the clinical team that to incorporate review for common errors which delay the billing process. *Estimated completion date: July 1, 2025. Responsible Party: Senior Director of Nursing, Perioperative Services.*
B.3	Revenue Integrity Management have documented their charge reconciliation procedures with a complete list of their WQs, and their purpose and responsible owner. *(Completed).*
B.4	Perioperative and Procedural Services Management, in collaboration with Supply Chain Services, should explore opportunities to further develop and complete the existing supplies catalog to facilitate entry of these charges concurrent with procedures. This should include a process to confirm that all items are approved for use when a new contract is loaded into UCSDH systems. *Estimated completion date: July 1, 2025. Responsible Party: Senior Director of Nursing, Perioperative Services.*

B. Charge Capture Reconciliation – Detailed Discussion

UCSDH Policy (UCSDHP) 724.1 Charge Capture states that it is the responsibility of the Department Manager to ensure timeliness and accuracy; that documentation supports the charges, charge entry, and error corrections; charge capture procedures are implemented and followed; and ensure that employees are trained in procedures and systems. Department managers are also responsible for reviewing available charge reconciliation and departmental revenue reports to ensure that charges are accurately posted and recorded. Currently, there is a draft Charge Reconciliation policy in development by RI.

We noted opportunities for improvement related to charge capture reconciliation since there was no formalized charge reconciliation process developed and documented performed by the Perioperative and Procedural Services team to ensure that charges are accurate. During the Revenue Integrity team review, errors are noted, such as cases not flagged as cancelled or discontinued, and/or missing anesthesia, OR, and PACU start or stop times, one-time supplies, and implants. The Revenue Integrity

team then has to contact Perioperative and Procedural Services or the appropriate clinical department staff on the case to follow-up on the discrepancy, which delays the posting of charges. A charge capture reconciliation within the Perioperative and Procedural Services team on the day a case is performed could minimize delays by adjusting for these common errors, and ensuring that the correct vendor supplies (name and quantity) are noted and agreed upon prior to the end of the case. Documentation that the review was performed could be evidenced by signing within Epic Verify Check.

Process to ensure charge capture for supplies could also be improved though ensuring contract items are approved for use and cataloged to facilitate selection in OpTime. Currently, the available supplies catalog does not allow the entry of all supply charges in a timely manner, and all items are not approved for use when a new contract is loaded into UCSDH systems. Upon confirmation, all line items on the contract that are approved could be cataloged by Supply Chain Services while flagging supplies/implants for OpTime, while identifying any obstacles to loading all approved items on a contract in Premier Connect. If supplies are flagged in the system for OpTime, the Charge Capture team can associate the supply item to a charge code, and this will enable the OR nurses to find and select the item in OpTime, rather than having to enter a one-time charge through a manual and time consuming process. Delays in ensuring completeness of the supply charges can further delay the billing of the entire OR case.

Based on our review of a sample of 14 cases, four cases had PACU times that were extended compared to the other similar procedures PACU time, without a note in the EHR indicating why the PACU time would be extended. One case had an OR Level 2, but the case was not charged by the OR Level 2 rate per minute and instead was charged a flat rate of $13,685 as minor surgery. If the case had been calculated based on the OR Level 2 rate per minute an additional $27,265 could have been billed. We also noted exceptions including cases not flagged as cancelled, and missing times, implants and/or supplies.

We also noted that there were no reports or tools readily available to assist the charge reconciliation process, such as dashboards or a charge reconciliation report (including time, errors, and number of cases completed for the day). Furthermore, Revenue Integrity uses WQs in their charge reconciliation process; the process has recently been formally documented with a list of WQs, and their purpose and responsible owner.

C.	Charge Capture Policies and Procedures
There are inconsistent charge capture timeliness standards within UCSDHP 724.1 Charge Capture and UCSDHP 725.1 Late Charge Policy. Moreover, while UCSDHP 724.1 does include charge reconciliation procedures to follow, charge capture reports are not available to the Department Managers who are responsible with ensuring that charges are accurately and fully recorded.	
Risk Statement/Effect	
Inconsistent charge reconciliation processes could result in incomplete, inaccurate and/or non-compliant billing.	
Management Action Plans	

C.1	Revenue Cycle Management will formalize the charge capture timeliness standard and update the related UCSDHP 724.1 Charge Capture policy for consistency with the revised UCSDHP 725.1 Late Charge Policy. *Estimated completion date: July 1, 2025. Responsible Party: Director, Hospital Coding, Revenue Integrity, and HIM.*
C.2	Revenue Cycle Management will develop charge reconciliation procedures and reports/tools for monitoring, and formalize roles and responsibilities between Revenue Cycle and departments. *Estimated completion date: July 1, 2025. Responsible Party: Director, Hospital Coding, Revenue Integrity, and HIM.*

C. Charge Capture Policies and Procedures – Detailed Discussion

There are inconsistencies within the UCSDH charge capture policies related to the timeliness of charge capture. UCSDHP 724.1 *Charge Capture,* issued by HIM & the Medical Center Business Office states that charges are to be posted within 24 hours of the date the services are rendered; however, UCSDHP 725.1 *Late Charges Policy* also owned by HIM and recently revised and approved in November 2024[4] states that late charges are defined as when charges are entered by physicians / providers after the 24 to 72 hours timeframe from date of service. We noted that the average charge lag is four days in FY2022-2023 for surgical and perioperative procedures.

Also, UCSDHP 724.1, states that "it is the responsibility of the Department Manager to ensure timeliness and accuracy, that documentation supports charges, charge entry, error correction, and charge reconciliation procedures are implemented and followed"; however there is a lack of UCSDH-approved charge reconciliation procedures which should be performed by Department Managers. Further, Department Managers do not have direct access to the charge entry and revenue reports to monitor whether charges are posted timely or accurately. Currently, there is a draft UCSDH Charge Reconciliation policy which is not formally approved. The policy does not define the roles of charge capture review between Revenue Integrity teams and Departments, nor has the reporting been established for monitoring. Clarifying roles and providing access to tools or reports for monitoring would assist Department management in fulfilling their responsibilities related to charge capture and reconciliation.

[4] As of December 17, 2024, AMAS noted that updated UCSDHP 725.1 has not yet been published at https://pulse.ucsd.edu/policies/UCSDHPs/Pages/default.aspx. Revenue Cycle Management indicated that the policy update is in process.