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Subject: **Epic Charge Capture – Clinic Procedures**  
**AMAS Audit Project 2011-55**

Audit & Management Advisory Services (AMAS) has completed a charge capture review for outpatient procedures performed during clinic visits at the request of UCSD Medical Group management. This report summarizes the results of our review.

**Background**

Certain outpatient procedures including, but not limited to, biopsies, colposcopies, and Foley Catheter placements may be performed either as a separately scheduled procedure, or during a clinic visit. In both cases, charges for these separately billable procedures are generated from the Epic electronic medical record (EMR) system through one of two methods: the charge order method or charge entry method.

**Charge Order Method**

The Epic charge order method was implemented in the following specialty clinics that went live on the Epic system prior to the implementation of the physician charge entry process:

- Family and Internal Medicine
- Women Health Services
- Cardiology
- Neurology
- Hematology Oncology

The charge order method automatically generates a charge for separately billable procedures when a physician/provider creates an Epic order for the procedure. The general exception is that charges for some injections and immunizations need to be entered separately in the charge capture tab.

To complete this process, the physician/provider accesses the Epic order entry tab, and selects the appropriate order in the “New order” field, inputs the quantity (if applicable), and adds comments. Prior to accepting the order, the order class must be changed from “normal” to “in-
clinic” status (if a default has not been set) to generate a charge. It is important that this step be completed because the order class “normal” suspends a charge pending additional actions to be taken, including securing an authorization. All in-clinic procedures that are correctly ordered will generate a charge when the patient encounter is closed. All generated charges will be reflected in Epic the following day.

Ambulatory Care management recently became aware that the charge order process was not generating charges for some of the procedures ordered. The Medical Group has been analyzing charge order clinic services rendered since September 2009 to identify missing charges. As a result of missing charges, management is considering converting all clinics to the charge entry method described below.

Charge Entry Method

Physicians in the majority of clinics capture charges for all services rendered by entering data into the Epic charge entry screen. For each patient visit, a level of service (LOS), which equates to an evaluation and management (E & M) Current Procedural Terminology (CPT) code, must be selected in the LOS tab. Some clinics have created Smart-Sets¹ to assist with this process. Regardless of the method used, physicians must select the appropriate LOS code based on the services provided. To generate a charge, the physician must then access a separate charge entry screen and select the service provided². After the required data fields are completed, the physician exits the charge entry screen, and should be able to view the charges generated. Charges will be transmitted to the GE Centricity billing system when the encounter is completed and closed. Controls have been established in Epic to prevent an encounter from being closed unless all required patient information has been completed. However, an Epic encounter may be closed without capturing all charges.

Because the electronic charge entry method requires the physician to access two separate screens to enter charge data into Epic, Ambulatory Care management has expressed concern that charges for procedures performed during a clinic visit might not be generated due to an oversight, or lack of training. As a result, this review was scheduled.

Audit Objective, Scope and Procedures

The objective of this review was to determine whether physicians were routinely submitting Epic charges for all billable procedures performed during a clinic visit.

To achieve our objective, we performed the following review procedures:

- Interviewed the Ambulatory Care Director of Access to discuss charge capture concerns;
- Contacted the Medical Group Business Services (MGBS) Abstracting Manager to attempt to obtain list of in-clinic procedures;

¹ A Smart Set is a pre-populated order or documentation that increases the efficiency of the encounter closure process.
² The menu of services available is customized by physician specialty.
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- Discussed charge capture issues for the Epic Charge Order process with the MGBS Revenue Manager reviewing charges;
- Discussed the Epic charge capture and order process with an Epic Team programmer analyst;
- Contacted the Department of Medicine (DOM) Clinical Operations Director (COD) to identify Divisions and physicians with a high volume of in-clinic procedures;
- Obtained a data file that included February 2010 surgical pathology orders from Medical Center Clinical Laboratory Administration, and traced a judgmental sample of orders to clinic visits to determine whether charges were captured for in-clinic procedures;
- Obtained an Epic encounters list for April 2010 for selected physicians identified by the DOM COD from Medical Group Decision Support (MGDS) and traced a judgmental sample of encounters to charges and;
- Traced sample of Epic encounters to patient account charges in GE Centricity.

Medical procedures performed during a clinic visit are not documented in a separate part of the Epic encounter record. Therefore, a query of Epic data fields could not be performed to identify a sample population of clinic procedures to compare to charge records. Because the objective of this review was to identify missing charges, test samples were selected using the following two approaches to identify clinic visits with procedure(s):

Sample Selection/Review Process: Pathology Orders

Certain in-clinic procedures result in a tissue specimen analysis that generates a pathology report. To identify clinic visits that included procedures, AMAS obtained a data file of pathology orders for the month of February 2010 from Medical Center Clinical Laboratory Administration. Orders were then traced to the Epic encounter and documentation for the encounter was analyzed to determine whether a separately billable procedure was performed. A judgmental sample of 10 physicians was selected. Three pathology orders for each physician were traced to clinic visits. For each visit, AMAS ensured that separately billable procedures were appropriately charged through Epic and transmitted to GE Centricity.

Sample Selection/Review Process: Department/Physician Selection

Because the DOM has a number of medical specialties, AMAS contacted the Clinical Operations Director to identify divisions/specialties, and physicians that were likely to perform procedures as part of a clinic visit. Based on the input we received, we selected 14 physicians from Rheumatology, Dermatology, Orthopaedic Surgery and Bone Marrow Transplant. AMAS obtained a list of April 2010 patient encounters from MGDS for each physician. A judgmental sample of 5 -10 encounters was then selected for each physician and traced to the Epic encounter record to identify whether in-clinic procedures had been performed. This process yielded a total of 27 patient visits for five physicians as described in the table below:
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<table>
<thead>
<tr>
<th>Department</th>
<th>Number of Physicians in the Test Sample</th>
<th>Number of patient visits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rheumatology</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Dermatology</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>Orthopaedic Surgery</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5</strong></td>
<td><strong>27</strong></td>
</tr>
</tbody>
</table>

**Conclusions**

Based on the audit work completed, we concluded that physicians were routinely submitting Epic charges for separately billable procedures performed during a clinic visit. Charges were correctly submitted for 55 (96%) of the 57 encounters in the sample. Although physicians were correctly entering charges in Epic, charges for some clinic procedures were not being released from Epic to GE Centricity, as a result of a programming error.

**Observations and Recommendations**

A. Missing Charges

**A charge was not generated for two procedures in the test sample.**

AMAS’ review of the 57 sampled patient visits identified two procedures performed by two Women’s Health physicians that were not appropriately billed. These are summarized in the table below:

<table>
<thead>
<tr>
<th>Patient # (last 4 digits of MRN)</th>
<th>Date of Service</th>
<th>Procedure not billed</th>
<th>Estimate of charges not billed</th>
<th>Cause of Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>2206</td>
<td>2/5/10</td>
<td>Endometrial biopsy</td>
<td>$350</td>
<td>Incorrect order class selected by physician</td>
</tr>
<tr>
<td>9277</td>
<td>2/4/10</td>
<td>Endometrial biopsy</td>
<td>$350</td>
<td>Order was not placed by physician</td>
</tr>
</tbody>
</table>

The Women’s Health Services clinic utilizes the charge order method for capturing charges. The MGBS Revenue Manager for Reproductive Medicine advised AMAS that orders were placed for the services with missing charges, but the corresponding charges were not sent from Epic to GE Centricity. However, a review of the clinic encounter records indicated that for one visit an order had not been placed, and for the other visit, the order was placed incorrectly. Incorrect or missing orders will prevent charges from being generated in Epic. Periodic charge capture reminder notices or training updates should be considered to help ensure that the charge capture is well understood and becomes a routine part of the encounter closure process.

**Management Corrective Actions:**

1. MGBS will create charges for the two unbilled procedures identified during this review.
2. The Epic Team will continue to provide quarterly training updates and/or reminders on Epic charge capture processes.

B. Epic Charge Order Process

The Epic Charge Order process did not generate charges for some clinic procedures.

During audit fieldwork, it was noted that charges for some clinic procedures were not being released from Epic to GE Centricity in clinics set up to generate charges using the Epic charge order method. A Medical Group Revenue Manager brought this issue to the attention of the Epic Team in early 2010. Further analysis of the problem determined that a change in the Epic configuration implemented in September 2009 prevented charges for some procedures from being generated and interfaced to GE Centricity. For the period of September 2009 through June 2010, Medical Group management identified missing charges for approximately 1,300 procedures. The missing charges were subsequently processed and billed. However, the Epic programming error has not been resolved. In addition, charges generated by the effected clinics have not been reviewed for appropriate corrections from July 1, 2010 through the present.

Management Corrective Action:

The Epic Team has taken steps to remediate the charge order programming error that prevents charges from passing to GE Centricity.

AMAS appreciated the assistance provided during the review. Because we were able to reach agreement regarding corrective actions to be taken 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. While management corrective actions have been included in the audit report, we may determine that additional audit procedures to validate the actions agreed to or implemented are warranted. We will contact you to schedule a review of the corrective actions, and will advise you when the findings are closed.

UC policy requires that all draft audit reports, both printed (copied on tan paper for ease of identification) and electronic, be destroyed after the final report is issued. Because draft reports can contain sensitive information, please either return these documents to AMAS personnel or destroy them.
If you have any questions regarding this report, please contact me at (858) 534-3617, or by email at shburke@ucsd.edu.

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