A follow-up audit to improve billing for ultrasound guidance during regional anesthesia at Children’s Hospital Colorado

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Background
Billing for ultrasound guidance (USG) during regional anesthesia requires an additional billing code. The recommended CPT code is “76942”, which is billed in addition to the code for the nerve block. This code takes into account both technical and professional components. The professional component includes the physician’s interpretation of the ultrasound image and the technical component incorporates costs required to maintain the ultrasound machine. If the ultrasound equipment is not owned and maintained by the anesthesiologist, the modifier “26” is attached to code 76942 to solely designate a professional fee.

A previous internal audit at Children’s Hospital Colorado found that USG was billed only 14% of the time when it was used.1 This represented a significant inefficiency in capturing appropriate anesthetic charges.

2011 Medicare Physician Fee Schedule National Average

<table>
<thead>
<tr>
<th>CPT code</th>
<th>Global payment</th>
<th>Professional payment</th>
<th>Technical payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>76942</td>
<td>$198.08</td>
<td>$33.64</td>
<td>$164.45</td>
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Methods
At Children’s Hospital Colorado, an electronic AIMS was installed in December 2011 (Epic Systems, Verona, WI) that includes the anesthesia records. Regional anesthetics are documented with a note describing the procedure and whether or not USG was used. This system prompts the billing department to initiate a bill for USG (CPT code 76942) when a provider documents that ultrasound was used for regional anesthesia. Ultrasound images, however, are not captured electronically by the AIMS, and must be printed out and scanned into the record as media files. These images are not attached to the anesthesia record itself, but are filed under a “media” section of the chart with other scanned documents.

To determine the total number of regional anesthesia blocks with USG between January 2012 to September 2012, we queried the PRAN (Pediatric Regional Anesthesia Network) database at our institution.2 Only information from our hospital was obtained; no aggregate or other center’s PRAN data were reviewed or accessed.

To assess our billing efficiency for USG, a separate audit of billing records was then performed to obtain the number of bills for USG during the same time period.

Additionally, we audited the electronic medical records of patients for whom a bill for USG had been processed by the billing service to determine if ultrasound images were actually present in these medical records.

Results
A query of the PRAN database revealed that between January 2012 through September 2012 a total of 597 patients received a regional anesthesia block using USG at Children’s Hospital Colorado. The total number of blocks was 812, as some patients received multiple regional blocks during a single anesthetic (for example, a popliteal and saphenous nerve block for the same surgery). When a patient receives multiple blocks during one anesthetic, our practice is to bill for USG only once. The audit of the billing records revealed that of the 597 patients who received a regional anesthesia block, the billing service processed a bill for USG in 471 patients. This represents a billing efficiency of 79% (471/597).

In our prior study, the number of bills processed for USG was divided by the total number of regional blocks (168/1211). Therefore, the prior study underestimated billing efficiency to the extent that some patients in that study had received multiple regional blocks. Nonetheless, assuming a similar percentage of patients received multiple blocks in that study as in the current study, the billing efficiency in the prior study was still less than 20%. Finally, of the 471 patients for whom a bill for USG was processed, only 246 charts had a scanned copy of the ultrasound image in the medical record.

Discussion
This follow-up audit of billing for USG found an improvement in billing efficiency. Compared to the prior study period (July 2010-June 2011) when only 14% of bills for USG were processed, this study found 79% of cases had bills processed. We attribute this increase to the integration of the billing processes with the data entered in the AIMS. This demonstrates an important application of AIMS to improve the accuracy of anesthesia billing.

This study also found that ultrasound images were scanned into the medical chart in only 52% of cases (246/471). Our current system requires the anesthesia provider to print a paper copy of the ultrasound image, which subsequently is scanned into the medical record. Potential reasons for failure include:
- forgetting to print the ultrasound image
- printer malfunction
- images being lost or damaged prior to scanning

Accurate billing for USG is a priority for health insurers and some require a permanent copy of the ultrasound image be retained in the medical record.3,4 Just as an integrated AIMS improved billing efficiency, it could also improve the process of retaining permanent ultrasound images. We hypothesize that automation of this process using the AIMS, by automatically transferring digital images from the ultrasound machine to the electronic medical record, is likely to be the most effective and efficient method to improve the rate of images being retained in the permanent medical record.

References