A Relative Value Unit Based Model for Quantifying Non-Billable Work Performed by Non-Physician Providers in Interventional Radiology Practices

The authors report no financial disclosures
PURPOSE

▪ Nurse practitioner and physician assistant non-physician providers (NPPs) are assuming greater roles in interventional radiology (IR) practices.

▪ Services provided by NPPs and billed under the NPP’s NPI number are easily quantifiable using established relative value unit (RVU) methodologies.
BUT, NPPs often perform *non-billable* work before and after procedures supporting work billed by physicians that facilitate IR practice efficiency

- Eg. History and physical, consent, moderate sedation evaluation, discharge orders, etc.

Tracking this non-billable work is important to quantify NPP contribution to clinical practices
PURPOSE

We aimed to develop a reproducible model for quantifying *non-billable* pre- and post-procedure work performed by NPPs for procedures performed by physicians.
METHODS/MATERIALS

- 6 month study (September 2015-February 2016)
- 3 large hospitals
- Studied non-billable NPP work performed for:
  - Liver biopsies
  - Lung biopsies
  - Renal biopsies
METHODS/MATERIALS

- Developed a customized module in our electronic medical record to track the following tasks performed by NPPs when the procedure was billed under a physician NPI:
  - History and physical (H&P)
  - Consent
  - Moderate sedation and assessment (MSA)
  - Post-procedure order entry
  - Discharge coordination
METHODS/MATERIALS

▪ RVUs for non-billable work were estimated based on existing Centers for Medicare and Medicaid Services (CMS) methodology
  ▪ The number of minutes of pre- and post-procedure time that factor into the total RVUs for each procedure was extracted from the AMA’s RBRVS Data Manager*  
  ▪ Each task involved in pre- and post-procedure work were assigned an estimated percentage of total time involved in pre and post procedure work  
  ▪ By convention, each minute of pre and post procedure work = 0.0224 RVUs  

SAMPLE CALCULATION:
H&P for percutaneous liver biopsy

Liver biopsy H&P ~ 22.3% of pre-service work

Components of pre-service work include H&P, consent, MSA, prepping, draping, and surgical time-out

19 minutes of pre-service work x 22.3% = 4.24 min

CMS includes 19 minutes of pre-service work in the total payment for percutaneous liver biopsies

4.24 min x 0.0224 RVU/min of pre-service work = 0.095 RVU

0.095 RVUs for H&P prior to liver biopsy
## CALCULATED VALUES of PRE- and POST-PROCEDURE WORK

<table>
<thead>
<tr>
<th>Procedure</th>
<th>CPT code</th>
<th>Pre-work time (minutes)</th>
<th>History and physical</th>
<th>Moderate sedation assessment</th>
<th>Consent</th>
<th>Post-work time (minutes)</th>
<th>Post procedure order entry</th>
<th>Discharge coordination and related work*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liver biopsy</td>
<td>47000</td>
<td>19</td>
<td>22.3 (0.095)</td>
<td>22.3 (0.095)</td>
<td>22.3 (0.095)</td>
<td>15</td>
<td>50 (0.168)</td>
<td>50 (0.168)</td>
</tr>
<tr>
<td>Lung biopsy</td>
<td>32405</td>
<td>19</td>
<td>30 (0.13)</td>
<td>30 (0.13)</td>
<td>30 (0.13)</td>
<td>20</td>
<td>50 (0.224)</td>
<td>50 (0.224)</td>
</tr>
<tr>
<td>Renal biopsy</td>
<td>50200</td>
<td>45</td>
<td>30 (0.302)</td>
<td>30 (0.302)</td>
<td>30 (0.302)</td>
<td>15</td>
<td>50 (0.168)</td>
<td>50 (0.168)</td>
</tr>
</tbody>
</table>

†Minutes for each pre-procedure work component are estimates.

*Such as post-procedure physical exam and discussion with family.

Note: Pre-service work for some procedures include work performed in the procedure suite, such as prepping, draping, performing surgical time-out, and administering anesthesia/sedation. This is why the pre-service work components in the table do not equal 100%.
RESULTS

H&P = 54
Consent = 58
MSA = 57
Discharge = 50
Coordination = 30

H&P = 34
Consent = 38
MSA = 37
Discharge = 47
Coordination = 35

H&P = 26
Consent = 28
MSA = 26
Discharge = 17
Coordination = 14

Total pre and post RVUs allotted to NPPs for procedures performed by physicians during the 6 month study period were 54.4 and 37.0, respectively.

(0.425 and 0.325 RVUs [0.75 total] per procedure)
CONCLUSION

- Using a modification of longstanding RVU methodology, *quantification* of non-billable non-procedural work performed by NPPs in IR practices is feasible and relatively easily accomplished.
- The measurable contributions of NPPs to even minor procedures can be substantial.
- As practices expand NPP roles, such methods can facilitate more robust and accurate financial pro forma modeling.