**Video-Based Coaching as an Educational Platform for Urologic Residency Training**

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### Introduction

- Residency operative experience is declining due to duty hour restrictions, increased scrutiny on attendings, and increasing fellowship trainees.
- Alternative strategies including traditional didactics, web-based learning and simulation labs have failed to show transferability to the operating room.
- Coaching has been minimally utilized in technical skill surgical training.
- Video based coaching (VBC) utilizes immediate, direct, and targeted feedback.
- VBC has shown promising results in general surgery residency training.

### Aim

To develop and utilize a coding schema to evaluate the efficacy of video-based coaching sessions (VBCS) in urologic procedures.

### Methods

- Urology residents, postgraduate years 2 through 5 and attendings at an academic tertiary care center were observed.
- A coding schema used in previous surgical studies was utilized by two independent “coders” identifying the initiator, content, technique, tone, and scheme (i.e, open versus closed question).
- Prior to the grand rounds, attendings were given a “coaching residents” pamphlet used in previous studies evaluating surgical education.
- Statistical analysis performed using X² and t-test.

### Results

#### Summary of Observed Surgical Cases

<table>
<thead>
<tr>
<th>Case</th>
<th>PGY Level</th>
<th>Attending Veteranship (&gt; or ≤ 20 years teaching)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robotic partial cystectomy</td>
<td>4</td>
<td>&lt;20</td>
</tr>
<tr>
<td>Green light prostatectomy</td>
<td>4/5</td>
<td>≥20</td>
</tr>
<tr>
<td>DVIU</td>
<td>4</td>
<td>≥20</td>
</tr>
<tr>
<td>Vaginal hysterectomy</td>
<td>5</td>
<td>&lt;20</td>
</tr>
</tbody>
</table>

**Table 1. Summary of cases observed from 09/2019 to 02/2020 with corresponding PGY-level of the resident involved in the case and the attending veteranship (less than or greater than 20 years teaching experience).**

#### Qualitative Resident Evaluations of VBCS

- “Nice to have this dialogue and accompanying picture”
- “This grand rounds covered areas in a time efficient manner”
- “Grand round setting for learning allows us to be more involved and ask questions”

### Discussion

- Optimal training of residents may require supplemental resources.
- Many cognitive skills involved in surgery can be taught outside the operating room, including furthering depth of knowledge, technique and reasoning behind critical decision making.
- Video based coaching increased teaching points across almost all parameters.
- Implementation of VBC is feasible to the majority of training programs.
- Response to VBC by participants was overwhelmingly positive.
- Further investigation is ongoing to assess the utility of VBC in all subspecialties in urology.

### Conclusions

- Across 4 urology surgery cases, VBC had increased teaching time and more focus on resident education compared to the OR.
- Future studies should focus on larger data pools over multiple institutions to determine generalizability.

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### References


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