Non-Operating Room Anesthesia: Patient Safety, Scheduling, Efficiency and Effective Leadership

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ABSTRACT:
Non-Operating Room Anesthesia (NORA) is a practice becoming increasingly established within the broader field of ambulatory care anesthesia. Performing cases outside the traditional hospital based operating room setting has offered not only added conveniences for both patients and proceduralists but has also increased the number of procedures that can now be safely performed in non-OR settings. As a result of this changing trend in practice, anesthesiologists have played a significant role to enter this venue and provide the required anesthesia services for cases once performed in hospital settings. The offering of anesthesia services for the growing volume and complexity of cases outside the typical support systems found in a hospital or ambulatory surgery center based setting requires a unique set of skills and preparation. This article provides an overview of the common challenges facing anesthesiologists participating in NORA procedures, discusses the minimum requirements for the safe practice of NORA, offers an overview of administrative and regulatory issues impacting NORA, as well as emphasizes the need for anesthesiologists to play an increasingly important role in driving future policy measures surrounding NORA practice.

Keywords: non-operating room anesthesia, patient safety
Introduction:

Anesthesiologists are increasingly participating to provide anesthesia care to patients undergoing procedures outside of the traditional main operating room setting. This practice expansion has led to the recognition of a distinct type of anesthesia service known as Non-Operating Room Anesthesia (NORA) that covers a vast array of procedural types [1] (Table 1).

<table>
<thead>
<tr>
<th>Gastroenterology Endoscopy Suite</th>
<th>MRI suite (Diagnostic, and surgical)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interventional Radiology areas including CT</td>
<td>Nuclear Medicine department</td>
</tr>
<tr>
<td>Bronchoscopy Suite</td>
<td>Electroconvulsive therapy at PACUs or other locations</td>
</tr>
<tr>
<td>Cardiac Catheterization Lab</td>
<td>Pain Management procedure rooms</td>
</tr>
<tr>
<td>Electrophysiology Lab</td>
<td></td>
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Table 1: Locations for Non-Operating Room Anesthesia (NORA) Services

The advancement of NORA popularity is largely attributed to advances in the procedures that no longer require the full capabilities of an operating room (such as endoscopic procedures) to perform as well as procedures involving complex and immobile technology (such as interventional radiology). In these settings the there is a need for the proceduralist to focus on the intervention, while the depth of sedation or anesthesia needed requires the care of an anesthesiologist. The goal of this article is to describe the challenges facing anesthesiologist participating in NORA procedures, to provide the minimum requirements for safe practice of NORA, describe administrative and regulatory issues surrounding NORA, as well as suggestions emphasizing the need for anesthesiologists to play an increasingly important role in driving future policy measures surrounding NORA practice.

NORA Challenges:

While in the past proceduralists could more easily provide moderate sedation while still performing the primary procedure, the complexity and technological advancement of medical procedures over time has increased requiring a greater need by the proceduralist to focus on the task at hand. Thus, the need for...