**Title:** Prehospital Intubation Securing Methods

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**2nd Party Appraiser:** Jen Greene

**Clinical Scenario:**
Paramedics arrive to find a 54 year old male patient involved in a house fire. The patient has significant amounts of soot around the face, nose and mouth and is complaining of tightness in the throat with audible stridor. The paramedics decided to intubate the patient to secure and protect. After intubating the patient, they secure the endotracheal tube with a commercial tube holder. The tube holder is intended to prevent accidental dislodgement.

**PICO (Population – Intervention – Comparison – Outcome) Question:**
In patients that are prehospitaly intubated, does a commercial tube holder help prevent tube dislodgement compared with using twill tape?

**Search Strategy:**
(Prehospital) and (endotracheal intubation) and (“commercial securing device”)

**Search Outcome:**
5510

**Relevant Papers:**

<table>
<thead>
<tr>
<th>Author, Date</th>
<th>Population: Sample characteristics</th>
<th>Design (LOE)</th>
<th>Outcomes</th>
<th>Results</th>
<th>strengths/Weaknesses</th>
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<tbody>
<tr>
<td>Douglas Kupas Karl Kauffman Henry Wang 2009</td>
<td>1732 patients undergoing tube securing efforts (pre hospitaly) in intubated patients</td>
<td>Prospective, observational, multicenter study LOE 2</td>
<td>Rate of dislodgement</td>
<td>Tube manually held: 12.5% dislodgement Commercial tube holder: 2.3% dislodgement Twill tape: 0.0% dislodgement</td>
<td>+ Large population number + High CI - Not randomized - No independent confirmation - No standardization of level of care</td>
</tr>
<tr>
<td>Murdoch, E. Holdgate, A. 2007</td>
<td>270 tube fixations undergoing a transfer from prehospital to hospital</td>
<td>Prospective simulation study with a comparison group LOE 3</td>
<td>Rate of dislodgement</td>
<td>Commercial tube holder: 0.0% dislodgement Twill tape: 63% dislodgement</td>
<td>+ High CI - Manikin Based</td>
</tr>
</tbody>
</table>

**Comments:** These were non traumatic intubated patients (no cervical collar)

**Consider:** Why would you NOT change practice, based on this article?
In reference to the initial question there was a large amount of drift. There have not been many clinical studies showing the effectiveness of tube holders.
Clinical Bottom Line:
There is not enough quality evidence to show that a certain way is more secure than another. Additionally, these studies even have opposing results.

References:
