An Economic Analysis of Postoperative Pain Management with Fentanyl Iontophoretic Transdermal System

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Methods

- A cost calculation model was developed to evaluate the economic value of fentanyl ITS compared to IV PCA for a hospital performing 1200 orthopedic procedures per year.
- Duration of time modeled was 48 hours.
- The model accounted for:
  - Costs for labor (nursing, pharmacist, RN/LPN), supplies, medications, and equipment.
  - The cost component for harmful and non-harmful events. Real data was used for the harm events.
  - The cost component for non-harmful IV PCA medication/device errors and harmful IV PCA.
- The model is designed to compare IV PCA to fentanyl ITS for orthopedic procedures.

Results

Table 3: Baseline Model Assumptions for Other Safety Events, Hospital Labor Requirements, Equipment and Supplies for the Delivery of PCA in the 48 Hours Following Surgery

<table>
<thead>
<tr>
<th>Event</th>
<th>Baseline Estimate</th>
<th>Source</th>
<th>Calculation / Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV PCA pump</td>
<td>12/30</td>
<td>Pharmacy</td>
<td>Fentanyl ITS pump: - Siphon IV PCA pump: 18 minutes - Fentanyl ITS pump: 36 minutes</td>
</tr>
<tr>
<td>IV PCA drug</td>
<td>60</td>
<td>Pharmacy</td>
<td>Fentanyl ITS drug: - Siphon IV PCA drug: 36 minutes - Fentanyl ITS drug: 36 minutes</td>
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Conclusions

Within the hospital setting, this analysis calculates fentanyl ITS may reduce the economic burden associated with IV PCA, pump and programming errors, labor and supply/equipment costs compared to IV PCA. This result in a potential economic opportunity of $79 per patient over a 48-hour period, less the acquisition cost of fentanyl ITS.

Disclosures

This study was funded by The Medicines Company

References