OBJECTIVE

The study was conducted to estimate the 90-day cost impact of DERMABOND PRINEO System compared to other wound closure methods for hip and knee arthroplasty from a U.S. provider perspective.

METHODS

• Data used in the model were based on input from an Expert Panel which consisted of:
  - Two orthopedic surgeons
  - Three physician assistants who specialize in orthopedic surgery
  - One home health agency representative
  - A survey and focus to face meeting was conducted with the Expert Panel to characterize the procedures that may contribute to ending of wound closure resources in hip and knee arthroplasty.

• From the Expert Panel, typical resource use for hip arthroplasty over a 90 day period were captured for wound closure with staples, Sutures, and DERMABOND PRINEO System.

• The model assumes 500 total annual hip or knee arthroplasty procedures will be conducted at a typical U.S. hospital.

• The model compares the hip costs in a Current Practice versus a Future Practice using materials used for the final skin layer, wound dressing materials, and post-operative costs.

• The distribution of wound dressing materials used in the Current Practice were obtained from the Premier Database and the Future Practice was a model assumption.

DISCUSSION AND CONCLUSIONS

• The model predicts that a Future Practice with increased use of DERMABOND PRINEO System has the potential to save costs compared to the Current Practice where only Staples or Sutures are used.

• Complications were based on Standard or Premium Dressings were used:
  - When Standard Dressings are used, the incremental cost savings with the Future Practice was predicted to be $234,361 over 90-day procedures ($194,881 savings per procedure).
  - When Premium Dressings are used, the incremental cost savings with the Future Practice was predicted to be $956,859 over 90-day surgeries/visits savings per procedure.

RESULTS

• The model results were calculated by determining the cost of closure materials, dressing materials, and post-operative visits in the Current Practice and Future Practice (Figure 1).

• Incremental results compare the Future Practice costs to the Current Practice costs.

METHODS CONT’D

Table 3: Dressing Materials Used During 90-Day Period

<table>
<thead>
<tr>
<th>Dressing Material</th>
<th>Standard Dressing Costs</th>
<th>Premium Dressing Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>$89.99</td>
<td>$58.99</td>
</tr>
</tbody>
</table>

Table 4: Post-Operative Visits Within 90 days

<table>
<thead>
<tr>
<th>Post-Op Visit</th>
<th>Current Practice</th>
<th>Future Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visits</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Cost</td>
<td>$117.50</td>
<td>$117.50</td>
</tr>
</tbody>
</table>

Figure 1: Model Design

Figure 2: Total Costs with Standard Dressing in Hip and Knee Arthroplasties (a)