Potential Contribution of Every Other Week Administered Erythropoiesis Stimulating Agents to the Operational Efficiency of Anemia Management in a Haemodialysis Center: an Explorative Pilot Study in a Haemodialysis Center in Switzerland

M. Burnier 1, D. Teta 1, C. Oudy 1, J. Demey 2 and A. Tanghe 2

1 Service de Néphrologie, CHUV, Lausanne, Switzerland 2 Health Information Communication Technology, Bruges, Belgium

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Haemodialysis Center: an Explorative Pilot Study in a Haemodialysis Center in Switzerland

Labor costs were derived from actual fully loaded wages for the time measured by observing each activity on multiple occasions.

The general process for ESA administration is shown in Figure 1. Structured interviews with facility staff were used to develop a comprehensive list of processes that are associated with and measured by observing each activity on multiple occasions.

To characterize the entire process of ESA delivery, from the initial drug order placement to the incineration of waste products after ESA administration.

To evaluate the impact of changing from the current distribution of ESA products and dosing frequencies to less frequent dosing (Q2W) using darbepoetin alfa in Swiss patients undergoing dialysis.

The Memorius study was conducted at multiple facilities throughout Europe. Here, we report preliminary results from 83 patients at our center in Lausanne.

The dosing frequency distributions are shown in Figures 3a (overall) and 3b (by ESA).

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RESULTS

Dosing Frequency of ESAs

• In the current situation, most patients were receiving an ESA one or more times each week.
• The most frequently used regimen was QW, with 48% of patients.
• The dosing frequency distributions are shown in Figures 3a (overall) and 3b (by ESA).

Figure 2. Data Collection Methodology

Table 1a. Annual Variable Costs Associated With ESA Administration Using Current Dosing Regimens

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<thead>
<tr>
<th>Operation Unit (N=63)</th>
<th>Annual Operating Costs (CHF)</th>
<th>Labor</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmacy</td>
<td>121 860</td>
<td>6141.40</td>
<td>16.60</td>
</tr>
<tr>
<td>Dialysis</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Waste Disposal</td>
<td>1.30</td>
<td>16.60</td>
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<tr>
<td>Total</td>
<td>233 402.30</td>
<td>6431.00</td>
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Table 1b. Annual Per Patient Costs Associated With ESA Administration Using Current Dosing Regimens

<table>
<thead>
<tr>
<th>Operation Unit (N=63)</th>
<th>Annual Operating Costs (CHF)</th>
<th>Labor</th>
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<tbody>
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<tr>
<td>Waste Disposal</td>
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<tr>
<td>Total</td>
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Figure 4. Estimated Annual Variable Cost Reductions Per Patient Using Q2W Dosing

Q2W administration leads to less material consumption. Number of syringes could be reduced by 61%, number of disinfectant bottles by 67% and number of disinfectant wipes by 67%.

DISCUSSION

• There are quantifiable labor and material cost benefits associated with less frequent dosing of ESAs in the anemic dialysis population.
• Total costs of ESA administration may be reduced by converting to every other week (Q2W) administration.
• The primary drivers of cost reduction due to less frequent dosing are labor and material costs at the Dialysis Unit.
• Because of the lower frequency of injection, the risk for mistakes and accidents could go down in all units.
• An ecologically relevant effect of the Q2W dosing is the reduced waste production.

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REFERENCES