Inventory Replenishment: A collaboration between hospitals and Canadian Blood Services

The June 2016 BloodNotes newsletter featured an article describing a hospital inventory trend tool that Canadian Blood Services developed to better understanding hospital stock during times of optimal inventory. The tool, which is now widely available to all hospitals served by Canadian Blood Services, is the foundational element on which a new collaboration is being built.

Currently limited to select hospitals in Atlantic Canada, an inventory replenishment process focused on red blood cell stock inventory levels has been successfully piloted by three hospitals since January 2016.

Prior to the pilot, the three hospitals were already sharing daily inventory with Canadian Blood Services via the web-based Blood Component and Product Disposition System (DISPO) and regularly reporting monthly disposition data for red blood cells by blood group. These data were used to calculate average daily red cell demand and inventory indices that were discussed with the hospital transfusion service. The collaborative discussion with each pilot hospital resulted in the determination of optimal red blood cell stock inventory levels. These would be used to direct automatic inventory replenishment from Canadian Blood Services.

Once the optimal inventory targets were established, the hospital and local Canadian Blood Services distribution site used the following process for inventory replenishment.

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Canadian Blood Services</th>
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<td>• Share RBC inventory levels (<a href="#">via the inventory submission page within the online Blood Component and Product Disposition System</a>)</td>
<td>• Access hospital submitted RBC inventory levels</td>
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<td>• Use replenishment calculator tool to determine # of units to ship to hospital</td>
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<td>• Ship RBC units to hospital per delivery schedule</td>
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The overall objective of the pilot was to determine and confirm efficiencies and process improvements. Each hospital experience was different, with positive results reported by all hospitals and the Canadian Blood Services sites. These include:

- Decreased orders for RBC (routine, ASAP and STAT)
- Less time spent placing/receiving orders and shipping/receiving/processing RBC boxes
- Optimized inventory levels
- Reduced paper-based process, leveraging existing technology (DISPO system)

The inventory replenishment process is now routine for all three hospitals and includes regular collaborative inventory review meetings to adjust target inventory levels if required. Next steps include expanding to more hospitals in Atlantic Canada and to explore further automation to reduce the manual components of the process.

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