Streamline Drug Stock Management in Cheshire Home Shatin (SCH)

Chan S S H (1), Mak K Y M (1), Ng W M (1), Tsang S M (1), Tsung W C (1), Yeung W (1)

(1) Disabled and Infirmary Units, Cheshire Home Shatin, Hospital, Authority

Keywords:
medication safety
streamline
lean and wast elimination
drug stock
order and refill
infirmary

Introduction
The pharmaceutical service in Cheshire Home Shatin is supported by an off-site pharmacy of an acute hospital. However, auto-refill drug stock service for emergency drug cabinets (EDC) is not available. Nurses are responsible to order, handle and maintain the drug stock in the EDC.
The issues of previous EDC were:
- locate on different floors
- lack of standard drug stock lists
- problems of over stock and understock
These issues were not only a kind of waste on manpower and resource but also imposed the risk on patients. It was because EDC provided the convenient for nurses to assess drug stock. On the other hand, it bypassed the pharmacy safety checking points such as drug allergy, drug cross-sensitivity and drug-drug interaction etc.

Objectives
The conceptual framework of lean management was applied in the program, which commenced on 1 Jan 2016 and completed in the end of January 2016.
The objectives of the improvement work were to
1. Enhance medication safety
2. Reduce the waste on manpower and resource
3. Improve service quality and efficiency

Methodology
Doctor, nurse and pharmacist reviewed the EDC drug lists. The non-emergency drug stock, high alert drug and rarely use drug were eliminated from the list. In addition,
one EDC instead of two was to back up the whole hospital and relocated to the center of the hospital for wards easily accessible. The NTEC standardization of drug shelf labeling was adopted. The requisition quantity of each drug item was set up in order to prevent unnecessary amount.

**Result**
The number of drug stock items was reduced from 48 to 26. The nurses in 9 wards took turn to order the drug and refill EDC monthly.

<table>
<thead>
<tr>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug stock cabinet</td>
<td>2</td>
</tr>
<tr>
<td>Infirmary Unit (IU)</td>
<td>1</td>
</tr>
<tr>
<td>Disabled Unit (DU)</td>
<td>1</td>
</tr>
</tbody>
</table>

Manpower to order IU: 2 times 1.33 times and refill the EDC DU: 4 times per year

Total time spent 60 mins 30 mins on refill process

Nurses were welcome the changes and positive feedback was received:
a. Save the manpower and time to manage the EDC  
c. Maintain sufficient stock for back up  
d. Avoid non-schedule day ordering

**Conclusions**
The lean tools including visual management, 5S and Kanban were adopted in the program. The workflow was redesigned and improved in a systematic way. It was evident with positive outcomes in term of safety and efficiency and could be sustained almost 12 months.