The impact of visualizing performance in improving medicines management in public health facilities in Uganda

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Background
Uganda continues to struggle with weak medicines management. While performance based reward system has proven successful in strengthening vaccine management, its efficiency in improving medicines management is not known. The impact of supervision much depends on implementation modality. To strengthen the effect of supervision and improve medicines management in health facilities, trained medicines management supervisors (MMS) implemented supervision, performance assessment and recognition strategy (SPARS) using an indicator based assessment tool, developed based on good pharmacy practices (GPP) indicators. The tool visualizes performance using a spidograph allowing the health worker to better see performance and assess progress. The impact of the standardized indicator based performance assessment and visualizing tool combined with supervision in Uganda to improve medicines management is not known.

Objective
To establish the impact of performance assessment and visual feedback in addition to SPARS on medicines management implemented by trained medicines management supervisors.

Methodology
A pre-post intervention study with pre-post and control performance assessment was based on a set of 25 qualitative and quantitative indicators covering medicines management. Performance assessment was done initially and at each supervisory visit every two months. Data was analyzed at initial and third performance assessment following two on-the-job training supervisions.

The study was implemented in 9 districts (Dec 10-Sep 11) situated in the central region of Uganda including 60 (83%) public and 12 private-not-for-profit intervention facilities covering all levels of care (health centre II to hospital).

Intervention
All 72 facilities by level of care within each of the 15 health sub-districts are randomly assigned to one of two groups: the intervention group (35) having facilities supervised, performance assessed and visualized; the control group (37) having facilities supervised and performance assessed but with no visualized performance.

Outcome Measures
The primary outcome measures (25 indicators) include assessment of stock and storage management, ordering and reporting, and dispensing and prescribing quality.

Results
There was no significant difference in medicines management for facilities with or without visualization. Both intervention and control groups showed improved medicines management from first to third supervision visit in all five components assessed.

<table>
<thead>
<tr>
<th>Visit 1</th>
<th>Average Scores</th>
<th>Visit 3</th>
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</thead>
<tbody>
<tr>
<td>Ordering &amp; reporting quality</td>
<td>Dispensing quality</td>
<td>Prescribing quality</td>
</tr>
<tr>
<td>Intervention group</td>
<td>3.19</td>
<td>2.09</td>
</tr>
<tr>
<td>Control group</td>
<td>3.17</td>
<td>2.08</td>
</tr>
<tr>
<td>p-value</td>
<td>0.76</td>
<td>0.96</td>
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(b) Comparing the difference between the 1st and 3rd visits for the individual 25 indicators (p=0.19)

Conclusion
Visualization of performance at facilities does not significantly improve performance. However, continuous supervision combined with standardized performance assessment improves medicines management.

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