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“Ten Minimum Requirement”: A management tool to improve quality of healthcare services in Lao People Democratic Republic (Lao PDR)

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Abstract

In Lao People’s Democratic Republic (PDR), the mortality rate for children under 5 years of age is high (131 per 1000 live births in 2003), partly as a consequence of poor basic services provided by district hospitals. A simplified management tool, “Ten MR (Minimum Requirement)”, was developed in Lao PDR. The tool assured the quality of health services including the processes of planning, implementing, self-monitoring, supervision, reporting and evaluation. The tool focused on ten basic services, integrating stakeholders from district hospitals and governing agencies. Each district hospital develops feasible annual activities, designating responsible people based on a consensus between hospital staff and local governing agencies. Hospitals can self-monitor their activities on a monthly basis. Supervisory visits to district hospitals by local governing agencies improved activities and communication between staff. Visualization of progress promoted the sharing of achievements between staff and highlighted activities in need of more work. In 2004, district hospitals in Vientiane and Oudomxay province initiated the introduction of the tool. These district hospitals included primary care hospitals for outpatients, emergency care and in-patients, with a capacity of 10-20 beds, providing care for a population of between 30,000 and 80,000 people. The Ministry of Health recognized the effectiveness of Ten MR and implemented the expansion of the tool to all district hospitals in Lao PDR from 2011. Ten MR benefits district hospitals and governing agencies. Ten MR focuses on the daily routine work, enhancing team work and communication between all stakeholders.

Keyword: Ten Minimum Requirement, primary care, management, quality

Short title: Management tool to improve quality of healthcare services in Lao
PDR

Background

In 2003, Lao People's Democratic Republic (Lao PDR) had one of the highest mortality rates in children under 5 years of age in South East Asia (131 per 1000 live births) \(^1\). The utilization of health facilities was low, especially for children under 5 years of age, because of expensive out of pocket payments, geographical barriers to access facilities and dissatisfaction with health services within local communities \(^2\).

In 2004, the KIDSMILE Project (Project for Strengthening Health Services for Children), funded by the Japan International Cooperation Agency (JICA), was launched in Vientiane and Oudomxay provinces in Lao PDR. The aim of the KIDSMILE Project was to reduce the mortality of under 5 years old by improving the health care delivery especially at local settings. After discussion with district hospitals and local and central government, the KIDSMILE Project initiated the development of a user-friendly quality improvement tool known as “Ten MR” (Minimum Requirement). In 2011, this was expanded nationwide by the Ministry of Health in Lao PDR. The aim of this manuscript was to describe how Ten MR has been developed and to share lessons learned for implementing Ten MR in Lao PDR.

Local setting

The population of Lao PDR was 6.4 million and the majority of people worked for agriculture. There were 47 distinct ethnic groups in 17 provinces in Lao PDR \(^2\). The diversity of ethnicity is a challenge to ensure the quality of health-care delivery. Lao PDR district hospitals provide primary care for a population of between 30,000 and 80,000, with 10–20 beds in each hospital \(^2\). District hospitals provide services ranging from basic treatment for common diseases to emergency treatment. In 2004, all district
hospitals in Vientiane and Oudomxay provinces introduced the Ten MR tool as a pilot. By 2015, 131 district hospitals nationally were using the system. Provincial health offices provide the budget for health services and supervise district hospitals, working with the district health office.

**Approach**

Ten MR is a management tool that includes the processes of planning, implementing, self-monitoring, supervision, reporting and evaluation for improving the quality of health services in district hospitals \(^3\). This tool integrates all staff stakeholders in hospitals and governing agencies, such as district and provincial health offices. District hospitals and district health offices often within the same organization propose their hospitals’ feasible annual activities based on current problems identified in each MR to provincial health offices. Then, provincial health officers approved the MR after the discussion. The planning procedure for MR activities is as follows; 1) designate responsible people in charge of Ten MR and each MR in the district hospital, 2) prioritize problems in each MR through discussions with staff, 3) identify feasible activities to solve the identified problems and set up an indicator for each activity, 4) assign responsible people for each activity, 5) estimate the necessary budget, 6) build consensus with local governing agencies such as provincial health offices.

The items of Ten MR were determined by the KIDSMILE Project in collaboration with local and central government staff and JICA experts. The priority was to improve services for maternal and child care. The project prioritized nine basic services district hospitals were expected to provide and included the additional item of regular monitoring of activities. The project emphasized the value of integrated activities with the entire district hospital staff rather than a vertical program for maternal and child care.
care staff, resulting in strong commitment from all hospital staff as well as staff from governing agencies. In 2011, Ten MR underwent minor revisions prior to nationwide expansion of the tool (Table 1).

Fig. 1 provides an example of the activity plan and monitoring chart for MR 3; “The hospital has all the essential drugs”. One district hospital in Vientiane province addressed this problem because medicine storage and management was not adequate and expired medicine was not always disposed of. The hospital identified three activities to solve the problem; 1) Designated staff check the availability of medicine and discard expired medicine each month, 2) Pharmacists organize and store medicine appropriately, 3) Designated staff evaluate the use of medicine prescribed by doctors every 3 months. In Fig. 1, for each month, planned activity is identified using a planned activity mark (an open circle). The principle of the describing activity is to write one clear activity in each row.

To monitor progress, district hospitals conduct a self-assessment of their activities and visualize their achievements monthly, quarterly, or annually, depending on their plans, using three simple levels; 1) complete implementation (done as planned), 2) partial implementation (partly done as planned), 3) not implemented (Fig. 1). District hospitals displayed the Ten MR chart in a communal area, accessible to all members of staff. This strategy promoted sharing of their achievements as well as highlighting activities which needed more work.

Supervision by governing agencies has the potential to accelerate implementation of activities through improving communication. When Ten MR was first initiated, meetings were scheduled two to four times each year, incurring running costs for travel fees for meetings with stakeholders as well as supervisory visits.

At the end of each year, a joint meeting, known as an MR workshop, was held
for the evaluation and sharing of good practices among people in charge of Ten MR in district hospitals. Hospitals with better outcomes had the opportunity to win an award for their achievements.

**Relevant changes**

The Ministry of Health in Lao PDR recognized the effectiveness of Ten MR and initiated the national introduction of the tool to all 127 district hospitals in 2009 in order to reform of health service delivery. The Ministry of Health assigned staff including medical officers for scaling up Ten MR and developed handbooks for district hospitals to implement Ten MR. Meeting with stakeholders and supervisor visits were conducted to build the system for each district hospital.

Despite multiple factors contributing to improving the health status of children, such as socioeconomic improvement and free care for children under the age of 5 years, the under-five mortality rate was 72 in 2012, which was still the highest in South East Asia. However, rates are decreasing and are on-track for achieving United Nations Millennium Development Goals 4 in 2015.

**Lessons learnt**

Ten MR is a simple management tool for improving services in hospitals in Lao PDR. Both hospitals and governing agencies share the activities, and staff members are empowered through the visualization of their achievements and the issues they need to work on. At the province or national level, district hospitals can share their experiences with other hospitals in annual meetings therefore hospitals can motivate each other and share ideas for good practice.

Improving the quality of primary care in hospitals, often with limited resources,
is a challenge for many countries especially in remote areas where activities cannot be monitored \(^4\). Local communities’ trust and satisfaction of health facilities at primary level is an essential factor for improving health outcomes \(^5\) and achieving universal health coverage, which Lao PDR aims to achieve by 2020 \(^2\). With this simple management tool, improvement was expected, even in rural settings where there was less supervision and control.

There have been a few management tools developed for improving the quality of primary care services. The WHO Regional Office for Europe developed the Primary Care Quality Management Tool, piloted in Slovenia and Uzbekistan \(^6\) which focused on structures and mechanisms to control or manage the quality of services. Introducing quality management system, developed by the European Practice Assessment, focused on the structure and process of primary care and has also achieved improvement of quality indicators \(^7\).

The specific characteristics of Ten MR as a management tool are the function of communication, integrating all the stakeholders, including hospital staff and governing agencies, encouraging voluntary daily routine work through commitment of all the stakeholders and self-monitoring through sharing progress by displaying the chart in communal areas. Ten MR is not a tool exclusively for managers but can be used by everyone committed to primary care, strengthening team work resulting in achievement of client-oriented facilities \(^8\). This is why district hospitals in Lao PDR have been using Ten MR for more than 10 years.

District hospitals need to expand their essential services, especially for non-communicable diseases such as ischemic heart disease and stroke, which were ranked as the 3\(^{rd}\) and 4\(^{th}\) highest burden of disease in Lao PDR in 2013 \(^9\). Increasing the budget to strengthen primary care services, including a prevention program, should
be addressed to maintain the trend of improvement of health outcomes in ASEAN countries. The framework of Ten MR is applicable in other contexts, and increasing the budget to develop the service will maintain the quality of the tool.

In conclusion, Ten MR benefits district hospitals and governing agencies. Ten MR focuses on the daily routine work, enhancing team work and communication between all stakeholders. The management tool developed and extended in Lao PDR, for improving the quality of services at primary care hospitals with limited resources could be applicable to other developing countries at low cost.

**Acknowledgments**

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**Funding**

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Table 1. Ten items on the Minimum Requirement in district hospitals in Lao PDR

<table>
<thead>
<tr>
<th>Item</th>
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<tbody>
<tr>
<td>1. The hospital is accessible to all patients 24 hours a day.</td>
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<tr>
<td>2. The hospital welcomes all patients with warmth and hospitality.</td>
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<tr>
<td>3. The hospital has all the essential drugs.</td>
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<tr>
<td>4. The hospital diagnoses and treats diseases followed based on national treatment guidelines.</td>
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<td>5. The hospital uses standard tests to diagnose diseases.</td>
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<td>6. The hospital has a patient referral system.</td>
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<td>7. The hospital keeps daily records for all patients.</td>
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<td>8. The hospital gives routine vaccination and maintains a good quality cold chain.</td>
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<tr>
<td>9. The hospital promotes safe delivery for all mothers and provides well-baby check-ups for all children.</td>
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<tr>
<td>10. The hospital monitors and evaluates activities of each MR regularly.</td>
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Fig. 1. Example of an activity plan and monitoring chart for MR 3: The hospital has all the essential drugs.

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<tbody>
<tr>
<td></td>
<td>10 11 12 1 2 3 4 5 6 7 8 9</td>
<td>Supervisor</td>
<td>Implementer</td>
<td></td>
</tr>
<tr>
<td>1. Designated staff check the availability of medicine and discard expired medicine each month.</td>
<td>● ● ● ● ● ● ○ ○ ○ ○ ○</td>
<td>○</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>2. Pharmacists organize and store medicine appropriately.</td>
<td>X X ● ● ● ○ ○ ○ ○ ○</td>
<td>○</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>3. Designated staff evaluate the use of medicine prescribed by doctors every 3 months.</td>
<td>○ ● ● ○ ○</td>
<td>○</td>
<td>0</td>
<td></td>
</tr>
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