Is it possible to increase quality of healthcare without increasing spending?

This is a critical question for many resource-constrained developing countries that seek to improve health outcomes for their citizens.

There is a large variation in management capacity and quality in the health sector in developed and developing countries. However, health spending only weakly correlates with quality of healthcare.

On the other hand, what does seem to be high predictor of quality is management capacity.

A full package of quality improvement interventions had large and significant effects on the adoption of several practices by primary healthcare center (PHC) staff.

A light package of baseline assessments and report interventions did not have a behavioral impact on PHC staff.

Few effects were found on practices that required substantial additional effort on the part of staff, infrastructure investments, or support from central or state government agencies (“difficult-to-change”).

With these questions in mind, the Nigerian Federal Ministry of Health contracted the non-profit “SafeCare” to pilot two versions of a quality improvement programme (full & light package) in 48 primary healthcare centres (PHCs). The full package consisted of three parts:

- Extensive baseline assessment, measuring the quality of care as well as identifying gaps;
- Development of detailed and tailored quality improvement plans for each PHC; and
- Continuous monitoring and support for the implementation of these quality improvement plans.
For the baseline assessment, SafeCare personnel rated clinics on a set of 823 indicators divided into 13 categories including in areas such as healthcare organization management, patient care, specialized services, and ancillary services. The quality improvement plans recommend actions specific to each PHC.

As a part of the monitoring and support, field officers visited the PHCs every other week over the course of 9 months. During each visit they convened a meeting, provided feedback on progress toward the established goals, and set new goals for the next two weeks.

Did the intervention work?

80 PHCs in six states (Anambra, Bauchi, Cross River, Ekiti, Kebbi, Niger) were randomly assigned to three groups. “Treatment A” describes the “full package” of the SafeCare intervention. “Treatment B” provides a lighter-touch, “information only” intervention, i.e. the baseline assessment and report without the quality improvement plan or monitoring. Lastly, 32 PHCs in the control group conducted “business as usual” without any of the quality improvement interventions (see the figure below).

The random assignment assured that the three groups were balanced across observable and non-observable characteristics at the outset. The team was able to use pre-existing data for balance checks, and as control variables. To measure results, data was collected in six monthly waves after the roll-out of the program (July 2014–February 2015). Longer-term follow-up data was collected in April and May 2016.

What were the results?

More consistent impacts were observed with Treatment A when compared to Treatment B across the board (with 76 outcome indicators). More specifically, it was observed that greater impacts were achieved in areas that were easier to change and within the control of the PHC staff.

<table>
<thead>
<tr>
<th>Sample recommended actions from Quality Improvement Plans</th>
<th>Degree of difficulty in implementation</th>
<th>% of PHCs for which this action was recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk Management: Employ a color coded system for mops &amp; brooms in cleaning different areas of the facility.</td>
<td>Easy</td>
<td>83%</td>
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<tr>
<td>Primary Health Care Services: Ensure the provision of soap, water and paper towels/single use towels at hand washing facilities. Water should be distributed to relevant areas of the facility with the use of buckets with tap heads (veronica buckets).</td>
<td>Moderate</td>
<td>83%</td>
</tr>
<tr>
<td>Facility Management Services: Ensure the provision of a regular source of power supply. Ensure that a back-up system for power supply is available and functional.</td>
<td>Difficult</td>
<td>92%</td>
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<table>
<thead>
<tr>
<th>Treatment A</th>
<th>Treatment B</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full package</td>
<td>Information only</td>
<td>Business as usual</td>
</tr>
<tr>
<td>• Baseline assessment &amp; report</td>
<td>• Baseline assessment &amp; report</td>
<td></td>
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<tr>
<td>• Quality improvement plan</td>
<td></td>
<td></td>
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<tr>
<td>• Monitoring &amp; support</td>
<td></td>
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<tr>
<td>24 PHCs</td>
<td>24 PHCs</td>
<td>32 PHCs</td>
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</table>
For example, 60.4% of Treatment A facilities posted an organizational chart, compared to only 3% in the control group. 59.9% featured a patient rights charter after the intervention (Treatment A), but only 2% did so in the control clinics.

Similarly, 18.4% of Treatment A facilities now have a pharmacy where drugs are labeled and well organized, compared to 3% in the control group. In Treatment B facilities, no impact on these indicators was observed.

**Conclusions**

The assessment, providing improvement plans and coaching significantly increased the adoption of some processes, particularly those that were easier to implement. If designed in a cost-effective way, improvement plans along with a regular monitoring program can be a valuable tool to achieve quality improvements even in environments with limited resources.

Only very limited impacts were observed for Treatment group B (light package). The assessment alone, along with initial feedback, was not sufficient to change behavior by PHC staff.

**Policy Recommendations**

Developing quality improvement plans along with a regular mentoring program therefore appear to be a valuable tool for quality improvement.
Improvements are also seen in intermediate outcomes, especially those more under the direct control of PHC staff. No effects were seen on the level of patient satisfaction (although patient satisfaction was already extraordinarily high also for the control group).

Substantial barriers to quality improvement remain. PHCs suffer from often dismal infrastructure and support, for example a lack of access to the national power grid or failures to promptly replenish the pharmacy in case of stock-outs.

Some process improvements require substantial extra effort by staff and thus are not “free” or easy to achieve. A barrier to even more improvements is therefore the lack of incentives “to go the extra mile”.

This impact evaluation was implemented as a collaboration between the Nigerian Ministry of Health, the World Bank Development Impact (DIME) team, and Johns Hopkins University. For more details on these results, please contact DIME (dime@worldbank.org).