Are beneficiaries aware about availability of grass root services and preventive measures of malaria? :
A cross sectional study

Aniruddha Gohel, Naresh Makwana, Mittal Rathod, Sudip Bhavsar, Dipesh Parmar

Abstract
Background: The Jamnagar district is one of the endemic regions of the country. The ASHA will be involved in diagnosis, treatment and prevention of malaria cases on a day to day basis. Knowledge of community is also important aspect for prevention of malaria.
Objectives: To assess awareness of beneficiaries about availability of grass root services and preventive measures of malaria.
Materials & Methods: A cross-sectional study was conducted in rural areas of the district by using multistage sampling.
Results: Around half beneficiaries had not received any advice by ASHA workers and more than half had no knowledge regarding preventive measures of malaria. Around half of them belonged to low performing sub centre-villages.
Conclusion: Malarial services provided by ASHAs, advice given by them and awareness of beneficiaries regarding prevention of malaria plays important part in performance of that sub centre-villages.

Keywords: NVBDCP, ASHA

1. Introduction
Malaria is still a major global public health concern [1]. India reports the highest malaria burden in the Southeast Asia region with 61% of the regional malaria cases [2]. In year 2012, India had 1.07 million confirmed malaria cases [3] and provisional 519 malaria deaths [4]. Despite more than five decades of intensive control efforts, malaria is still a challenge to the Indian health system [5].
The average cost of treatment was 475 rupees in 2012. Earnings loss per day was 213 rupees and the total work days lost is assumed to 10 days, derived from the NSS study [6]. The study district is one of the endemic regions of the country [7]. In the study district, in year 2012 total malaria cases were 1556, of which 72 were P. falciparum cases [8].
In NRHM, ASHA worker is positioned at grass root level. Early diagnosis and prompt treatment is a cornerstone of malaria control [9]. The ASHA will be involved in diagnosis and treatment of malaria cases on a day to day basis. She will screen fever cases suspected to be suffering from malaria, using RDTs and blood slides and administer anti-malarial treatment of positive cases. So, role of ASHA worker is critical at grass root level. So, ASHA collect blood slide, treatment started within 24 hours of test, money charged by ASHA for diagnosis or treatment, advice given by ASHA workers regarding prevention of malaria, knowledge of community regarding prevention of malaria should be considered.

2. Materials and Methods
The present study was conducted in rural areas of the study (Jamnagar) district. A cross-sectional study was conducted for a period was one year. Out of the total talukas, one PHC was selected from each taluka by simple random sampling technique. After selecting the PHCs, visits have been made to the PHCs. From each PHC, three sub-centres were selected on the basis of performance of last year’s ABER and API and were classified as High performing sub centre, Average performing sub centre and Low performing sub centre.
From each sub centre, one village was selected randomly. From each village, two beneficiaries who had fever in last month treated by ASHA were interviewed. So, total 60 beneficiaries were included in the present study. The data entry was done using Microsoft Office Excel 2007 and data analysis was done using EPI INFO and in Microsoft Office Excel 2007. Appropriate statistical tests were applied. The study protocol was reviewed and approved by the institutional ethical committee of the institution. Prior consent was taken after fully explaining the purpose of the study.

3. Results

Table 1 shows distribution of beneficiaries regarding services provided by ASHA workers, i.e. blood slide collection, initiation of treatment and any money charged by ASHA. According to guidelines ASHA will screen fever cases suspected to be suffering from malaria, using RDTs and blood slides and administer anti-malarial treatment of positive cases. In present study, Out of 60 beneficiaries interviewed, 20 from villages each from high performing, average performing and low performing sub centres. Out of 60 beneficiaries interviewed, ASHA collected blood slide from all (100%) fever cases and none of the beneficiaries were charged money by ASHA for diagnosis or treatment. Treatment started within 24 hours of test within 55 (91.66%) beneficiaries.

Table 2 shows advice given by ASHA workers to beneficiaries regarding preventive measures of malaria. Around half (46.66%) beneficiaries had not received any advice about methods of protection for prevention against malaria. Around half of them belonged to low performing sub-centre-villages. It was statistically significant (p value < 0.05).

Table 3 shows distribution of beneficiaries having knowledge regarding prevention of malaria. Community Participation is one of the main components in malaria control strategies. So, knowledge regarding preventive measures of malaria in the community plays a major role in malaria control. More than half (53.34%) beneficiaries had no knowledge regarding preventive measures of malaria. From which around half from low performing sub-centre-villages. It was statistically significant (p value < 0.05).

4. Conclusion

According to NVBDCP, malarial services provided by ASHA workers were satisfactorily regarding blood slides collected from all fever cases, no money charged for treatment. Around half beneficiaries had not received any advice about methods of protection for prevention against malaria. More than half beneficiaries had no awareness regarding preventive measures of malaria. Around half of them belonged to low performing sub-centre-villages. So, services provided by ASHA workers, advice given by them and awareness of beneficiaries regarding prevention of malaria plays important part in performance of that sub-centre-villages.

Table 1: Distribution of beneficiaries regarding services provided by ASHA workers

<table>
<thead>
<tr>
<th>Services by ASHA</th>
<th>Total sub centre-villages (n=60)</th>
<th>High performing sub centre-villages (n=20)</th>
<th>Average performing sub centre-villages (n=20)</th>
<th>Low performing sub centre-villages (n=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASHA collect blood slide</td>
<td>60 (100%)</td>
<td>20 (100%)</td>
<td>20 (100%)</td>
<td>20 (100%)</td>
</tr>
<tr>
<td>Treatment started within 24 hours of test</td>
<td>55 (91.66%)</td>
<td>20 (100%)</td>
<td>18 (90%)</td>
<td>17 (85%)</td>
</tr>
<tr>
<td>Money charged by ASHA for diagnosis or treatment</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
</tbody>
</table>

(Chi square value =6.562, DF=2, p value=0.037)

Table 2: Distribution of beneficiaries as per advice given by ASHA workers regarding prevention of malaria

<table>
<thead>
<tr>
<th>Advice by ASHA</th>
<th>Total sub centres-villages (n=60)</th>
<th>High performing sub centre-villages (n=20)</th>
<th>Average performing sub centre villages (n=20)</th>
<th>Low performing sub centre-villages (n=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASHA tell about methods of personal protection to be used for prevention against malaria</td>
<td>Yes</td>
<td>32 (53.34%)</td>
<td>15 (75%)</td>
<td>10 (50%)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>28 (46.66%)</td>
<td>5 (25%)</td>
<td>10 (50%)</td>
</tr>
</tbody>
</table>

(Chi square value =6.964, DF=2 and P value=0.03)

Table 3: Distribution of beneficiaries having knowledge regarding prevention of malaria

<table>
<thead>
<tr>
<th>Knowledge regarding preventive measures of malaria</th>
<th>Total sub centres- villages (n=60)</th>
<th>High performing sub centre- villages (n=20)</th>
<th>Average performing sub centre-villages (n=20)</th>
<th>Low performing sub centre-villages (n=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>28 (46.66%)</td>
<td>14 (70%)</td>
<td>8 (40%)</td>
<td>6 (30%)</td>
</tr>
<tr>
<td>No</td>
<td>32 (53.34%)</td>
<td>6 (30%)</td>
<td>12 (60%)</td>
<td>14 (70%)</td>
</tr>
</tbody>
</table>

(Chi square value =6.964, DF=2 and P value=0.03)

5. References


