Assessing the Influence of Psychosocial Factors on Provider Malaria Case Management in Health Facilities in Benin

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Context & Methods
Malaria in Benin

- Risk of malaria spans the entire country
- Malaria is a leading cause of morbidity and mortality
  - 47% of outpatient consultations in the general population
  - ~50% of outpatient consultations
  - 39% of hospitalizations in children under five
- National prevalence of malaria among children aged 6 to 59 months has increased 39% between 2011-2012 and 2017-2018
Provider Behavior & Malaria Case Management

• Health care provider adherence to case management guidelines is critical for malaria control.

• Provider behavior is complex and influenced by factors at the individual, interpersonal, facility, and system levels.

• Psychosocial factors have been found to influence behaviors across health areas and settings.

• However, little research attention has been paid to the role of psychosocial factors on provider behavior, including their attitudes and perceived norms.
Study Methods

• Cross-sectional health facility assessment in Benin
• Random sample of facilities within each of the 12 departments selected using probability proportional to the facilities’ 2019 malaria incidence
  – 128 health facilities
  – 366 health workers involved in malaria case management
  – 1245 patients with fever
• Providers interviewed with structured questionnaire to assess socio-demographic and psychosocial factors affecting case management practices
Data Analysis: Multivariable Logistic Regression

- Dependent variable: correct management of fever
- Independent variables: client sociodemographic characteristics, provider psychosocial characteristics, and facility characteristics
- Logistic regression limited to facilities where diagnostic testing (RDT and microscopy) was available on survey date (88 facilities)
Results
Provider Behavior: Adherence to Guidelines

- Of the suspected malaria cases, less than two-thirds were tested for malaria.
- 84% of tested and positive cases were given correct treatment for malaria.
- One fifth of cases that tested negative received an antimalarial.
- Among untested suspected cases, 57% received an antimalarial.
Provider Behavior: Adherence to Guidelines

Percent of clients correctly managed* in facilities with diagnostic test, by type of facility

*Correct management defined as testing positive and receiving recommended antimalarial or testing negative and not receiving antimalarial.

- Health Center: 69.6%
- Hospital: 51.2%
- Health Post: 64.2%
- Nurse’s Station: 62.1%
- Private Clinic: 12.7%
- All facilities: 54%

n=793
## Logistic Regression: Correct Case Management

<table>
<thead>
<tr>
<th>Predictors – Psychosocial &amp; Other Variables</th>
<th>Odds Ratio</th>
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</thead>
<tbody>
<tr>
<td>Patient's age (RC=&lt;5)</td>
<td></td>
</tr>
<tr>
<td>5-14 years</td>
<td>1.66*</td>
</tr>
<tr>
<td>15 years or older</td>
<td>1.04</td>
</tr>
<tr>
<td>Percent of health workers regularly supervised</td>
<td>0.37*</td>
</tr>
<tr>
<td>Percent of health workers trained in case management</td>
<td>8.31***</td>
</tr>
<tr>
<td>Health workers mean case management knowledge score (RC=low)</td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td>0.69</td>
</tr>
<tr>
<td>High</td>
<td>2.33**</td>
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<tr>
<td>Perceived positive peer behavior (RC=low)</td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td>2.57*</td>
</tr>
<tr>
<td>High</td>
<td>1.37</td>
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<tr>
<td>Provider’s positive perceptions about their clients (RC=low)</td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td>1.25</td>
</tr>
<tr>
<td>High</td>
<td>1.61±</td>
</tr>
<tr>
<td>Prevalence of positive cases in health facility (RC=low)</td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td>2.53**</td>
</tr>
<tr>
<td>High</td>
<td>3.05**</td>
</tr>
</tbody>
</table>

RC: Reference category

*p < 0.1, * * p < 0.05, * * * p < 0.01
Additional Results

• Facility type: Odds of adherence was especially low for patients treated in private clinics
• Attitudes: Provider attitudes towards case management not associated with the outcome
Recommendations
Recommendations

• Psychosocial factors of providers should be taken into account to improve malaria case management in Benin

• Improving provider adherence to case management guidelines could benefit from:
  – Strengthening technical knowledge of providers
  – Using a norms-based approach to address negative beliefs of providers about the professional behaviors of their colleagues
  – Promoting discussion among providers about case management guidelines
  – Empowering providers to strengthen the capacity of patients to adhere to treatment and positioning patient adherence as the norm
Recommendations

• Efforts to improve provider adherence to case management guidelines will also benefit from:
  – Paying special attention to private clinics
  – Better understanding and addressing the reasons for the negative association between provider supervision and adherence. Could it be that poorly performing facilities are the ones targeted for supervision?
  – Emphasizing the importance of adherence to guidelines irrespective of patient’s age
Thank You
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