Attitudes, beliefs, and practices relevant to malaria prevention and treatment in Liberia, 2014

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Presentation Objectives

1. Examine attitudes and beliefs associated with behavioral outcomes related to malaria prevention and treatment;
2. Discuss implications of data for programming, policy and future research.
Background

- Endemicity high but varies across counties;
- Household survey designed and implemented in collaboration with President’s Malaria Initiative (PMI) and the Liberia MOH;
- Data collected between March and April 2014 by Subah-Belleh Associates.
Methods

• Cross-sectional survey: 300 households in Bong, Rivercess, Cape Mount, and Grand Kru;
• Sampling of locations proportional to their population within a county;
• Household questionnaire administered to head of households;
• Individual questionnaire administered to 1200 female and 360 male caretakers of children under five;
Analyses informed by the ideation model

- **SKILLS & KNOWLEDGE**
  - IDEATION
    - COGNITIVE: Beliefs, Values, Knowledge, Perceived Risk, Norms
    - EMOTIONAL: Self-Efficacy, Preferences
    - SOCIAL: Spousal Communication, Perceived Social Support, Personal Advocacy

- **ENVIRONMENTAL SUPPORTS & CONSTRAINTS**

- **COMMUNICATION**
  - QUALITY IMPROVEMENT/PPP
  - MASS MEDIA
  - COMM. MOBILIZ
  - INTEGRATION/COUNSELING
  - ADVOCACY

- **INTENTION**

- **BEHAVIOR**

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Source: Adapted from Kincaid (2000)
Percent reporting weekly listenership of radio by sex and county

<table>
<thead>
<tr>
<th>County</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bong</td>
<td>61.1</td>
<td>58</td>
</tr>
<tr>
<td>Cape Mount</td>
<td>61.1</td>
<td>48</td>
</tr>
<tr>
<td>Grand Kru</td>
<td>71.1</td>
<td>46.7</td>
</tr>
<tr>
<td>Rivercess</td>
<td>83.3</td>
<td>77.7</td>
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</tbody>
</table>
Exposure to Malaria-Related Campaigns

• Three quarters of caretakers had heard or seen a message from the “Take Cover” campaign and “Healthy Baby Happy Mother” campaign during the past year

• Reach of messages is higher among caretakers that:
  – are male, have more formal schooling, live in Bong or Rivercess, live in richer households, and listened to radio or TV at least once a week

• Campaigns have the least reach in areas with higher prevalence of malaria in children
Malaria-related Ideation and Behaviors
Components of General Malaria Ideation

- Malaria knowledge: causes, symptoms, prevention methods
- Perceived susceptibility
- Perceived severity
- Perceived self-efficacy for malaria prevention
- Perceived self-efficacy for severity recognition
- Interpersonal communication on malaria
Score varied between -1.65 and 0.739, with a mean of 0
About half of the respondents had a positive general malaria ideation score;
Odds of demonstrating positive malaria ideation increased with education, married status, and campaign exposure.
Residence in Cape Mount or Grand Kru, and being Christian are associated with decreased odds of having positive general malaria ideation.
Bed net: Ideation and behavior
Components of bed net ideation

- Awareness of a place to buy nets.
- Willingness to pay for bed nets,
- Perceived self-efficacy for bed net use
- Perceived response efficacy for bed nets
- Attitudes towards bed nets
- Discussion about bed nets,
- Participation in decisions about bed nets,
- Descriptive norm about bed nets;
- Net shape and color preferences
Bed Net Ideation

Bed net ideation score by county

- Overall bed net ideation moderately favorable: score ranges between -14 and 28 with mean of 5.8;
- Lower (less positive) ideation score associated with residence in Cape Mount, poorer households and smaller family sizes.

n=1560
% of nets in use that are in poor or unsafe conditions, by county

<table>
<thead>
<tr>
<th>County</th>
<th>Percent of Nets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bong</td>
<td>10.8</td>
</tr>
<tr>
<td>Cape Mount</td>
<td>25.8</td>
</tr>
<tr>
<td>Grand Kru</td>
<td>33.6</td>
</tr>
<tr>
<td>Rivercess</td>
<td>44.5</td>
</tr>
</tbody>
</table>

n=657
Net ownership and caretaker use

- When the household has nets, most caretakers sleep under one, except in Grand Kru;
- In households with at least one ITN, significant predictors of increased caretaker bed net use are:
  - Female gender;
  - Secondary education or higher;
  - Married status
  - Residence in Bong or Cape Mount
Child net use in households with at least one bed net

- Most children sleep under a net in households with net;
- Residence in Grand Kru and larger household size associated with decreased odds of sleeping under a net;
- Odds of sleeping under a net increase with number of nets in households;
- No differences by sex or household wealth status

Female: n=300; Male: n=322
Net use among various age categories in households with at least one bed net

No evidence of preferential treatment for children under-5 over adults in net allocation in any county. However, older children and adolescents less likely to use a net than children or adults.
Percent distribution of nets by number of users

- One: 9%
- Two: 27.1%
- Three: 47.9%
- Four +: 16%
IPTp ideation and uptake
Components of IPTp Ideation

- Knowledge about IPTp
- Attitudes towards
- Perceived response efficacy of IPTp
- Interpersonal communication about malaria in pregnancy
- Descriptive norm about ANC use
Overall IPTp ideation moderately favorable: score ranges from -6 to 11 with mean of 3.6;
- Score significantly higher for women than men, particularly in Bong and Cape Mount;
- Higher (more positive) ideation score associated with residence in Bong and Rivercess, campaign exposure, and richer households.
IPTP uptake during pregnancy in last 2 years

- Bong: 92.8% took at least one dose, 80.3% took 2 or more doses
- Cape Mount: 83.9% took at least one dose, 74.6% took 2 or more doses
- Grand Kru: 74.7% took at least one dose, 62.4% took 2 or more doses
- Rivercess: 96.4% took at least one dose, 78.5% took 2 or more doses

n=884
Case management: ideation and practices
Components of treatment ideation

- Awareness that malaria is treated with ACT
- Perceived self-efficacy for recognizing a fever indicative of malaria
- Treatment attitudes
- Perceived response efficacy of diagnostic test
- Participation in household decision about health care seeking for children
- Perceived norm about malaria treatment
- Discussion about malaria treatment with others
Treatment Ideation Score by County and Sex

- Overall treatment ideation moderately favorable: score ranges from -5 to 16 with mean of 4.6;
- Score significantly higher for men than for women in most counties;
- Higher (more positive) ideation score associated with residence in Bong and Rivercess, campaign exposure, and richer households;
- Lower (more negative) ideation score associated Christian religious affiliation
Children with fever in last 2 weeks that received prompt ACT treatment

- Only a little over a third (36.8%) of children sick with fever in last two weeks received prompt ACT treatment;
- Odds of prompt ACT treatment increased with:
  - Caregiver’s positive general malaria ideation;
  - Caregiver’s positive treatment ideation
  - Campaign exposure level.

n=583
Recommendations - Programmatic

- Radio should continue to be at the core of malaria prevention and treatment communication but programs should explore additional communication channels to increase reach;
- Strategically designed messages should seek to correct misinformation about malaria prevention, symptoms and causes;
- Efforts should seek to increase understanding about perceived threat of malaria while strengthening the self-efficacy for action;
Recommendations - Programmatic

• Increase understanding about response-efficacy of bed nets and IPTp;
• Many of the nets in use in the study households were in need of repairs. Communication efforts that promote net care and repair are relevant;
• LLIN distribution plans should consider that white rectangular nets were most preferred by caretakers, and capitalize on the willingness of the population to pay for nets;
Recommendations – Future Research

- Conduct further research to understand why women are not taking the recommended doses of IPTp;
- Conduct further research on multi-level factors that hinder prompt treatment.
Recommendations – Indicator Guide

• Net access indicator may underestimate net coverage in contexts where more than two people normally share a net;
• Data collection tools should allow us to collect information on more household members per net;
• Some suggested questions could be benefit from rewording: e.g., Q408 and Q714