Preventing Malaria in Pregnancy through Community-Directed Intervention: Evidence from Akwa Ibom State, Nigeria

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Research Question
Will CDI increase uptake of the following malaria in pregnancy services?

- ITN during pregnancy
- Number of antenatal care visits
- Taking antimalarial during pregnancy
- Taking the recommended two doses of SP during the last pregnancy

Basic Malaria in Pregnancy (MIP) Interventions and Indicators
Roll Back Malaria 2010 targets are 80% coverage of these:

- Use of insecticide-treated nets (ITNs) during pregnancy
- Used ITN in the night prior to the interview
- Number of antenatal care (ANC) visits (where MIP control services provided)
- Taking appropriate anti-malaria drug for malaria episode during pregnancy
- Taking the recommended two doses of sulphadoxine-pyrimethamine (SP) during the pregnancy as intermittent preventive treatment (IPT)

Nigeria MIP Community-Clinic Partnership Intervention

- CLINIC
  - MIP performance standards developed and implemented
  - Referrals, Records, Feedback
  - Training, Supervision, Mobilization, Commodities

- COMMUNITY
  - MIP skills and responsibilities implemented through community-directed intervention

Implementation of Malaria in Pregnancy Control Design: Pre-Post Parallel Group Design

Adapting CDI to MIP Prevention

- Front-line staff conducted community outreach, meetings, mobilization, etc.
- Kin groups formed basis of community-directed distributor (CDD) selection
- Community members in 489 kin groups (clans) chose 734 trained CDDs who were trained by front-line staff
- CDD kits provided – medicine, counseling cards, registers
- Communities conducted mapping to identify socio-economic structures that will support MIP programming
- Communities conducted census to estimate quantities of commodities required by each kindred (clan)

Evaluation Design

October 2007
Baseline Survey

Program Launch
July 2008

February 2010
Endline Survey

Program Impact
Slept under ITN Regularly

Use of ITN and ANC Attendance over Time

Key Findings

ANC visits rose in treatment and control groups (estimated coefficient on group differences -0.016, 95% CI [-0.107, 0.074], p = 0.646).

However, CDI led to substantial, additional increases in ITN use and in adherence to the prescribed IPTp protocol.

Relative to women in the control area, an additional 74% of women slept under a net during pregnancy (95% CI [0.035, 0.115], p < 0.001).

An additional 8.5% of women slept under an ITN after delivery and before the interview (95% CI [0.045, 0.122], p < 0.001).

The effects of the CDI program were largest for IPTp adherence, increasing the fraction of pregnant women taking at least two SP doses during pregnancy by 35.3 percentage points (95% CI [0.280, 0.425], p < 0.001) relative to the control group.

Conclusions: CDDs Are on Hand to Encourage ITN Use and Provide SP for IPT

- The results suggest that the inclusion of community-based programs can substantially increase effective access to malaria prevention.
- Given the relatively modest financial commitments they require, community-directed programs appear to be a cost-effective way to improve malaria prevention.
- The participatory approach underlying CDI programs also promises to strengthen ties between the formal health sector and local communities.