Positive deviance: An innovative approach to improve malaria outcomes

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Manila, Philippines
Positive deviance concept

- In every community there are certain individuals whose uncommon/positive behaviours enable them to find better solutions to problems than their neighbours who have access to the same resources.
PD History

- **1980s**: Marian Zeitlin, Tufts Visiting Professor, applies asset-based approach in nutrition research.
- **Mid 1990s**: PD for nutrition is scaled up in Vietnam, spreads to other countries.
- **Late 1990s-present**: PD is applied to many intractable problems including advocacy against FGM, MRSA transmission, education, HIV/AIDS, and human trafficking.
- **2011-present**: Malaria Consortium is applying Positive Deviance first time on malaria and dengue in the GMS region.
## PD programme experience

<table>
<thead>
<tr>
<th>Programmatic context</th>
<th>Countries</th>
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<tbody>
<tr>
<td>Childhood development &amp; Malnutrition (PD/Hearth)</td>
<td>More than 40 countries throughout the world</td>
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<tr>
<td>HIV/AIDS risk reduction</td>
<td>Myanmar, Indonesia, Viet Nam</td>
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<tr>
<td>Antenatal care, Maternal &amp; Newborn Care, Breastfeeding</td>
<td>Egypt, Pakistan, Viet Nam</td>
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<tr>
<td>Female Genital Cutting</td>
<td>Egypt</td>
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<tr>
<td>Girl Trafficking</td>
<td>Indonesia, Nepal</td>
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<tr>
<td>Education Issues</td>
<td>Argentina, US (NSDC)</td>
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<tr>
<td>Quality of Health Care</td>
<td>US (Waterbury Hospital, Connecticut)</td>
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Focus on PD Behaviours

• We can’t (yet) clone people

• But we can adopt their successful behaviors/strategies
PD Focus on Practice rather than Knowledge
The presence of Positive Deviants demonstrates that it is possible to find successful solutions **TODAY** before all the underlying causes are addressed!
<table>
<thead>
<tr>
<th>Traditional Approach</th>
<th>Positive Deviance</th>
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<tbody>
<tr>
<td>• Externally Fueled (by “experts” or internal authority)</td>
<td>• Internally Fueled (by “people like us”, same culture and resources)</td>
</tr>
<tr>
<td>• Top-down, Outside-in</td>
<td>• Down-up, Inside-out</td>
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<tr>
<td>• Deficit Based “What’s wrong here?”</td>
<td>• Asset Based “What’s right here?”</td>
</tr>
<tr>
<td>• Begins with analysis of underlying causes of <strong>PROBLEM</strong></td>
<td>• Begins with analysis of demonstrably successful <strong>SOLUTIONS</strong></td>
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Positive Deviance on Malaria
Why PD in Greater Mekong Sub-region

- **Focus is from control to elimination**
  - As the malaria programme strategy shifts from control to elimination, it requires more effective community engagement approaches to maintain the participation and enthusiasm of communities in the wake of disappearing disease.
  - Innovative, local and focused approaches are required to engage and target the high risk mobile & migrant populations, ethnic groups and hotspots to control/eliminate malaria.

- **Interpersonal communication (IPC)**
  - Surveys suggest IPC as the most preferred communication method.
  - PD is the best IPC method as it engages community and expedite the process of behaviour change.
## Objectives

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<th>1</th>
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<tbody>
<tr>
<td>To describe the practical application of a positive deviance (PD) informed pilot project on high risk community members, rubber tappers and fishermen</td>
<td>To orient the National Malaria Control Programme, Myanmar and key partners on the PD approach</td>
<td>To conduct evaluation of positive deviance approach using both quantitative and qualitative methods</td>
<td>To document the process and lessons learned to share with national malaria programmes and key stakeholders/partners</td>
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Positive deviance pilot villages

PD piloted in six villages of Kyun Su Island, Myanmar

- Population: 7,000
- April 2013 to March 2014
- Selection criteria
  - High risk MARC area
  - Presence of high risk population rubber tappers/fisher men
  - Presence of village volunteers
PD process
Positive deviance process

Step 1: Community orientation to explain PD to community

Step 2: Situation analysis to establish normative behaviours

Step 3: Positive deviance inquiry to investigate positive deviant’s strategy

Step 4: Participatory analysis to vet PD findings

Step 5: PD feedback session and action planning
Positive deviance process conti...

1. **Community orientation**
   - Invite community members
   - Explain PD concept through games and stories
   - Promise to assemble again in a week with solution

2. **Situation analysis**
   - Conduct focus group discussions
   - Establish normative behaviours of community around malaria
   - Identify potential positive deviants through FGDs
Positive deviance process

3. PD inquiry:
   • In-depth interviews with potential PD role models (male/female)
   • Identify successful PD behaviours and strategies

4. Participatory analysis
   • Write PD behaviours on flip charts
   • Invite key community stakeholders to vet or validate PD behaviours

5. Feedback session:
   • Conduct at the end of PD process to share the identified PD behaviours
   • Share PD findings through role plays
   • Identify volunteers
A female rubber tapper who works in a rubber farm for 15 years but has never had malaria:

- She **always wears a long-sleeved shirt, long trousers and rubber boots** when she works in the rubber farm.
- She **covers her head and face with a cloth** during rubber tapping to avoid mosquito bites.
- When she is at home, she **always sleeps under the LLIN**.
- **Burns coil** when cooking/TV.
- Whenever gets sick, she **always contacts the volunteer for blood test**.
Positive deviance implementation

- Training of volunteers
- Conduct PD sessions to share PD behaviours
- Monthly meetings at health facility
- PD handover seminar
- PD evaluation
Positive deviance implementation

➢ Training of volunteers
  • PD volunteers are trained about malaria prevention and control, communication and facilitation skills, etc.

➢ PD sessions
  • PD volunteers conduct regular interactive PD sessions in their communities to share PD behaviours
  • Role plays and story telling methods are used in the PD sessions
Positive deviance implementation conti...

- **Participatory monitoring**
  - PD volunteers create “village malaria maps” to show coverage of PD sessions and HH with suspected cases

- **Monthly volunteers meetings**
  - Progress review, feedback
  - On job training of volunteers

- **PD seminar**
  - A large community event to handover project to community
  - Reinforce messages and acknowledge volunteers
Evaluation
Evaluation methodology
Data collected at baseline (March 2013) and endline (March 2014)

Quantitative data
- Household survey of 462 (baseline) and 496 (endline) households

Qualitative data
- 12 focus group discussions and 10 in-depth interviews
Results
<table>
<thead>
<tr>
<th>BCC coverage increased from 15.9% to 63.0%</th>
<th>Increases in coverage were mostly due to increases in messages from health workers</th>
<th>PD was only the intervention in villages that engaged VHV/health staff</th>
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</thead>
<tbody>
<tr>
<td>• i.e. receiving any malaria messages/information in past six months</td>
<td>• 40.7% of respondents received information from village health volunteers (VHVs)/health facility staff at endline, compared to 10.6% at baseline</td>
<td>• Only other NGO in the community (Myanmar Medical Association) was also part of the intervention</td>
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Behaviour change communication coverage and its source

Baseline

- Other: 10.6%
- NGO staff: 4.7%
- VHV/Health Facility Staff: 5.3%

Endline

- Other: 40.7%
- NGO staff: 6.2%
- VHV/Health Facility Staff: 34.5%
Key finding 2: Knowledge

Knowledge about malaria risks, symptoms, prevention methods and treatment increased.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Baseline</th>
<th>Endline</th>
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<tbody>
<tr>
<td>Mosquito bites cause malaria</td>
<td>76.3%</td>
<td>93.3%</td>
</tr>
<tr>
<td>Sleeping under insecticide treated net can prevent malaria</td>
<td>55.6%</td>
<td>78.6%</td>
</tr>
<tr>
<td>Fever is a symptom of malaria</td>
<td>55.2%</td>
<td>84.1%</td>
</tr>
<tr>
<td>Antimalarials must be taken for three days</td>
<td>40.3%</td>
<td>50.6%</td>
</tr>
<tr>
<td>Person may not recover if they don’t complete treatment</td>
<td>27.6%</td>
<td>45.2%</td>
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Key finding 3: Attitudes

Attitudes towards village health volunteers improved.

Over time, VHVs became the second most important source of malaria advice or treatment and testing

- At endline 30.6% of households would go to VHVs for malaria advice or treatment, compared to 11.4% at baseline

Rural health centers, however, remained the primary sources of advice, testing and treatment

- 46% (baseline) -39% (endline) would go there for malaria advice or treatment
- Reduction possibly because people more likely to go to VHV first
Preferred sources of malaria advice and treatment

Baseline
- 39.3% Other
- 49.3% Rural Health Center
- 11.4% VHV

Endline
- 23.4% Other
- 46% Rural Health Center
- 30.6% VHV
Key finding 4: Practices

Prevention practices among women, fishermen and forest-goers improved.

<table>
<thead>
<tr>
<th>Practices</th>
<th>Baseline</th>
<th>Endline</th>
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</thead>
<tbody>
<tr>
<td>Bed net usage among women</td>
<td>69.9%</td>
<td>78.4%</td>
</tr>
<tr>
<td>Wearing of long clothes among forest-goers</td>
<td>24.2%</td>
<td>49.3%</td>
</tr>
<tr>
<td>Wearing of long clothes among fishermen</td>
<td>18%</td>
<td>36.7%</td>
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</table>
Key finding 5: Impact of positive deviance on key behaviour

People in villages where the role model wore long clothes were more likely to also do so, compared to people in villages where the role model did not.

<table>
<thead>
<tr>
<th>Village</th>
<th>VHVs promote long clothes?</th>
<th>VHVs promote long clothes + mention role model?</th>
</tr>
</thead>
<tbody>
<tr>
<td>War Chaw</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Kat talu</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Ka Phwar</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Tee Pu</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Kadu Kadut</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Pyint Htet Aww</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
Proportion of forest-goers and fishermen that wear long clothing to avoid malaria

- **BASELINE**: 21.7%
- **Villages where VHVs promote long clothes**: 38.8%
- **Villages where VHVs promote long clothes + mention role model**: 56.4%
Conclusion
Lessons learned

➢ Strong community mobilization tool
  • Positive deviance engages community throughout the process which develops strong sense of ownership

➢ Effective interpersonal communication tool
  • An effective alternative to traditional BCC methods for hard-to-reach populations

➢ Fills in the formative research gap
  • PD process helps understand context, normative behaviours which enables us to develop tailored communication strategies

➢ Build capacity and leadership in volunteers
  • PD approach provides on-job training opportunities to volunteers which boost their confidence, increase motivation and ensure their retention.
Challenges

- Require some basic facilitation skills
  - PD is a human intensive (PD process) and requires some facilitation skills

- Time and human intensive (especially PD process)
  - The first, one-week, phase is intensive

- Require regular supportive supervision
  - PD requires regular monitoring and supervision (at least on monthly basis)
Next steps

➢ Randomized controlled trial
  • A randomized controlled trial is being conducted in Hinthada Township, Myanmar with an entomological component

➢ Scaling up and cost effectiveness
  • PD will be scaled up in Myanmar
  • Costing and cost effectiveness of PD activities will be evaluated
Thank you!

www.malariaconsortium.org