Did PEPFAR Impact the ABCs of HIV Prevention?

Madison Little, Rutgers University
Dr. Ashley Fox, University at Albany
Background

• The President’s Emergency Plan for AIDS Relief (PEPFAR) is former President G.W. Bush’s signature global health initiative, which channeled $15 billion into the global HIV/AIDS epidemic in 15 focal countries since 2004.

• 30% of this global funding has gone towards PEPFAR’s controversial prevention policies: its ABC approach (Abstain, Be faithful, Condomize).

• This study assesses the impact of PEPFAR funding on sexual behavior relating to the ABCs of prevention in PEPFAR focal countries compared with similar countries that did not receive PEPFAR funding.
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PEPFAR Focal Country in Red
Non-PEPFAR Focal Country in Blue

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Data

- Country-level data on five variables among youth—abstinence, multiple partners, condom use, and sex before the ages of 15 and 18—were collected from nationally-representative Demographic and Health Surveys.

- Nine PEPFAR-focus countries and five non-PEPFAR-focus countries in sub-Saharan Africa with data supporting pre-PEPFAR (1999-2003) and post-PEPFAR (2004-2011) implementation years were selected for evaluation.

- PEPFAR-focus countries with available data were: Ethiopia, Kenya, Malawi, Mozambique, Rwanda, Tanzania, Uganda, Zambia, and Zimbabwe.

- Non-PEPFAR-focus countries with available data were: Benin, Burkina Faso, Congo, Guinea, Madagascar, and Mali.
Analysis

- Country-level data on youth age 15-24 differentiated by gender was averaged.

- Paired samples t-tests and Wilcoxon non-parametric tests were conducted.

- Assessed differences in the change in mean prevalence rates of behavioral variables between PEPFAR and non-PEPFAR countries in the pre-PEPFAR and post-PEPFAR implementation periods.
Results

- The results showed no difference in the change in mean values of youth abstinence ($p=0.52$), condom use ($0.51$) or multiple partners in the past year ($0.92$) in case countries compared with controls.

- Elimination of data from an outlying non-PEPFAR focus country (Mali) showed a marginally significant increase in the mean values of abstinence among youth in PEPFAR countries compared with non-PEPFAR countries ($p=0.14$).

- Graphs of the change in risk behavior over this time period show reductions in youth risk behavior over time in both PEPFAR and non-PEFAR countries.
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**Abstinence Behavior in PEPFAR Focus Countries**

- **Ethiopia**: 87.1% (2000), 91.7% (2005), 90.9% (2011)
- **Kenya**: 50.4% (2003), 50.9% (2008)
- **Mozambique**: 32.9% (2003)
- **Rwanda**: 46.3% (1999), 51.6% (2003), 57.8% (2004), 55.7% (2007)
- **Tanzania**: 52.6% (2003), 60.1% (2006)
- **Uganda**: 57.8% (2004)
- **Zambia**: 39.3% (2001)

**Abstinence Behavior in Non-PEPFAR Focus Countries**

- **Benin**: 42.2% (2001), 50.3% (2006)
- **Burkina Faso**: 65.2% (2003)
- **Madagascar**: 52.0% (2003), 61.3% (2008)
- **Mali**: 57.8% (2001), 83.6% (2006)
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% Youth with Multiple Partners in PEPFAR Focus Countries

- Ethiopia: 10.6, 2.7, 3.1
- Kenya: 13.7, 10.5, 10.5
- Malawi: 7.5, 7.6
- Mozambique: 23.6, 13.9, 18.8
- Rwanda: 3.6, 2.7, 5.6
- Tanzania: 27.1, 20.1, 19.1
- Uganda: 13.1, 16.4, 16.7
- Zambia: 17.1, 12.9, 10.9
- Zimbabwe: 14.9, 10.8, 11.7

% Youth with Multiple Partners in Non-PEPFAR Focus Countries

- Benin: 18.6, 12.1
- Burkina Faso: 13.0, 9.0
- Guinea: 25.7, 18.8
- Madagascar: 17.5, 17.6
- Mali: 12.4, 10.6
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Condom Use in PEPFAR Focus Countries

Condom Use in Non-PEPFAR Focus Countries
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## Change in Mean Rates of Risk Behavior Pre and Post PEPFAR Implementation in Focal & Non-Focal Countries

<table>
<thead>
<tr>
<th>Change in Behavior</th>
<th>PEPFAR Mean</th>
<th>Non-PEPFAR Mean</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in Abstinence</td>
<td>2.6814</td>
<td>11.9625</td>
<td>p=.52</td>
</tr>
<tr>
<td>Change in Abstinence (without Mali)</td>
<td>2.6814</td>
<td>7.35</td>
<td>p=.14</td>
</tr>
<tr>
<td>Change in Multiple Partners</td>
<td>-3.64</td>
<td>-3.82</td>
<td>p=.92</td>
</tr>
<tr>
<td>Change in Condom Use</td>
<td>7.5844</td>
<td>5.27</td>
<td>p=.54</td>
</tr>
<tr>
<td>Change in Sex Before 15</td>
<td>-2.4329</td>
<td>-0.9</td>
<td>p=.51</td>
</tr>
<tr>
<td>Change in Sex Before 18</td>
<td>-1.7914</td>
<td>-3.85</td>
<td>p=.53</td>
</tr>
</tbody>
</table>
Discussion

• Across each of the ABCs, there is a positive change toward lower-risk behavior regardless of PEPFAR focus or non-PEPFAR focus, particularly in condom use.

• Most countries have seen improvements in the ABCs of prevention, but there are some outliers.
  
  • Rwanda has seen declines in abstinence and increases in multiple partners, though has seen increases in condom use.
  
  • Mali, a non-PEPFAR-focus country, saw a sharp, unexplained increase in abstinence between 2001 and 2006.
Discussion

• This general trend in improvement across both PEPFAR and non-PEPFAR countries and across high and low prevalence countries suggests that general AIDS funding and/or increased awareness about AIDS has contributed to safer sex practices.

• We have begun to construct a longitudinal panel from Demographic and Health Surveys to examine trends in youth sexual behavior using microdata.
Conclusions

- These results suggest that PEPFAR behavioral prevention funding has not had a substantial impact on sexual behavior in spite of the billions of dollars invested in these programs.

- Nevertheless, across each of the ABCs, there is a positive change toward lower-risk behavior regardless of PEPFAR or non-PEPFAR focus status.
Limitations

• High early marriage rates in many SSA countries limits the generalizability of the main abstinence measure employed in this study.

• In this present analysis, we do not adjust for other domestic and international sources of AIDS funding apart from PEPFAR.

• Using aggregate country data limits statistical tests that can be performed.
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