Integration of Family Planning Services into HIV Care Clinics: Results from a Cluster Randomized Controlled Trial in Nyanza, Kenya
Background

• High HIV prevalence
• Large unmet need for contraception among HIV-infected women
• Prevention of unintended pregnancy has implications for:
  • Perinatal HIV transmission: FP is one of WHO’s four pillars of prevention of perinatal transmission
  • Maternal/neonatal morbidity and mortality
Background

• Lack of rigorous evidence about impact of integrating family planning into HIV care on contraception use

• Two recent cohort studies (Nigeria and Kenya)

• No association found between integrated services and more effective contraceptive use (permanent, hormonal, intrauterine methods) or pregnancy incidence
  
  – Increased condom use associated with integration in Kenya study

  McCarraher 2011; Kosgei 2011
FP/HIV Care Integration Trial

• Goal:
  – To increase contraceptive prevalence among HIV-infected patients by integrating FP into HIV care in Nyanza, Kenya.
  – To provide evidence about the effect of integrated services in order to guide policy and service implementation.
## Cluster Randomized Trial

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Full integration of family planning services into HIV clinics, compared to referral for FP services</th>
</tr>
</thead>
</table>
| Outcomes     | 1) Prevalence of more effective FP  
               2) Pregnancy rate                                                                                                                                 |
| Study sites  | 18 public health facilities in 4 districts randomized in a 2:1 ratio, stratified by size of HIV clinic |
| Health facilities | District hospitals, health centers, and dispensaries                                          |
More Effective FP

• Permanent
  – Tubal Ligation
  – Vasectomy

• Hormonal
  – Oral
  – Injectable
  – Implants

• Intrauterine methods
FP Study Timeline

Phase 1
**Baseline Data**
(3 months)

- Client and Provider Interviews
- Contraception and pregnancy data collection for men and women

Phase 2
**Site Activation**
(7 months)

- Train clinicians and clinic health assistants on FP

Phase 3
**Intervention Implementation**
(12 months)

- Client and Provider Interviews
- Refresher trainings
- Cost data collected
Separate Clinics within the Health Facility

PSC = HIV Clinic

MCH / Family Planning Clinic
Control Clinics N=6

PSC = HIV Clinic

MCH / Family Planning Clinic

HIV Care & Treatment
FP Health Education and Counseling

Method Provision, Contraception Follow-up
Intervention Clinics N=12

HIV Care & Treatment, FP Education, Counseling, Method Provision, and Contraception Follow-up

PSC = HIV Clinic

MCH / Family Planning Clinic
All Sites N=18

System Strengthening: Training, Mentoring, Supportive Supervision, Commodity Security, & Community Engagement

PSC = HIV Clinic
MCH / Family Planning Clinic
Effect of integrating family planning services into HIV care and treatment on contraceptive use and pregnancy among women in Nyanza, Kenya

Daniel Grossman, Sara J. Newmann, Maricianah Onono, Cinthia Blat, Elizabeth A. Bukusi, Starley Shade, Rachel L. Steinfeld, Craig R. Cohen
Methods

• Abstracted data on demographics, contraceptive use and pregnancy from electronic medical records of women age 18-45

• Compared contraceptive use between the baseline period (Dec 2009-Feb 2010) and final 3 months of follow-up (Jul 2011-Sep 2011) between study arms

• FP modeled dichotomously, with use of more effective FP compared to less effective and no FP
Methods

• Primary outcome: use of more effective contraception

• Secondary outcome: condom use
  – Both adjusted for clustering
  – Both adjusted for baseline measurement

• Secondary outcome: incident pregnancy rates during the follow-up year
  – Adjusted for clustering
Results – Baseline Demographics

<table>
<thead>
<tr>
<th></th>
<th>Integrated sites N=1,801</th>
<th>Non-integrated sites N=2,005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (median)</td>
<td>31 years old</td>
<td>30 years old</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary or less</td>
<td>87%</td>
<td>81%</td>
</tr>
<tr>
<td>Secondary</td>
<td>12%</td>
<td>17%</td>
</tr>
<tr>
<td>College</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>61%</td>
<td>59%</td>
</tr>
<tr>
<td>Single</td>
<td>10%</td>
<td>9%</td>
</tr>
<tr>
<td>Widowed</td>
<td>29%</td>
<td>31%</td>
</tr>
<tr>
<td>On ARVs</td>
<td>53%</td>
<td>50%</td>
</tr>
</tbody>
</table>
Results – Contraceptive Use

- Integrated
- Non-Integrated

Not using FP
Using less effective FP
Dual Use
Using more effective FP

Baseline
12/09 - 2/10

Endline
7/11 - 9/11
## Results – Change in FP use

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Adjusted odds ratio</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of more effective FP</td>
<td>1.55</td>
<td>1.13 – 2.11</td>
</tr>
<tr>
<td>Condom use</td>
<td>0.82</td>
<td>0.65 – 1.05</td>
</tr>
<tr>
<td>Dual method use</td>
<td>1.25</td>
<td>0.80 – 1.95</td>
</tr>
</tbody>
</table>
Results – More effective contraceptive use (% of women)

Baseline

- Integrated
  - Oral: 2%
  - Injectable: 11%
- Non-integrated
  - Oral: 2%
  - Injectable: 6%

Endline

- Integrated
  - Oral: 2%
  - Injectable: 4%
- Non-integrated
  - Oral: 2%
  - Injectable: 4%
## Results – Incident pregnancy during follow-up year

<table>
<thead>
<tr>
<th>Incident pregnancies</th>
<th>Integrated sites</th>
<th>Non-integrated sites</th>
<th>GEE aOR</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.41*</td>
<td>1.95*</td>
<td>0.95</td>
<td>0.70 – 1.30</td>
</tr>
</tbody>
</table>

*per 100 woman-visits to clinic
Conclusions

• Integration of FP services into HIV care and treatment in this setting
  – Increased use of more effective FP methods
  – No significant change in
    • Condom use
    • Dual method use
  – No significant change in pregnancy incidence

• Highlights importance of study methodology
Policy implications

- Study findings support integration of FP services into HIV care and treatment
- All effective FP methods can be successfully provided at the HIV clinic
- Dual method use promotion is a critical component of integration
- Additional research is needed to identify strategies to increase IUCD uptake in this setting