Epidemiologic Notes and Reports

**Pneumocystis Pneumonia --- Los Angeles**

In the period October 1980-May 1981, 5 young men, all active homosexuals, were treated for biopsy-confirmed *Pneumocystis carinii* pneumonia at 3 different hospitals in Los Angeles, California. Two of the patients died. All 5 patients had laboratory-confirmed previous or current cytomegalovirus (CMV) infection and candidal mucosal infection. Case reports of these patients follow.

Patient 1: A previously healthy 33-year-old man developed *P. carinii* pneumonia and oral mucosal candidiasis in March 1981 after a 2-month history of fever associated with elevated liver enzymes,
# Increased HIV Prevention Tools from RCTs in 2009

<table>
<thead>
<tr>
<th>Intervention</th>
<th>RCTs</th>
<th>Effective</th>
</tr>
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<tbody>
<tr>
<td>Behavioral</td>
<td>7</td>
<td>0</td>
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<tr>
<td>Male Circumcision</td>
<td>3</td>
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</tr>
<tr>
<td>Diaphragm</td>
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<td>0</td>
</tr>
<tr>
<td><strong>Topical PrEP</strong> (microbicide)</td>
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<td>1</td>
</tr>
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<tr>
<td>STD Treatment</td>
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* 12 without ARV, 1 with ARV

Updated from Padian N et al. *Lancet* 2010
### Increased HIV Prevention Tools from RCTs in 2010-11

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Updated from Padian N et al. *Lancet* 2010
Clinical trial evidence for preventing sexual HIV transmission – June 2011

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<td>Treatment for prevention (HPTN 052; Africa, Asia, America’s)</td>
<td>96% (73; 99)</td>
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<td>Medical male circumcision (Orange Farm, Rakai, Kisumu)</td>
<td>54% (38; 66)</td>
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<td>Oral PrEP for MSMs (iPrEx: Americas, Thailand, Africa)</td>
<td>44% (15; 63)</td>
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<td>STD treatment (Mwanza)</td>
<td>42% (21; 58)</td>
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<td>Microbicide (CAPRISA 004 tenofovir gel)</td>
<td>39% (6; 60)</td>
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<td>RV-144 Vaccine (Thailand)</td>
<td>31% (1; 51)</td>
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In the HPTN: ARVs for Prevention

Can we block infection with topical or systemic ARVs? Oral and topical PrEP

Can we treat the infected partner with cART and protect the sexual partner? ART for prevention
Test, Link, and Care (TLC) for HIV Prevention

If you diagnose and treat enough HIV+ people, you can reduce transmission

A principal unifying HPTN theme:
Evaluation of testing: HPTN 043,
HIV negatives: PrEP 066, 067, 069;
HIV positives: HPTN 052, HPTN 065;
Prev. for Positive 063, Acute inf. 062
Estimated Number of Perinatally Acquired AIDS Cases, by Year of Diagnosis, 1985-2003—United States

Note: Data adjusted for reporting delays and for estimated proportional redistribution of cases in persons initially reported without an identified risk factor.

Lessons from PMTCT successes: ART for Prevention works!
Populations at special risk
If you engage the right persons with effective interventions, you make a disproportionate impact on the epidemic

A 2nd unifying HPTN theme:
IDU/Asia: HPTN 058
Adolescents/Africa: HPTN 068
Black MSM & women-at-risk/US: 061, 064
New Combination Prevention Initiative
100 HIV+ persons

Objective

Aware HIV+
79%

Linked to care
60%

Viral Load suppressed
55%

Achieved

79

Not Achieved

21

NOTE: Only 26% of HIV+ persons were in care with an estimated VL <500 copies/mL.

2011: A banner year for HPTN clinical trials!

The test of concept for ART for Prevention
“Test, Link, and Care”
“Test and Treat”
HPTN 052

The New York Times
Early H.I.V. Therapy Sharply Curbs Transmission

The Wall Street Journal
Scientists See Breakthrough in the Global AIDS Battle

msnbc.com
Starting HIV meds quickly helps protect partner

Associated Press
Earlier HIV therapy protects against virus spread
HPTN 043 “Project Accept” Study Demonstrates that Community Mobilization Boosts HIV Testing Rates in Developing Countries

Getting to the HIV Test: It Takes a Village
Acknowledgments

*Thanks to our sponsors:*

**NIH**: NIAID, NIMH, NIDA

**DOS**: Office of the Global AIDS Coordinator (PEPFAR)

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CDC, Departments of Health, Ministries of Health
IMPAACT, ACTG, HANC
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Everyone of you who contributes to the fight against HIV infection!

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