HIV Prevention in San Francisco: Where Do We Go from Here?

Grant Colfax, MD
Director of HIV Prevention and Research
San Francisco Department of Public Health
What’s changing?

• Greater emphasis and more resources to:
  – Case finding (testing, partner notification)
  – Medical care and treatment (viral load, adherence)

• Continued support for proven strategies to interrupt transmission
  – Condoms
  – Syringe access

• Less emphasis on:
  – Intensive interventions to change individual sexual behavior
    • Targeted to persons at highest risk for HIV
    • Delivered in both care and community settings

• More emphasis on monitoring and evaluating in real time to improve care
You are invited to the marriage of...
HIV Incidence, United States

- HIV incidence peaked in 1984-1985 at 130,000 infections/year
- Approximately 53,600 new infections each year stable since 2000
- Incidence highest among MSM compared with other risk groups
  - 53% of new infections among MSM
  - 42 times higher compared with heterosexual men
  - Black MSM 9-fold higher incidence compared with white MSM
- Incidence stable among women since early 1990s
  - approximately 20,000 new infections per year

Hall et al. JAMA, 2008
HIV Prevalence, Selected Regions and Subgroups

Adapted from: El-Sadr, et al., *NEJM*, 2010
San Francisco’s Endemics

Gay men: Endemic

Injection drug users: Endemic

Heterosexuals: Neither epidemic nor endemic

McFarland, 2009
# Prevention Indicators, San Francisco

<table>
<thead>
<tr>
<th>Parameters</th>
<th>2004 (%)</th>
<th>2008 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Among MSM, HIV Test in Last 12 mos.</td>
<td>65</td>
<td>71</td>
</tr>
<tr>
<td>HIV-Positive People Unaware of Status</td>
<td>24</td>
<td>15-20</td>
</tr>
<tr>
<td>Linkage to Care</td>
<td>88% (2006–2007)</td>
<td></td>
</tr>
<tr>
<td>Engaged in Care</td>
<td>71</td>
<td>78</td>
</tr>
<tr>
<td>ART Coverage (PWA)</td>
<td>74 (2005)</td>
<td>90</td>
</tr>
<tr>
<td>Virologic Suppression</td>
<td>52 (2005)</td>
<td>72</td>
</tr>
</tbody>
</table>
## Prevention Indicators, San Francisco

<table>
<thead>
<tr>
<th></th>
<th>MSM</th>
<th></th>
<th>MSM</th>
<th></th>
<th>IDU</th>
<th></th>
<th>IDU</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HIV-</td>
<td>HIV+</td>
<td>HIV-</td>
<td>HIV+</td>
<td>HIV-</td>
<td>HIV+</td>
<td>HIV-</td>
<td>HIV+</td>
</tr>
<tr>
<td>Free Condoms</td>
<td>79%</td>
<td>70%</td>
<td>67%</td>
<td>69%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Free Needles</td>
<td>N/A</td>
<td>N/A</td>
<td>76%</td>
<td>97%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual counseling</td>
<td>11%</td>
<td>16%</td>
<td>17%</td>
<td>16%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group counseling</td>
<td>5%</td>
<td>11%</td>
<td>8%</td>
<td>16%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: NHBS, HIV Epi Section, DPH
SFDPH HIV Prevention Section Core Functions

• Receives $14 million in funding for Prevention
• Additional $12 million NIH/CDC research funding
• Partners with 37-member HIV Prevention Planning Council (HPPC)
• Contracts with CBOs and other agencies to provide prevention programs
• Condom distribution program (1 million/year)
• Supports 30 agencies in delivery of prevention work
• Conducts prevention research
• Advocates for improved HIV prevention and treatment policy

SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
HIV PREVENTION SECTION
SFHIV
SFHIV.ORG
The Planning Cycle

HPPC Recommendations → HIV Prevention Plan

Research, Data, Evaluation → Request for Proposals (RFP)

HIV Prevention Programs → HIV Prevention Plan
HIV Prevention 2010: From the Plan to Practice

- Vision: End new HIV infections in San Francisco
- Goal: Reduce new HIV infections by 50% by 2017
  - Resources to populations at greatest risk for HIV:
    - MSM (70-79%)
    - IDU (10-20%)
    - TFSM (5-8%)

www.sfhiv.org
Strategy Goals and Targets for 2015

Reducing New HIV Infections
• Lower the annual number of new infections by 25%

Increasing Access to Care and Improving Health Outcomes for People Living with HIV
• Increase the proportion of newly diagnosed patients linked to clinical care within three months of their HIV diagnosis from 65% to 85%

Reducing HIV-related Health Disparities
• Increase the proportion of HIV diagnosed gay and bisexual men with undetectable viral load by 20%

Strategy URL: http://www.whitehouse.gov/administration/eop/onap/nhas
NATIONAL HIV/AIDS STRATEGY FOR THE UNITED STATES

Recommended Action

Measure and utilize community viral load: Ensure that all high prevalence localities are able to collect data necessary to calculate community viral load, measure the viral load in specific communities, and reduce viral load in those communities where HIV incidence is high.
Transmission Rate: Measure of Annual Transmissions in Relation to HIV Prevalence

- Current U.S. rate: 5 transmissions/100 persons living with HIV
- NHAS goal: 3.5 by 2015
- Reproductive rate = (Tx/100) * D, where D= duration of infectiousness
  - Prevention goal: Reproductive rate below 1.

Holtgrave, 2010
## Calculated HIV Reproductive Rate at Various Transmission Rates and Levels of Years of Post-infection Life Expectancy

<table>
<thead>
<tr>
<th>T(x) (Transmission Rate)</th>
<th>Levels of Years of Post-infection Life Expectancy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>28.73</td>
</tr>
<tr>
<td>5.0</td>
<td>1.44</td>
</tr>
<tr>
<td>4.5</td>
<td>1.29</td>
</tr>
<tr>
<td>4.0</td>
<td>1.15</td>
</tr>
<tr>
<td>3.5</td>
<td>1.01</td>
</tr>
<tr>
<td>3.0</td>
<td>0.86</td>
</tr>
<tr>
<td>2.5</td>
<td>0.72</td>
</tr>
<tr>
<td>2.0</td>
<td>0.57</td>
</tr>
<tr>
<td>1.5</td>
<td>0.43</td>
</tr>
<tr>
<td>1.0</td>
<td>0.29</td>
</tr>
<tr>
<td><strong>Threshold T(x) for Reproductive Rate = 1</strong></td>
<td><strong>3.48</strong></td>
</tr>
</tbody>
</table>

Holtgrave. Public Health Rep, 2010

<table>
<thead>
<tr>
<th>Year</th>
<th>HIV INCIDENCE</th>
<th>PREVALENCE</th>
<th>CRUDE TRANSMISSION RATE [per 100 Cases]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Point Estimate</td>
<td>95% CI</td>
<td>Living reported HIV/AIDS cases</td>
</tr>
<tr>
<td>2006</td>
<td>975</td>
<td>801-1,082</td>
<td>15,099</td>
</tr>
<tr>
<td>2007</td>
<td>792</td>
<td>552-1,033</td>
<td>15,298</td>
</tr>
<tr>
<td>2008</td>
<td>621</td>
<td>462-782</td>
<td>15,597</td>
</tr>
</tbody>
</table>

Data source: SFDPH HIV Surveillance 2009 Report
New Directions for SF HIV Prevention

To reduce new HIV infections by 50% by 2017, the HIV Prevention Plan prioritizes five areas:

1. HIV status awareness
2. Prevention with positives
3. Drivers of HIV
4. Structural change
5. Syringe access

Source: HPPC, 2010 San Francisco HIV Prevention Plan
Our approach...

Figure 1: Highly active HIV prevention
This term was coined by Prof K Holmes, University of Washington School of Medicine, Seattle, WA, USA. STI=sexually transmitted infections.

Coates. Lancet, 2008
... with increasing emphasis on testing and treatment outcomes

<table>
<thead>
<tr>
<th>Infections Averted</th>
<th>Tx&lt;500</th>
<th>Tx All</th>
<th>Test &amp; Tx All</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>1,554</td>
<td>2,169</td>
<td>2,810</td>
</tr>
<tr>
<td>2019</td>
<td>3,102</td>
<td>4,550</td>
<td>6,040</td>
</tr>
<tr>
<td>2029</td>
<td>4,940</td>
<td>8,221</td>
<td>12,189</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percent Reduction in New Infections</th>
<th>Tx&lt;500</th>
<th>Tx All</th>
<th>Test &amp; Tx All</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>42%</td>
<td>59%</td>
<td>76%</td>
</tr>
<tr>
<td>2019</td>
<td>42%</td>
<td>61%</td>
<td>81%</td>
</tr>
<tr>
<td>2029</td>
<td>33%</td>
<td>55%</td>
<td>81%</td>
</tr>
</tbody>
</table>

Charlebois, Das, Porco, Havlir et. al. CROI, 2010
Community-Level Harm Reduction

- Increasing Population Impact
  - Counseling and Education
  - Clinical Interventions
  - Long-Lasting Protective Interventions
  - Socioeconomic Factors

- Increasing Individual Effort Needed

Changing the Context to Make Individuals’ Default Decisions Healthy

Frieden. AJPH, 2010. Slide from: M. Das
Plan Focus Area #1: HIV Status Awareness

• What will be emphasized?
  • New testing models
    – Routine testing for groups with high HIV prevalence
    – Simplifying HIV test process and results notification
    – Less counseling
  • More partner notification by DPH, including at community-based sites
  • Efforts to detect early infection

• Indicators of success:
  • Positivity rate and number of new positives identified
  • Frequency of testing among high-risk populations
  • Linkage to medical care

• Outcomes:
  • 30,000 HIV tests in DPH-supported programs
  • All persons at high-risk for HIV are tested at least every 6 months
  • 90% of HIV-positive persons are in care within 3 months of diagnosis
A New HIV Diagnosis Reduces Risk Behavior

Colfax, et al. AIDS, 2002
The Need for More HIV Testing among High-risk Groups in SF

<table>
<thead>
<tr>
<th>Behavioral Risk Populations (BRPs)</th>
<th>At risk pop. size*</th>
<th>% not tested past 6 mos.**</th>
<th>Testing deficit, 6 mos.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSM</td>
<td>48,329</td>
<td>54%</td>
<td>26,098</td>
</tr>
<tr>
<td>IDU</td>
<td>14,609</td>
<td>58%</td>
<td>8,473</td>
</tr>
<tr>
<td>TFSM</td>
<td>1,880</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Min. total additional tests needed every 6 months</strong></td>
<td><strong>34,571</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Based on Consensus Estimates, 2010 San Francisco HIV Prevention Plan

**Source: National HIV Behavioral Surveillance (NHBS) study, San Francisco data
Testing in Social Networks: The Black Men Testing Project

38% of newly diagnosed cases referred by HIV+ MSM

Legend
HIV- = Blue
Known HIV+ = Red
New HIV+ = Green

Fuqua, et al., 2010
Detection of New HIV Infections: High-risk Sites

- City Clinic, Magnet, and AHP 2007-2009:
  - 32,494 HIV tests
  - 538 (1.66%) new HIV positives
- 14,544 specimens pooled for RNA testing
  - 54 (.37%) acute cases identified
- Acutes account for 9% of all newly diagnosed
Ongoing and Upcoming Testing Research, HIV Prevention Section

• STOP study: compares 3\textsuperscript{rd} generation tests vs. 4\textsuperscript{th} generation tests vs. RNA pooling
  – New diagnoses
  – Cost
  – Feasibility

• Symptom-driven screening for acute HIV
  – Collaborative effort with Pilcher, et. al.
What is the role of pre-test counseling?

Project AWARE

- Evaluates the effect of counseling on STI incidence
- Secondary outcomes:
  - Reduction of sexual risk behaviors
  - Cost and cost-effectiveness of counseling
- Principal Investigators: Lisa Metsch (University of Miami); Grant Colfax (San Francisco Department of Public Health)

**SITES**
- Columbia, SC
- Jacksonville, FL
- Los Angeles, CA
- Miami, FL
- San Francisco, CA
- Pittsburg, PA
- Portland, OR
- Seattle, WA
- Washington, DC

**Sample:** 5,000 participants

**STUDY DESIGN**
- Recruitment and Enrollment
- STI Testing
- Baseline Assessment
- Randomization
- Risk-reduction counseling with on-site rapid HIV test
- Information with on-site rapid HIV test
- STI testing repeated at 6 months
Plan Focus Area #2: Prevention with Positives (PWP)

• What will be emphasized?
  • Increased PWP in HIV medical care settings
  • Focus on persons at high-risk for transmitting HIV (high VL)
  • Models that address barriers to care, including stigma, fear, discrimination, etc.

• Indicators of success:
  • Engagement and retention in care
  • Treatment adherence
  • Viral load suppression

• Outcomes:
  • All HIV-positive persons in care are offered treatment
  • 90% of those on treatment have undetectable viral load
## ART and HIV-1 Transmission

<table>
<thead>
<tr>
<th></th>
<th>Linked HIV-1 Infection</th>
<th>Person Years</th>
<th>Rate</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>No ART Initiated</td>
<td>102</td>
<td>4,558</td>
<td>2.24</td>
<td>(1.84-2.72)</td>
</tr>
<tr>
<td>After ART Initiation</td>
<td>1</td>
<td>273</td>
<td>0.37</td>
<td>(0.09-2.04)</td>
</tr>
</tbody>
</table>

Adjusted* Relative Risk $= 0.08$ (95% CI 0.002, 0.57), $p=0.004$

*For time on study and CD4 count

We are doing well, but we can do better...

• Of 15,757 reported HIV cases in San Francisco:
  • 21% not in routine care
  • 28% have detectable viral load
  • In 2008, 329 in SF known to have viral load >100k

• Correlates of higher viral load are:
  • Transgender, homeless, IDU, African-American, MSM-IDU;
    four SF neighborhoods w/lowest median incomes

Source: SFDPH; Das, CDC Prevention Conference, 2008
Behavioral Model for Vulnerable Populations

INDIVIDUAL PATIENT CHARACTERISTICS:

PREDISPOSING FACTORS

TRADITIONAL
- Age
- Gender
- Ethnicity
- Education
- Health benefits
- Perception of HIV risk

VULNERABLE
- Immigration status
- Sexual orientation
- Incarceration history
- Psychiatric illness
- Substance abuse
- Stigma

ENABLING
- Income
- Insurance
- Housing/transportation
- Social support
- Coping/self-efficacy
- Acceptance of diagnosis

NEED
- Comorbidities/
  opportunistic infections
- Symptoms
- Self-perceived health status
- HIV disease stage

VULNERABLE NEED
- Immigration status
- Sexual orientation
- Incarceration history
- Psychiatric illness
- Substance abuse
- Stigma
- Immigration status
- Comorbidities/
  opportunistic infections
- Symptoms
- Self-perceived health status
- HIV disease stage

METHODS OF TESTING SITE LINKAGE TO CARE
- Diagnostic vs. screening
- Targeted vs. nontargeted
- Pre-counseled vs.
  not pre-counseled
- Medical vs. non-medical
- Ambulatory vs. admitted

CLINIC
- Insurance compatibility
- Appointment availability
- Psychiatric treatment
- Vouchers
- Reminder phone calls
- Ease of check-in

MEASURES
- Connection to HIV clinic
- Appointment adherence
- ART adherence
- Transmission risk acts
- Psychological well-being

BIOLOGIC OUTCOMES
- CD4 reconstitution
- VL suppression
- Death

- Opportunistic infections

K. Christopoulos, et al. Adapted from Ulett, CID. In press.
### Risk Changes:
Percentage of men engaging in behavior at baseline who remain (light shading) in the category at follow-up, change to riskier behavior (dark shading) or change to less risky behavior (unshaded)

<table>
<thead>
<tr>
<th>BASELINE FOLLOW UP</th>
<th>Safer Sex</th>
<th>Seroadaptation</th>
<th>Risk</th>
<th>Follow Up Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Sex</td>
<td>50</td>
<td>11</td>
<td>11</td>
<td>24</td>
</tr>
<tr>
<td>Only Oral Sex</td>
<td>5</td>
<td>46</td>
<td>17</td>
<td>14</td>
</tr>
<tr>
<td>100% Condom Use</td>
<td>17</td>
<td>7</td>
<td>18</td>
<td>1</td>
</tr>
<tr>
<td>Pure Serosorting</td>
<td>0</td>
<td>0</td>
<td>26</td>
<td>16</td>
</tr>
<tr>
<td>Oral Sex Serosorting</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Condom Serosorting</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>Seroposition-ing</td>
<td>0</td>
<td>36</td>
<td>8</td>
<td>14</td>
</tr>
<tr>
<td>Condom Seroposition-ing</td>
<td>26</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Risky Sex</td>
<td>0</td>
<td>0</td>
<td>17</td>
<td>13</td>
</tr>
<tr>
<td>Baseline Total</td>
<td>25</td>
<td>15</td>
<td>13</td>
<td>9</td>
</tr>
</tbody>
</table>

McFarland, et al., 2010
Change in Prevention Discussions and Sexual Behavior

<table>
<thead>
<tr>
<th>Variable</th>
<th>Intervention Effect OR (95% CI)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussed safer sex</td>
<td>1.49 (1.06-2.09)</td>
<td>0.02</td>
</tr>
<tr>
<td>Asked if sexually active</td>
<td>1.60 (1.05-2.45)</td>
<td>0.03</td>
</tr>
<tr>
<td>Number of partners</td>
<td>0.49 (0.26-0.92)</td>
<td>0.03</td>
</tr>
</tbody>
</table>
Plan Focus Area #3: Drivers of HIV

• Plan definition of a driver:
  • Prevalence of 10% or greater in highest-risk populations
  • Independently associated with a minimum 2-fold increase in risk for HIV infection

• Drivers identified in the Plan:
  - Cocaine/crack
  - Methamphetamine
  - Poppers
  - Gonorrhea
  - Heavy alcohol use
  - Multiple partners

• Behavioral interventions to focus on Drivers

• Indicators of success for programs focusing on drivers:
  • Linkage to testing
  • Linkage to care
  • Reduction in drivers
## MSM Trends in Substance Use, San Francisco

<table>
<thead>
<tr>
<th>Drug</th>
<th>2004 Use last 12 months</th>
<th>2008 Use last 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methamphetamine</td>
<td>22%</td>
<td>13%</td>
</tr>
<tr>
<td>Cocaine</td>
<td>17%</td>
<td>24%</td>
</tr>
<tr>
<td>Crack</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Hallucinogens</td>
<td>5%</td>
<td>9%</td>
</tr>
<tr>
<td>Poppers</td>
<td>20%</td>
<td>19%</td>
</tr>
<tr>
<td>Heroin</td>
<td>0.3%</td>
<td>0.6%</td>
</tr>
</tbody>
</table>

Source: NHBS, San Francisco
Meta-analysis of Behavioral Interventions for Methamphetamine use

<table>
<thead>
<tr>
<th>Study</th>
<th>Standardised mean difference (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shoptaw et al (2005)¹¹¹*</td>
<td>0.51 (0.06 to 0.95)</td>
</tr>
<tr>
<td>Shoptaw et al (2005)¹¹¹†</td>
<td>0.42 (-0.02 to 0.86)</td>
</tr>
<tr>
<td>Shoptaw et al (2006)¹³⁸</td>
<td>0.15 (-0.23 to 0.53)</td>
</tr>
<tr>
<td>Roll et al (2006)¹³⁶</td>
<td>0.48 (0.10 to 0.85)</td>
</tr>
<tr>
<td>Peirce et al (2006)¹³⁷</td>
<td>-0.05 (-0.80 to 0.70)</td>
</tr>
<tr>
<td>Shoptaw et al (2008)¹³⁵</td>
<td>0.53 (0.13 to 0.94)</td>
</tr>
<tr>
<td>Sherman et al (2009)¹²³</td>
<td>-0.03 (-0.34 to 0.28)</td>
</tr>
<tr>
<td>Overall (fixed-effects model)</td>
<td>0.28 (0.13 to 0.44)</td>
</tr>
<tr>
<td>Overall (random-effects model)</td>
<td>0.30 (0.11 to 0.49)</td>
</tr>
</tbody>
</table>

Colfax, et al., Lancet, 2010 © Elsevier
Can we find a drug to treat methamphetamine dependence?

- 2 current NIH-funded randomized controlled studies of potential drugs
  - Mirtazapine — analyses in progress
  - Aripiprazole
- All study participants receive HIV and substance use counseling
- Community support and input through community consultant group
Plan Focus Area #4: Structural Change

- **Plan definition:** “New or modified programs, practices, or policies that are logically linkable to HIV transmission and acquisition and that can be sustained over time even when key actors are no longer involved.”

- **Examples:**
  - HIV and STI screening as standard of care in medical settings for persons at risk for HIV
  - Non-harassment policies for drug paraphernalia
  - Client-level linkages to Healthy SF for comprehensive healthcare across all our HIV prevention programs
Outcomes of SF Partner Services, 2004-2008

- 481 interviewed
- 419 partners named
- 363 (87%) located
  - 263 (55%) did not name partners
- 56 (13%) not located
- 313 interviewed
  - 34 (9%) refused
  - 16 (4%) OOJ
  - 200 (92%) of 212 remaining tested
    - 95 (30%) HIV-infected
  - 44 (22%) of tested newly diagnosed HIV+

Marcus. AIDS, 2009. Slide from: Susan Philip
PrEP “Issues”
Potential implementation will be complex — important to start thinking about this now.
New Programmatic Grants to implement the National HIV/AIDS Strategy

- Enhanced Comprehensive HIV Prevention Planning and Implementation for Metropolitan Statistical Areas Most Affected by HIV/AIDS — SFDPH awarded
- Implementing HIV testing in medical settings and linkages to care — SFDPH awarded
- PCSI: Program Collaboration and Service Integration for HIV, STD, TB, and hepatitis — SFDPH awarded
Percentage of MSM HIV/STD Cases within the SF Male Population, 1999-2008

Disparity:  
- HIV: 85.90
- Gonorrhea: 15.17
- Chlamydia: 6.14
- Syphilis*: 59.64

*Cumulative syphilis data from 2004-2008

Sources: HIV Epidemiology Report 2009; SFDPH STD Annual Summary 2008
Acknowledgments

• HIV Prevention Planning Council
• Community Consultant Group
• SFDPH: Kyle Bernstein, Susan Buchbinder, Moupali Das, Teri Dowling, Noah Carraher, Jonathan Fuchs, Albert Liu, Bob Kohn, Sally Liska, Julia Marcus, Tim Matheson, Willi McFarland, Giuliano Nieri, Israel Nieves-Rivera, Tracey Packer, Mike Pandori, Susan Phillip, Henry-Raymond Fisher, Andrew Reynolds, Nyisha Underwood, Michaela Varisto
• UCSF: Bradley Hare, Diane Jones, Chris Pilcher
• University of Miami: Lisa Metsch