The Magnolia Project:

A Pre/Interconceptional Approach to Reducing Black Infant Mortality

Impetus for Using PPOR

- Duval was one of three counties in 1995-97 that had an infant mortality rate significantly higher than the state
- Two factors contribute to higher infant mortality rates in Duval:
  - Proportion of nonwhites in the population
  - Poor outcomes among nonwhites
Infant Mortality Rates, Duval County, 1994-2001

Approaches

- PPOR analysis
- Linking of FIMR findings
- Development of specific interventions for federal Healthy Start grant application
- Integration into ongoing community planning process
Black & White Fetal-Infant Death Rates
By Period of Risk, Duval County 1995-97

<table>
<thead>
<tr>
<th>Weight Range</th>
<th>Maternal Health/Prematurity</th>
<th>Neonatal</th>
<th>Postneonatal</th>
</tr>
</thead>
<tbody>
<tr>
<td>500-1499g</td>
<td>Black 6.9 White 2.3 R= 3.01 (2.14, 4.25 95% C.I.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1500g+</td>
<td>Maternal Care Black 3.4 White 2.0 R= 1.70 (1.12, 2.56 95% C.I.)</td>
<td>Newborn Care Black 1.5 White 1.2 R= 1.22 (0.67, 2.20 95% C.I.)</td>
<td>Infant Care Black 2.8 White 1.9 R= 1.44 (0.69, 2.24 95% C.I.)</td>
</tr>
</tbody>
</table>

Total Feto-Infant Deaths/1000 (Live Births + Fetal Deaths) =
Black 14.6 White 7.4 R=1.96 (1.59, 2.41 95% C.I.)

**PPOR Results**

**PPOR Findings:**
- Greatest racial disparities occurred in Maternal Health and Maternity Care
- Disparities disappeared in the other categories
- Indicate the need for intervention with women before they become pregnant as well as improved access to prenatal care
Fetal & Infant Mortality Review (FIMR)

- Information abstracted from birth, death, medical, hospital and autopsy records
- Family interviews
- ACOG process
- Case review team determines medical, social, financial and other issues that may have impacted on poor outcome

FIMR Process

- 142 fetal and infant cases reviewed by CRT since 1995
  - 83 white
  - 53 black
  - 6 other
- Systematic, not random, sample based on specific criteria
Linking FIMR to PPOR

**Most Frequent FIMR Factors:**
- Infections and STDs
- No Healthy Start screening
- Late/inadequate prenatal care
- Previous poor outcome
- Family planning problems
- General state of mother’s health
- Poor nutrition

**Federal Healthy Start Application**
- RFP in 1999 for projects to address racial disparities in birth outcomes
- Opportunity to use PPOR & FIMR Findings to design interventions
- Proposed a Pre- and Interconceptional Model
The Magnolia Project

- Project area:
  - Five zipcodes in **NW Jacksonville**
    (32202, 32204, 32206, 32208 and 32209)
  - Area accounts for more than half of the Black infant mortality in the city
  - About **25,000 women** age 15-44 years old live in the project area
  - **85%** African-American
The Magnolia Project

Interventions:
- Enhanced clinical care
- Case management & risk reduction
- Outreach
- Community development
The Magnolia Project

Clinic services
- Age 15-44
- Resident of target area
- Pregnant or able to get pregnant
- Health exam > 1 year

Case management
- 15-44 and living in target area
- Not pregnant, but sexually active
- 3 or more risk factors: previous loss, repeated STDs, no family planning, substance abuse, pregnancy <15 yrs, mental health probs, protective services, no source of care

The Magnolia Project

Project experience
- 700+ Women served
  - 100+ case management (3+ months)
- <20% pregnant
- 3,347 clinic visits
- 426 pregnancy tests (73% negative)
The Magnolia Project

Demographic Characteristics (2001-02)
- Age
  - 76.6% 15-25
  - 17.6% 26-35
  - 5.4% 36-43
  - 0.5% 44+
- 88.3% single
- 95.1% African American
- Mean annual income = $6,557
- <20% Medicaid eligible

The Magnolia Project

Clinical Patient Profile (2001-2002)
- 51.5% BV
- 42.7% Family planning issues
- 32.0% Chlamydia
- 27.2% Dental problems
- 20.4% Poor nutrition
The Magnolia Project

Clinical Patient Profile
- 16.5% Previous poor outcome
- 13.6% Abnormal PAP
- 11.7% Gonorrhea
- 10.7% Yeast Infection
- 9.7% Tobacco Use

The Magnolia Project

Case Management Participant Profile

<table>
<thead>
<tr>
<th>Risk Factor/Problem</th>
<th>% (n=70)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Planning Issues</td>
<td>67.1</td>
</tr>
<tr>
<td>Education/Training</td>
<td>44.3</td>
</tr>
<tr>
<td>Job Placement</td>
<td>42.9</td>
</tr>
<tr>
<td>Bacterial Vaginosis</td>
<td>42.9</td>
</tr>
<tr>
<td>Poor Nutrition</td>
<td>38.6</td>
</tr>
<tr>
<td>Repeated STDs</td>
<td>28.6</td>
</tr>
</tbody>
</table>
The Magnolia Project

- Risk Factors by Type
  - 35.1% Medical
  - 64.9% Social
- Duration of Service (current participants)
  - 51% >12 months
  - 13% 9-12 months

The Magnolia Project

<table>
<thead>
<tr>
<th>Duration of Services</th>
<th>Average Risks/Participant</th>
</tr>
</thead>
<tbody>
<tr>
<td>12+ months</td>
<td>12.0</td>
</tr>
<tr>
<td>9-12 months</td>
<td>5.9</td>
</tr>
<tr>
<td>6-8 months</td>
<td>3.6</td>
</tr>
<tr>
<td>3-5 months</td>
<td>6.6</td>
</tr>
<tr>
<td>&lt;3 months</td>
<td>2.2</td>
</tr>
</tbody>
</table>
The Magnolia Project

Risk Status: Current Participants (n=70)
- Average duration: 406 days
- 13.6 risks/problems per participant
- 70% completed referrals
  - 33% resolved
  - 39% managed
  - 2% not resolved

The Magnolia Project

Risk Status at Closure (n=99)
- Average duration: 188 days
- 3.8 risks/problems per participant
- 82% completed referrals
  - 42% resolved
  - 45% managed
  - 5% not resolved
Resident Infant Mortality Rates by Race
Duval County
1995 - 2002 (Provisional)


CityMatCH Practice Collaborative
- Update of initial PPOR analysis (1997-99)
- Maternal Health & Infant Care now areas of concern
- Racial disparities focus
- Phase 2 analysis
  - Birthweight specific analysis
  - Cause of death (Infant Care)
  - Attributable risk
- Integration into HS Planning Process
In conclusion...

- PPOR links analysis to action
- Easily integrated into ongoing community initiatives like FIMR, Healthy Start planning & service delivery
- Can complement & enhance existing MCH efforts