Emerging practices from MCH partnership
Louisville/Jefferson County
Best Practice Profile

InterCHANGE Conference
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MCH issue addressed

Eliminating racial disparities by:
- Fostering community partnership
- Increasing awareness of existing MCH issues and racial disparities by presentations, publications, meetings, round table discussion, etc.
- Developing strategies focused on interconceptional / preconceptional health
Key partners

- Louisville and Jefferson County Health Department
- March of Dimes – strong support and collaboration. MOD funded the local FIMR
- Health Status Assessment Committee
- Board of Health
- City of Louisville, Office of Strategic Planning
- Neighborhood Places
- Park DuValle Community Health Center

Expected results

- To develop a strong local partnership among different agencies, organizations, projects that have the same goal of improving the women and children’s health.
- To implement the preconceptional / interconceptional health care plan as a result of a strong collaboration between the public health professionals and the local medical community
- To decrease the existing racial disparities
Method used =
local MCH partnership/
collaboration

The existing MCH programs:

- Healthy Start Initiative – HRSA funded
- FIMR – MOD funded
(2000-2001 DUI project)
- PPOR
(PPOR-PC, CityMatCH/CDC initiative)
**Recommendations**

- **PPOR Phase 1**
  - Link births with deaths
  - Identify the groups with gaps

- **FIMR**
  - Home interviews + medical records

- **Data + stories**
  - Paint faces behind the numbers
  - Identify problems/gaps in services

- **PPOR Phase 2**
  - Multiple data sources (if available)
  - Statistical data analysis
  - Analyze the impact of different risk factors

**Recommendations**

- Develop evidence-based prevention strategies (preconceptional, during pregnancy and interconceptional) e.g. Healthy Start

- Improve women and children’s health

- Reduce the existing racial disparities

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**PPOR Phase 1**

**Feto-Infant Mortality Rates**

**Jefferson County, All Races, 1997-1999**

<table>
<thead>
<tr>
<th>Maternal Health/ Prematurity</th>
<th>2.93</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal Care</td>
<td>2.55</td>
</tr>
<tr>
<td>Newborn Care</td>
<td>1.55</td>
</tr>
<tr>
<td>Infant Health</td>
<td>2.06</td>
</tr>
<tr>
<td>500-1499 g</td>
<td>264 fetal &amp; infant deaths</td>
</tr>
<tr>
<td>1500+ g</td>
<td>29,048 fetal deaths &amp; live births</td>
</tr>
</tbody>
</table>

**Excluded from the analysis:**

- fetal deaths under 24 weeks and
- live births under 500 grams

**Total IMR = 9.09**

(10% decrease compared to 1996-1998)
Examine the “Opportunity Gap”
Reference Groups

Attempt to choose a simple optimal group; at least 15% of the population

U.S. studies:
- 20 or more years of age
- 13 or more years of education
- Non-Hispanic white women

We used an internal reference group (Jefferson County data) and an external reference group (national group)

PPOR Phase 1
Louisville/Jefferson County: Excess Mortality (Rates) 1997-1999

Total excess internal = 2.85
Total excess external = 3.19
PPOR Phase 1

Maternal Health/ Prematurity (VLBW Deaths)
White 2.27
African Americans 4.93

Maternal Care (Stillbirths)
White 2.18
African Americans 3.66

Newborn Care (Neonatal Deaths)
White 1.4
African Americans 2.11

Infant Health (Postneonatal Deaths)
White 1.53
African Americans 3.38

Louisville/Jefferson County
PPOR Phase 1 findings (1997-1999 data)

- Maternal Health/Prematurity group (VLBW deaths) identified with gaps when target population compared to an internal reference.
- Maternal Care group (fetal deaths = stillbirths of 1,500+ grams) identified with gaps when compared to an external reference group.
- Greatest racial disparities occurred in Maternal Health/Prematurity (VLBW deaths) and Infant Health (postneonatal deaths).
PPOR Phase 1 / Excess rates by NPs when compared to an internal reference group

Maternal Health/Prematurity
Maternal Care
Newborn Care
Infant Health

MH/P and MC by NP were not accurate because of the incomplete geocoding process (missing cases).

Recommendations
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  - Data + stories
  - Statistical data analysis
  - Analyze the impact of different risk factors

- Develop evidence-based prevention strategies (preconceptional, during pregnancy and interconceptional) e.g. Healthy Start

- Improve women and children's health
  - Reduce the existing racial disparities
Phase 2 PPOR Analysis

“To better describe known factors that do and do not contribute to excess feto-infant mortality in the target population to better target and direct prevention efforts.”

Dr. William Sappenfield

PPOR Phase 2

We found that the excess mortality rates of MH/P group is due to the birthweight distribution (Kitagawa formula).

The next question is what are the underlying risk factors of this outcome (VLBW).
Cohort study model (1997-1999 data)

- **Relative Risk (RR)** = the relative probability that exposed will acquire the disease (in this case, VLBW) compared to the probability that the unexposed will get the disease.

- **Attributable risk percent (AR%)** = the proportion of those exposed who have the disease (in this case VLBW) due to exposure itself.

### PPOR Phase 2
**Risk factors exposure for VLBW group**
**Healthy Start area, all races (1997-1999 data)**

<table>
<thead>
<tr>
<th>Risk factors</th>
<th>RR</th>
<th>AR%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Previous preterm/small infant</td>
<td>10.56</td>
<td>90.53%</td>
</tr>
<tr>
<td>2. Inadequate prenatal care</td>
<td>6.23</td>
<td>84.68%</td>
</tr>
<tr>
<td>3. Chronic hypertension</td>
<td>2.76</td>
<td>80.11%</td>
</tr>
<tr>
<td>4. Hypertension during pregnancy</td>
<td>2.46</td>
<td>59.43%</td>
</tr>
<tr>
<td>5. Interval between pregnancy less than 24 months</td>
<td>2.31</td>
<td>56.66%</td>
</tr>
<tr>
<td>6. Alcohol consumption</td>
<td>2.19</td>
<td>54.33%</td>
</tr>
<tr>
<td>7. Diabetes</td>
<td>1.56</td>
<td>36%</td>
</tr>
<tr>
<td>8. Unmarried</td>
<td>1.33</td>
<td>24.9%</td>
</tr>
<tr>
<td>9. Smoking</td>
<td>1.06</td>
<td>5.7%</td>
</tr>
<tr>
<td>10. Education less than 13 years</td>
<td>1.03</td>
<td>2.93%</td>
</tr>
</tbody>
</table>
PPOR Phase 2
Risk factors exposure for VLBW group
African Americans living in Healthy Start area (1997-1999)

<table>
<thead>
<tr>
<th>Risk factors</th>
<th>RR</th>
<th>AR%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Inadequate prenatal care</td>
<td>6.23</td>
<td>83.95%</td>
</tr>
<tr>
<td>2. Previous preterm or small infant</td>
<td>5.85</td>
<td>82.89%</td>
</tr>
<tr>
<td>3. Chronic hypertension</td>
<td>2.76</td>
<td>81%</td>
</tr>
<tr>
<td>4. Alcohol consumption</td>
<td>2.38</td>
<td>57.98%</td>
</tr>
<tr>
<td>5. Interval between pregnancy less than 24 months</td>
<td>2</td>
<td>50.18%</td>
</tr>
<tr>
<td>6. Hypertension during pregnancy</td>
<td>1.98</td>
<td>49.60%</td>
</tr>
<tr>
<td>7. Diabetes</td>
<td>1.88</td>
<td>46.78%</td>
</tr>
<tr>
<td>8. Smoking</td>
<td>1.52</td>
<td>34.38%</td>
</tr>
<tr>
<td>9. Education less than 13 years</td>
<td>1.05</td>
<td>4.96%</td>
</tr>
<tr>
<td>10. Unmarried</td>
<td>0.82</td>
<td>-22.19%</td>
</tr>
</tbody>
</table>

PPOR Phase 2
Discussion/Conclusion

- The risk factors have different patterns by race when ranked in descending order.
- The first three major risk factors for the entire HS area and for African American women living in this area are the same: previous preterm infants, inadequate prenatal care and chronic hypertension.
- Being unmarried is not a risk factor for African Americans.
- The findings will be used to develop prevention strategies that need to be focused on preconceptional/interconceptional health.
- The major limitation of this analysis are:
  - State Vital Statistics files are the only data sources with debatable accuracy and validation (self reporting/missing values).
  - There are just crude RR and AR% calculated; more statistical analysis required (logistic regression will follow).
Recommendations

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**Statistical data analysis**
- Analyze the impact of different risk factors

**Recommendations**

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- Reduce the existing racial disparities

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**FIMR process and updates**

- Local FIMR uses the National model
- 49 contacts in 2001 identified by PPOR mapping process
- 15 cases analyzed (5 cases from Maternal Health/Prematurity group, 12 from Maternal Care group)
- 3 Case Review Team meetings held on May 2001, November 2001 and May 2002
- One of the recommendations: *develop a post partum care plan based on pregnancy outcome*
Recommendations

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Multiple data sources (if available)

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Improve women and children’s health
Reduce the existing racial disparities

Perinatal Health

PPOR findings, complemented by the FIMR recommendation

Preconceptional and interconceptional health as important as prenatal health
**Recommendations**

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**Healthy Start Goals by Model**

**New funding cycle**

**ELIMINATING DISPARITIES (ED) COMPETITION GOALS:**

1. to improve health and social services care coordination for childbearing women and their families living in the project area by providing culturally competent services
2. to improve pregnancy outcomes to pregnant women receiving Healthy Start culturally sensitive case management services
3. to enhance sensitivity to major cultural health and belief practices of professionals and paraprofessional that serve the project area
4. to empower the consortia and community members to shape the services that offset the needs

**INTERCONCEPTIONAL CARE FOR HIGH-RISK WOMEN AND THEIR INFANTS (ICHRW) GOALS:**

1. to improve interconceptional health care and social services for high risk women and their infants living in the project area and to better integrate them into local health system
2. to increase awareness of the providers as well as of the community of the importance of interconceptional care
**Major barriers:**

- Lack of resources (staff and money)
- Competition between MCH programs and other public health programs for limited resources.

**Overcome by:**

- using the existing programs and resources and re-shaping the existing strategies/services based on program evaluation findings
- increasing awareness and local understanding of the MCH issues by using the knowledge gained at the CityMatCH / CDC trainings, conference calls, seminars.
Accomplishments

- Community partnership
- Improve the Healthy Start services
- Implement the interconceptional risk assessment and new postpartum/interconceptional health care plan
- Increase awareness of the existing MCH issues not just of the local department and local medical community, but also of the state partners as well as of the policy makers.

Lessons learned

- Prematurity/VLBW is a complex association of different factors and more research is necessary
- Preconceptional / interconceptional health to be a priority for public health and medical community
- Re-define the content of prenatal care and thus its adequacy or inadequacy (concerns about the way was measured and the impact it had has on pregnant women)
- Improve the existing data and/or develop other data sets as necessary ➔ better data for better information
Lessons learned (continue)

- PPOR integration into the existing community initiatives enhanced the MCH/women’s health capacity/efforts
- Work as a team, build partnership and collaboration
- Be flexible, adjust the system by using the evidence-based findings
- Need right stakeholders and political will to be successful