Introduction

The overall goal of the KY-Moms: Maternal Assistance Towards Recovery (MATR) case management program is to increase positive birth outcomes for high risk pregnant women in Kentucky by reducing inter-related risks. These include substance abuse, mental health problems, and intimate partner violence, which could potentially have a negative impact on the health of the pregnant mother, fetal development, and birth outcomes. KY-Moms MATR case management clients received both traditional case management assistance to meet basic needs such as safe housing, food, and childcare, as well as referrals to treatment services. Clients also received information and support to facilitate a healthy pregnancy and fetus as well as to meet needs after the baby is born.

Evaluation Method

The KY-Moms MATR outcome evaluation includes a face-to-face baseline interview by program staff from eleven Community Mental Health regions to assess these risk factors. In addition, clients are offered the opportunity to be contacted for a postnatal follow-up interview approximately 6 months after the birth of their baby.

Results for this study include analysis of self-report responses on the evidence-based baseline and follow-up for 118 pregnant women whose baby was living with them and were not in a jail or controlled environment.

This Findings at a Glance summarizes results from the full KY-Moms MATR 2019 Outcomes Report1 and is organized into four main sections: (1) changes on the three main factors targeted at prenatal baseline and postnatal follow-up; (2) changes in other factors examined at prenatal baseline and postnatal follow-up; (3) client satisfaction with the KY-Moms MATR program; and (3) birth events and outcomes compared to the general population of mothers.

Description of KY-Moms Clients Included in the Follow-up Sample

One hundred and eighteen clients completed a six-month postnatal follow-up assessment and met criteria to be included in this report. Of those clients:

- They were an average of 22 weeks pregnant and were in the program an average of 19 weeks.
- They were an average of 25 years old and predominately white (89%).
- One-quarter were not married or not currently cohabiting, 67% were married or cohabiting, and 8% were separated/divorced.
- Most were from metropolitan areas (47%) while 29% were from non-metropolitan areas and 25% were from very rural areas.
- About 20% had less than a high school degree, 40% were high school graduates or had their GED, 34% had some college, and 6% had a college or vocational/technical school degree.

1 Findings from the full report can be downloaded from http://cdar.uky.edu/KY-Moms%20MATR/
Factors Targeted by KY-Moms MATR

Measures compare 6 months before the client became pregnant and the past 6 months at postnatal follow-up.

**Substance Use***

<table>
<thead>
<tr>
<th>Substance Use</th>
<th>2015 (n = 136)</th>
<th>2016 (n = 169)</th>
<th>2017 (n = 63)</th>
<th>2018 (n = 106)</th>
<th>2019 (n = 118)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>REPORTED ANY ILLEGAL DRUG USE</strong></td>
<td>47.8%</td>
<td>48.5%</td>
<td>57.1%</td>
<td>59.4%</td>
<td>61.0%</td>
</tr>
<tr>
<td><strong>REPORTED ANY ALCOHOL USE</strong></td>
<td>2.9%</td>
<td>10.1%</td>
<td>6.3%</td>
<td>13.2%</td>
<td>12.7%</td>
</tr>
<tr>
<td><strong>REPORTED SMOKING CIGARETTES</strong></td>
<td>54.4%</td>
<td>52.1%</td>
<td>47.6%</td>
<td>56.6%</td>
<td>62.7%</td>
</tr>
</tbody>
</table>

Overall, the percent of women who reported illegal drug use increased from 2015 to 2019 for both the 6 months before pregnancy and the 6 months after the baby was born.

Trends in illegal drug use at prenatal baseline and postnatal follow-up

Prior to 2019, around half of clients reported alcohol use in the 6 months before pregnancy. In addition, prior to 2019, alcohol use at follow-up generally decreased since 2015. In 2019, however, a greater number of clients reported alcohol use in the 6 months before pregnancy and in the 6 months since having the baby.

Trends in alcohol use at prenatal baseline and postnatal follow-up

Cigarette use was high at prenatal baseline for each year with well over three-quarters of women reporting smoking cigarettes in the six months before pregnancy. At follow-up, a large number of women continued to smoke cigarettes.

Trends in cigarette use at prenatal baseline and postnatal follow-up

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2 All trend analyses present only annual report data at baseline and follow-up and do not include between-year statistical analysis.

***p <.001
Mental Health

Clients who met study criteria for depression and/or anxiety at prenatal baseline was fairly constant over from 2015 to 2018. In 2019, however, the percentage of clients who met study criteria for depression and/or anxiety at prenatal baseline increased from 2018.

Intimate Partner Violence

The number of clients who reported any intimate partner violence at prenatal baseline was fairly consistent over the past 5 years. Overall, the number of clients who reported intimate partner violence at follow-up was also fairly consistent with 14.7% to 11.1% of clients reporting intimate partner violence in the 6 months since the birth of the baby (with the exception of 2017).

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3 Any intimate partner violence was defined in this study as a client indicating “yes” to any of the partner violence questions asked in the survey (e.g., verbal and psychological abuse, extreme jealousy and control, threats of violence towards client and others close to them, physical violence, stalking, partner purposely damaging or destroying property, sexual assault/threats of assault) at each period.

***p < .001
Economic Hardship

TRENDS IN DIFFICULTY MEETING BASIC LIVING NEEDS

- At intake: 44% reported difficulty in meeting basic living needs.
- At follow-up: 38% reported difficulty in meeting basic living needs.

TRENDS IN DIFFICULTY MEETING HEALTH CARE NEEDS*

- At intake: 29% reported difficulty in meeting healthcare needs.
- At follow-up: 16% reported difficulty in meeting healthcare needs.

*I like how she helped me explore my options and resources and come up with a plan.”
- KY-MOMS MATR FOLLOW-UP CLIENT

Other factors examined at postnatal follow-up

From 2015 to 2017, the number of clients who reported difficulty meeting basic living needs at follow-up significantly decreased from baseline. In 2018, however, the number of clients who reported difficulty sharply increased from 2017 and there was very little change from baseline to follow-up.

Ratings of experience with KY-Moms MATR program

At follow-up, clients were asked to rate their level of satisfaction with the treatment program on a scale from 1 (worst treatment imaginable) to 10 (best treatment).

Almost all clients in the postnatal follow-up sample indicated they would recommend KY-Moms MATR case management to a friend.
Birth Events and Outcomes

KY-Moms MATR program Clients Compared to the General Population of Mothers

The Kentucky Vital Statistics birth event data set was used to examine birth outcomes of KY-Moms MATR clients and their babies compared to mothers in the state who did not participate in the study. Below are characteristics which differ significantly between the two groups:

<table>
<thead>
<tr>
<th>AGE**</th>
<th>EDUCATION***</th>
<th>MARITAL STATUS***</th>
<th>COMMUNITY***</th>
<th>SMOKING***</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>85%</td>
<td>33%</td>
<td>47%</td>
<td>67%</td>
</tr>
<tr>
<td>(Average age)</td>
<td>At least HS grad/GED</td>
<td>Married/ Cohabiting</td>
<td>Metropolitan</td>
<td>Smokers</td>
</tr>
<tr>
<td>27</td>
<td>89%</td>
<td>57%</td>
<td>60%</td>
<td>21%</td>
</tr>
<tr>
<td></td>
<td>At least HS grad/GED</td>
<td>Married/ Cohabiting</td>
<td>Metropolitan</td>
<td>Smokers</td>
</tr>
</tbody>
</table>

Even with risk factors for negative birth outcomes before coming into the program (including alcohol and illegal drug use, high rates of smoking, depression or anxiety symptoms, and intimate partner abuse), their birth outcomes were very positive overall, and were nearly identical to the general population of mothers and babies.

Conclusion

This study provides support of the efforts by the Kentucky Division of Behavioral Health to address the rising statewide and national problem of drug-exposed pregnancies, given the positive changes in the women’s substance-using behavior once interventions were initiated. Trend reports provided throughout this report reflect the importance of annual data collection. These data trends over time can show consistency, improvement, or highlight an area which may need further attention in the KY-Moms MATR program. Overall, evaluation results indicate that pregnant women participating in the KY-Moms MATR program significantly improved on a variety of inter-related risk factors including substance use, mental health symptoms, and intimate partner violence and had birth outcomes similar to the general population of mothers.

No significant differences in birth outcomes for KY-Moms MATR clients compared to the general population of mothers

<table>
<thead>
<tr>
<th>GESTATIONAL AGE</th>
<th>BIRTH WEIGHT</th>
<th>APGAR SCORE</th>
<th>PRENATAL VISITS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>38.1</strong> Average weeks</td>
<td><strong>7lbs, 0oz</strong> Average birth weight</td>
<td><strong>8.8</strong> Average score</td>
<td><strong>11.4</strong> Average number of visits</td>
</tr>
<tr>
<td><strong>38.3</strong> Average weeks</td>
<td><strong>7lbs, 3oz</strong> Average birth weight</td>
<td><strong>8.8</strong> Average score</td>
<td><strong>11.8</strong> Average number of visits</td>
</tr>
</tbody>
</table>

Each birth outcome was entered as the dependent variable in a separate binary logistic regression model with KIDS NOW Plus participation as the predictor variable and the covariates of mother’s age, education (i.e., high school diploma or higher), area of residence (metropolitan vs. non-metropolitan county), marital status, and smoking at the time of the birth. The alpha level was set at p < .01.

* 114 KY-Moms MATR clients and 53,641 mothers in the general population in Kentucky who gave birth between December 2016 and December 2017; **p<.01, ***p<.001. 

5 Each birth outcome was entered as the dependent variable in a separate binary logistic regression model with KIDS NOW Plus participation as the predictor variable and the covariates of mother’s age, education (i.e., high school diploma or higher), area of residence (metropolitan vs. non-metropolitan county), marital status, and smoking at the time of the birth. The alpha level was set at p < .01.