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 use/misuse, 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 69 pregnant women who were not in a jail or controlled environment and whose baby was living with them.

This Findings at a Glance summarizes results from the full KY-Moms MATR 2020 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 MATR Clients Included in the Follow-up Sample

Sixty-nine 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 18 weeks.
- They were an average of 26 years old and predominately white (87%).
- Thirty percent were not married or currently cohabiting, 59% were married or cohabiting, and 10% were separated/divorced.
- Most were from metropolitan areas (55%) while 30% were from micropolitan areas and 15% were from very rural areas.
- Over two-thirds of clients (68%) were not currently employed at prenatal baseline.
- Ten percent of clients considered themselves to be homeless.

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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**

**Reported Any Illegal Drug Use***

- Baseline: 64%
- Follow-up: 7%

**Reported Any Alcohol Use***

- Baseline: 52%
- Follow-up: 23%

**Reported Smoking Cigarettes***

- Baseline: 75%
- Follow-up: 63%

### Trends in illegal drug use at prenatal baseline and postnatal follow-up²

The percent of women who reported illegal drug use in the 6 months before pregnancy appears to have increased since 2015. The percent of women who reported illegal drug use in the past 6 months at postnatal follow-up, overall, appears stable.

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

With the exception of 2019, around half of clients reported alcohol use in the 6 months before pregnancy. In addition, alcohol use at follow-up appeared to decrease from 2015 to 2017 but almost doubled in 2020.

### Trends in cigarette 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.

*p < .05, ***p < .001

² For each trend report presented, the years correspond to years in which the annual reports were published. In addition, all trend analyses present only annual report data at baseline and follow-up and do not include between-year statistical analysis.
Mental Health

**Trends in depression and/or anxiety at prenatal baseline and postnatal follow-up**

<table>
<thead>
<tr>
<th>Year</th>
<th>Prenatal Baseline</th>
<th>Postnatal Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>41.9%</td>
<td>16.9%</td>
</tr>
<tr>
<td>2016</td>
<td>46.7%</td>
<td>29.0%</td>
</tr>
<tr>
<td>2017</td>
<td>47.6%</td>
<td>11.1%</td>
</tr>
<tr>
<td>2018</td>
<td>40.6%</td>
<td>33.0%</td>
</tr>
<tr>
<td>2019</td>
<td>54.7%</td>
<td>35.9%</td>
</tr>
<tr>
<td>2020</td>
<td>69.6%</td>
<td>31.9%</td>
</tr>
</tbody>
</table>

The percent of clients who met study criteria for depression and/or anxiety at prenatal baseline was fairly consistent from 2015 to 2018; however after 2018, the percent of clients appeared to increase.

At follow-up, the degree to which the percent of clients who met study criteria for depression and/or anxiety decreased fluctuated from 2015 to 2018.

**Intimate Partner Abuse**

**Trends in any intimate partner abuse at prenatal baseline and postnatal follow-up**

<table>
<thead>
<tr>
<th>Year</th>
<th>Prenatal Baseline</th>
<th>Postnatal Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>27.2%</td>
<td>14.7%</td>
</tr>
<tr>
<td>2016</td>
<td>28.4%</td>
<td>15.4%</td>
</tr>
<tr>
<td>2017</td>
<td>33.3%</td>
<td>1.6%</td>
</tr>
<tr>
<td>2018</td>
<td>33.3%</td>
<td>12.4%</td>
</tr>
<tr>
<td>2019</td>
<td>25.6%</td>
<td>11.1%</td>
</tr>
<tr>
<td>2020</td>
<td>36.2%</td>
<td>13.0%</td>
</tr>
</tbody>
</table>

The percent of clients who reported any partner abuse at prenatal baseline was fairly consistent over the previous 6 years. In 2020, however, the percent of clients who reported any partner abuse appeared to increase compared to 2019. Overall, the percent of clients who reported partner abuse at follow-up was also fairly consistent in the 6 months since the birth of the baby.

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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***
Other factors examined at postnatal follow-up

**Economic Hardship**

The percent of clients who reported having difficulty meeting basic living needs in the six months before pregnancy remained fairly consistent over the past 6 years at baseline. From 2015 to 2017, the number of clients who reported difficulty meeting basic living needs at follow-up significantly decreased from baseline. In 2020, there was a larger decrease from baseline to follow-up in clients reporting difficulty meeting basic living needs.

**REPORTED DIFFICULTY MEETING BASIC LIVING NEEDS**
- **52%** at baseline
- **26%** at follow-up

**REPORTED DIFFICULTY MEETING HEALTH CARE NEEDS**
- **30%** at baseline
- **19%** at follow-up

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Trends in difficulty meeting basic living needs at prenatal baseline and postnatal follow-up

The percent of clients who reported having difficulty meeting basic living needs in the six months before pregnancy remained fairly consistent over the past 6 years at baseline. From 2015 to 2017, the number of clients who reported difficulty meeting basic living needs at follow-up significantly decreased from baseline. In 2020, there was a larger decrease from baseline to follow-up in clients reporting difficulty meeting basic living needs.

**REPORTED DIFFICULTY MEETING HEALTH CARE NEEDS**
- **52.9%** at prenatal baseline
- **26.1%** at postnatal follow-up

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Trends in difficulty meeting health care needs at prenatal baseline and postnatal follow-up

Overall, at baseline, the percent of clients reporting that they had difficulty meeting health care needs has steadily declined. In 2015, almost half of clients reported having difficulty meeting health care needs in the 6 months before pregnancy and in 2020, around 30% of clients reported having difficulty meeting basic health care needs. At postnatal follow-up, on average, less than one-fifth of clients reported struggling to meet health care needs.

**REPORTED DIFFICULTY MEETING HEALTH CARE NEEDS**
- **47.2%** at prenatal baseline
- **44.1%** at postnatal follow-up

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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).

- **92** Average rating
- **99%** Almost all clients in the postnatal follow-up sample indicated they would recommend KY-Moms MATR case management to a friend.

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“I felt like if I needed anything they were always there.”
- KY-Moms MATR follow-up client

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*p < .01.
**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>Characteristics</th>
<th>KY-Moms MATR</th>
<th>General Population</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AGE</strong></td>
<td>26 Average age</td>
<td>27 Average age</td>
</tr>
<tr>
<td><strong>EDUCATION</strong>*</td>
<td>3% College degree</td>
<td>47% College degree</td>
</tr>
<tr>
<td><strong>MARITAL STATUS</strong>*</td>
<td>30% Married</td>
<td>58% Married</td>
</tr>
<tr>
<td><strong>COMMUNITY</strong></td>
<td>55% Metropolitan</td>
<td>61% Metropolitan</td>
</tr>
<tr>
<td><strong>SMOKING</strong>*</td>
<td>55% Smokers</td>
<td>26% Smokers</td>
</tr>
</tbody>
</table>

* 66 KY-Moms MATR clients and 61,064 mothers in the general population in Kentucky who gave birth between December 2017 and January 2019; **p<.05, ***p<.001.

Note: Responses in the birth event data set may vary from responses in the KY-Moms MATR assessments because the time frames are different.

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), KY-Moms MATR clients’ birth outcomes were very positive overall, and were nearly identical to the general population of mothers and babies.

<table>
<thead>
<tr>
<th>Birth Events and Outcomes</th>
<th>KY-Moms MATR</th>
<th>General Population</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GESTATIONAL AGE</strong></td>
<td>38.1 Average weeks</td>
<td>38.2 Average weeks</td>
</tr>
<tr>
<td><strong>BIRTH WEIGHT</strong></td>
<td>7lbs, 5oz Average birth weight</td>
<td>7lbs, 3oz Average birth weight</td>
</tr>
<tr>
<td><strong>APGAR SCORE</strong></td>
<td>8.7 Average score</td>
<td>8.8 Average score</td>
</tr>
<tr>
<td><strong>PRENATAL VISITS</strong></td>
<td>11.7 Average number of visits</td>
<td>11.8 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 KY-Moms MATR 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.

**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.