

## Meadows Mental Health Policy Institute

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### Collaborative Care (CoCM) Key Reference List

#### Adult CoCM Randomized Controlled Trials / Systematic Reviews / Meta-Analyses

- The multi-site Improving Mood Promoting Access to Collaborative Care Treatment (IMPACT) study, which remains the largest CoCM randomized clinical trial to date, showed over six months that 49% of people achieved depression response and 30% achieved depression remission with none seeing a psychiatrist face-to-face. The corresponding figures for usual primary care depression treatment (without Collaborative Care) were 31% and 17%, respectively.<sup>1</sup>
- A Cochrane systematic review / meta-analysis, including 79 randomized controlled trials (RCT), associated CoCM with significant improvement in depression and anxiety outcomes compared with usual care.<sup>2</sup>
- A systematic review / meta-analysis, including 37 RCTs, found CoCM to be more effective than usual care in improving depression outcomes in the short and longer terms.<sup>3</sup>
- A systematic review / meta-analysis, including 69 RCTs, found CoCM to be effective in achieving clinically meaningful improvements in depression outcomes and public health benefits in a wide range of populations, settings, and organizations.<sup>4</sup>
- A systematic review / meta-analysis, including 31 RCTs, found CoCM to be effective for people with depression alone as well as for people with depression and chronic physical conditions.<sup>5</sup>
- In the Depression Improvement Across Minnesota: Offering a New Direction (DIAMOND) randomized study with a stepped-wedge design, patients in CoCM clinics had response and remission rates at 24 weeks of 46.7% and 36.4%, respectively. However, usual primary care depression groups also had similar rates of depression response and remission.<sup>6</sup>
- In a large RCT of the Team Care intervention (i.e., CoCM for depression and poorly controlled diabetes or coronary heart disease, or both), patients in the intervention group had greater overall 12-month improvement across glycated hemoglobin (i.e., blood sugar) levels, LDL cholesterol levels, systolic blood pressure, and SCL-20 depression scores.<sup>7</sup>

#### Non-Randomized CoCM Studies Conducted in Real-World Settings

- In a CoCM implementation across community health centers in Washington State, the mean overall rate of depression improvement increased from 39.5% to 43.1% over the first two years. Beginning in the third year, depression improvement rates continued to increase, albeit at a slower rate, until reaching a peak of 45.6% in year five. Beginning in

the sixth year, the percentage of patients with depression improvement decreased, reaching its final value of 41.8% in year eight.<sup>8</sup>

- Implementation of CoCM in six Texas clinics showed response rates of 32–83% across the clinics and remission rates of 25–70% (at 16 weeks) and 26–77% (at 24 weeks).<sup>9</sup>
- Implementation of CoCM across 135 primary care clinics in the Northwestern United States showed response rates of 33% at 12 weeks and 38% at 24 weeks, as well as remission rates of 23% at 12 weeks and 25% at 24 weeks. Of note, there was no comparison group in this study, so the baseline response and remissions rates are unknown.<sup>10</sup>
- Implementation of CoCM in seven New York City clinics showed response rates for patients with depression or anxiety at 10–14 weeks was 58% across the clinics. For remission rates at 10–14 weeks, 19% of patients with depression and 29% of patients with anxiety were reported to be in remission across the clinics.<sup>11</sup>

### CoCM in Pediatrics

- A systematic review on pediatric behavioral health integration (BHI) included 11 studies, three of which implemented CoCM and two of which implemented multiple components of CoCM. All three of the CoCM studies found that the intervention group was associated with improved outcomes relative to the comparison group.<sup>12</sup>
- A RCT of CoCM for adolescents with depression found that the CoCM group had greater improvement at 12 months in depression symptoms (68% vs. 39%) and remission (50% vs. 21%) than the control group.<sup>13</sup>
- A RCT of CoCM for children with attention-deficit / hyperactivity disorder (ADHD) symptoms found that those in the enhanced CoCM care group experienced better symptom trajectories.<sup>14</sup>
- A RCT of CoCM for children with behavior problems, ADHD, or anxiety found that the CoCM group was associated with improved access, child / parent outcomes, consumer satisfaction, and clinician-reported skills and efficacy.<sup>15</sup>
- A RCT of modified CoCM for adolescents and young adults with depression found that the CoCM intervention was associated with significantly higher mental health care use, lower depressive symptoms, higher quality of life, and greater satisfaction.<sup>16</sup>
- A retrospective cohort study of EMERALD (Early Management and Evidence-Based Recognition of Adolescents Living with Depression), a CoCM program for adolescents with depression, found that the CoCM Intervention group had higher rates of remission and response than the comparison group.<sup>17</sup>
- An uncontrolled study of CoCM for children and adolescents with anxiety, depression, or ADHD found CoCM to be associated with improved access to care, improved pediatrician attitudes, and improvements in symptoms.<sup>18</sup> A subsequent uncontrolled study on the same implementation found for children and adolescents with ADHD that

significant improvement was observed from baseline to any initial follow-up measure and at six and 18 weeks. Additionally, significant differences in treatment outcomes were identified for children and adolescents with anxiety receiving psychotherapy alone and those receiving medication management and psychotherapy.<sup>19</sup>

### CoCM Mitigating Health Disparities

- A systematic review containing 19 studies found that CoCM mitigates treatment disparities for people of color, including Black, Latino, Asian, Native American, and Alaska Native patients.<sup>20</sup>

### CoCM in Specific Populations

- CoCM treatment in rural settings has been found to be as efficacious as urban treatment and primary care providers reported positive experiences overall.<sup>21</sup>
- CoCM has been shown to be efficacious in populations with depression and specific medical co-morbidities, such as those with recent cardiac events,<sup>22</sup> cancer,<sup>23</sup> diabetes,<sup>24</sup> and HIV.<sup>25</sup>
- CoCM has been shown to be efficacious for depression in federally qualified healthcare centers (FQHCs) with telemedicine-based collaborative care teams yielding the best outcomes.<sup>26</sup>
- CoCM has been shown to be efficacious for depression when delivered through telehealth.<sup>27</sup>
- CoCM has been shown to be efficacious for trauma survivors<sup>28</sup> and post-traumatic stress disorder (PTSD).<sup>29</sup>
- CoCM has been shown to be efficacious for patients with depression and substance use disorders (SUD).<sup>30,31</sup>

### CoCM in Maternal Mental Health

- Women enrolled in CoCM through their women's health provider have been shown to experience greater improvement in depressive symptoms, better overall functioning, greater satisfaction with care, and better adherence with antidepressants when prescribed.<sup>32</sup>
- Compared to mothers receiving public health maternity support services, mothers enrolled in a culturally relevant CoCM program showed significant improvement in quality of care, depression severity, and remission rates.<sup>33</sup>
- A mixed methods study looking at the implementation of CoCM in a rural OB-GYN clinic showed 87% of eligible patients enrolled in the CoCM program and 64% of them showed greater than a 50% decrease in their PHQ-9 scores.<sup>34</sup>
- A secondary data analysis of the electronic records showed CoCM can be useful in women's health practices in reducing anxiety symptoms over a 90-day time period.<sup>35</sup>

### CoCM Return on Investment

- CoCM has been shown to have a return on investment (ROI) of six to one for patients with depression over a four-year period.<sup>36</sup>
- Spending on CoCM services did not significantly increase overall healthcare costs and was noted to be generally modest.<sup>37</sup>
- If CoCM services were available to all Medicaid beneficiaries nationwide with diagnosed depression (approximately 20% of the general Medicaid population), Medicaid could collectively save approximately \$15 billion annually.<sup>38</sup>
- According to a 2017 evaluation, individuals with behavioral health conditions, including mental health and SUDs, are associated with a projected \$406 billion in additional annual healthcare costs across all payers. An estimated 9–17% of this additional spending can be saved annually through effective BHI with models such as CoCM. This equates to estimated savings of \$38–\$68 billion annually across all payers, or \$19.3–\$38.6 billion, \$6.0–\$12.0 billion, and \$12.3–\$17.2 billion for commercial payers, Medicare, and Medicaid, respectively.<sup>39</sup>
- CoCM is cost-effective for patients with depression using the standard of \$50,000 per Quality-Adjusted Life Year (QALY).<sup>40</sup>
- CoCM is associated with approximately \$1,000 in total cost of care savings for patients with depression and diabetes, equating to an average of approximately 60 additional depression-free days over a two-year period.<sup>41</sup>
- Relative to treatment models that co-locate independent mental health clinicians in primary care, patients receiving CoCM services were found to have significantly lower odds of emergency department visits and medical specialty office visits, while differences in total costs of care across the two treatment models were not significantly different.<sup>42</sup>

### CoCM Financing

- CoCM reimbursement with novel billing codes has been shown to be feasible in real-world settings, leading to greater financial stability for practices.<sup>43,44</sup>
- CoCM code utilization has increased among Medicare beneficiaries since 2017.<sup>45,46</sup>
- Regarding CoCM implementation costs, the median cost per CoCM clinic implemented was \$160,000, with this figure ranging from \$49,000 to \$650,000. Smaller health systems had a higher median cost per clinic implemented (\$200,000), while larger systems had a smaller median cost (\$100,000). Across health systems, leadership personnel costs accounted for 70% of total CoCM costs, suggesting that efficient implementation with the involvement of fewer high-level leadership personnel for shorter periods may be favorable in reducing overall implementation spending.<sup>47</sup>

- The use of CoCM and other BHI codes in the commercial market increased from 2018 to 2021 (by between 10 and 35 times). Payment for CoCM and other BHI codes in the commercial market increased from 2018 to 2021. Payment for CoCM and BHI codes in the commercial market is higher than Medicare payment for the same codes.<sup>48</sup>
- A lack of billing clarity and awareness as well as workforce issues hinder the adoption of CoCM among FQHCs. Furthermore, FQHCs are not fully equipped with the resources, workflows, staffing, and payment structures to support CoCM and BHI billing. Increased financial and logistical support to build practice infrastructure is needed to reduce the administrative complexity and inadequate reimbursement mechanisms that currently hinder the implementation of the CoCM and integrated care delivery.<sup>49</sup>
- Major barriers to CoCM billing at scale include mandatory consent documentation and patient cost-sharing requirements.<sup>50</sup>

## Endnotes

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