

## Meadows Mental Health Policy Institute

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### Collaborative Care (CoCM) Key Reference List

#### Effectiveness of Adult CoCM: RCTs and Meta-Analyses

- The multi-site Improving Mood Promoting Access to Collaborative Care Treatment (IMPACT) study, which remains the largest CoCM RCT 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> See PDF [here](#).
- The eIMPACT RCT suggests integrating digital health interventions into CoCM for depression led to meaningful improvements in depressive symptoms for 43% of people at 12 months (compared to only 17% of those in usual care).<sup>2</sup> Benefits were sustained up to 24 months and extended to reductions in anxiety symptoms and increased positive<sup>3</sup> See PDFs [here](#) and [here](#).
- A Cochrane systematic review / meta-analysis, including 79 RCTs, associated CoCM with significant improvement in depression and anxiety outcomes compared with usual care.<sup>4</sup> See PDF [here](#).
- 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>5</sup> See PDF [here](#).
- 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>6</sup> See PDF [here](#).
- 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>7</sup> See PDF [here](#).
- 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>8</sup> See PDF [here](#).
- 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>9</sup> See PDF [here](#).
- CoCM has been shown to be efficacious for depression when delivered through telehealth.<sup>10,11</sup> See PDFs [here](#) and [here](#).

- CoCM has been shown to be efficacious in populations with depression and specific medical co-morbidities, such as those with recent cardiac events,<sup>12,13</sup> cancer,<sup>14</sup> diabetes,<sup>15</sup> and HIV.<sup>16</sup> See PDFs [here](#), [here](#), [here](#), and [here](#).
- CoCM has been shown to be efficacious for trauma survivors<sup>17</sup> and post-traumatic stress disorder (PTSD).<sup>18</sup> See PDFs [here](#) and [here](#).

### Adult CoCM in Real-World Settings: Implementation and Observational Studies

- 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>19</sup> See PDF [here](#).
- 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 remission rates are unknown.<sup>20</sup> See PDF [here](#).
- 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>21</sup> See PDF [here](#).
- Implementation of a virtual CoCM program in a large integrated health care system in Northern California led to greater symptom improvement for anxiety and depression compared to those in specialty psychiatry.<sup>22</sup> See PDF [here](#).
- The Supportive Oncology Collaborative, a CoCM program integrating behavioral health and palliative care in a cancer center in Massachusetts led to depression response rates (34.9% at 12 weeks and 54.5% at 24 weeks)<sup>23,24</sup> of CoCM in individuals with cancer.<sup>25</sup> See PDFs, [here](#), and [here](#), [here](#), and [here](#).

### CoCM in Pediatric Settings

- 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>26</sup> See PDF [here](#).
- A RCT of CoCM for adolescents with depression found that children in the intervention had greater improvement at 12 months in depression symptoms (68% vs. 39%) and remission (50% vs. 21%) compared to those in the control group.<sup>27</sup> See PDF [here](#).

- 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>28</sup> See PDF [here](#).
- 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>29</sup> See PDF [here](#).
- 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>30</sup> See PDF [here](#).
- 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>31</sup> See PDF [here](#).
- A study of CoCM for children and adolescents with anxiety, depression, or ADHD found CoCM services to be associated with improved access to care, improved pediatrician attitudes, and symptom improvements.<sup>32</sup> For children and adolescents with ADHD, 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>33</sup> See PDFs [here](#) and [here](#).

### CoCM and 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>34</sup> See PDF [here](#).
- In a real-world implementation and effectiveness study of a CoCM program consisting of 148 adults with diagnoses of depression and anxiety in an urban academic setting situated in a mental health shortage area, significant reductions in depression and associated symptoms were observed among majority racial and ethnic minority patient population.<sup>35</sup> See PDF [here](#).

### CoCM in Federally Qualified Health Centers (FQHCs) and Rural Health Centers (RHC)

- Studies show that CoCM treatment in rural clinics is as effective as in urban clinics,<sup>36</sup> across older and younger adults.<sup>37</sup> Primary care providers in these settings also report positive experiences implementing the model. See PDFs [here](#) and [here](#).
- In a longitudinal study in one FQHC, patients receiving CoCM services experienced meaningful reductions in depressive symptoms, with 63% of patients showing evidence

of depression remission at 12 months. Longer enrollment, higher fidelity to CoCM, and greater treatment adherence were all linked to symptom improvements<sup>38</sup> See PDF [here](#).

- A RCT at FQHCs found CoCM to be efficacious for treating depression, with the strongest results seen in clinics using telemedicine-based collaborative care teams.<sup>39</sup> See PDF [here](#).

### CoCM and Substance Use Disorders

- CoCM has been shown to be efficacious for patients with depression and substance use disorders (SUD).<sup>40,41</sup> See PDFs [here](#) and [here](#).
- CoCM adapted for opioid use disorder (OUD) led to a greater reduction in the number of days of nonmedical opioid use compared to standard CoCM for mental health symptoms alone.<sup>42</sup> Even patients with probable OUD and co-occurring mental illness engaged with care managers and received<sup>43</sup>CoCM with fidelity. See PDFs [here](#) and [here](#).
- CoCM resulted in significantly more access to treatment and abstinence from alcohol and drugs at 6 months, than usual care among adults with opioid and/or alcohol use disorders (OAU) seen in primary care.<sup>44</sup> See PDF [here](#).
- CoCM delivered by telehealth has shown preliminary efficacy for chronic pain and substance use for rural-residing veterans with co-occurring chronic musculoskeletal pain and substance use disorders.<sup>45</sup> See PDF [here](#).

### CoCM and Suicidal Ideation and Behaviors

- A large meta-analysis found that CoCM was associated with significant reductions in suicidal ideation at four to six months post-intervention, with the greatest impact observed among adults aged 65 years and older. Embedding a psychological intervention within CoCM was identified as the strongest factor contributing to reductions in suicidal ideation.<sup>46</sup> See PDF [here](#).
- In a community-based CoCM program, rates of suicidal ideation among participants declined from 11% at enrollment in CoCM to 7% after treatment, alongside improvements in depression and anxiety symptoms.<sup>47</sup> See PDF [here](#).
- One RCT found that older adults receiving CoCM services experienced lower rates of suicidal ideation compared to those receiving usual care at 12 months (9.8% vs. 15.5%), with effects sustained at 18 months (8% vs. 13.3%) and 24 months (10% vs. 13.9%).<sup>48</sup> See PDF [here](#).
- Adults aged 60 years or older who received CoCM services had a 2.2-fold greater decline in suicidal ideation and higher rates of depression remission compared to usual care at 4 months (26.6% vs. 15.2%), 8 months (36% vs. 22.5%) and 24 months (45.4% vs. 31.5%).<sup>49</sup> See PDF [here](#).

- A joint systematic review and meta-analysis found that CoCM reduced suicidal behavior by 44% among patients with depression or at risk of suicide in primary care settings.<sup>50</sup> See PDF [here](#).

### 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>51</sup> See PDF [here](#).
- 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>52</sup> See PDF [here](#).
- 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>53</sup> See PDF [here](#).
- 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>54</sup> See PDF [here](#).

### CoCM and 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>55</sup> See PDF [here](#).
- Spending on CoCM services did not significantly increase overall healthcare costs and was noted to be generally modest.<sup>56</sup> See PDF [here](#).
- 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>57</sup> See PDF [here](#).
- 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>58</sup> See PDF [here](#).
- CoCM is cost-effective for patients with depression using the standard of \$50,000 per Quality-Adjusted Life Year (QALY).<sup>59</sup> See PDF [here](#).
- 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>60</sup> See PDF [here](#).

- 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>61</sup> See PDF [here](#).

### CoCM and 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>62,63</sup> See PDFs [here](#) and [here](#).
- CoCM code utilization has increased among Medicare beneficiaries since 2017.<sup>64,65</sup> See PDFs [here](#) and [here](#).
- 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>66</sup> See PDF [here](#).
- 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>67</sup> See PDF [here](#).
- 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>68</sup> See PDF [here](#).
- Major barriers to CoCM billing at scale include mandatory consent documentation and patient cost-sharing requirements.<sup>69</sup> See PDF [here](#).

## Endnotes

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