May 22, 2025

Collaborative Care Model (CoCM):

Promoting Adoption in Massachusetts

Virna Little, PsyD, LCSW-r
Co-Founder, Concert Health
Co-Founder, Zero Overdose

MAMH
Massachusetts Association for Mental Health

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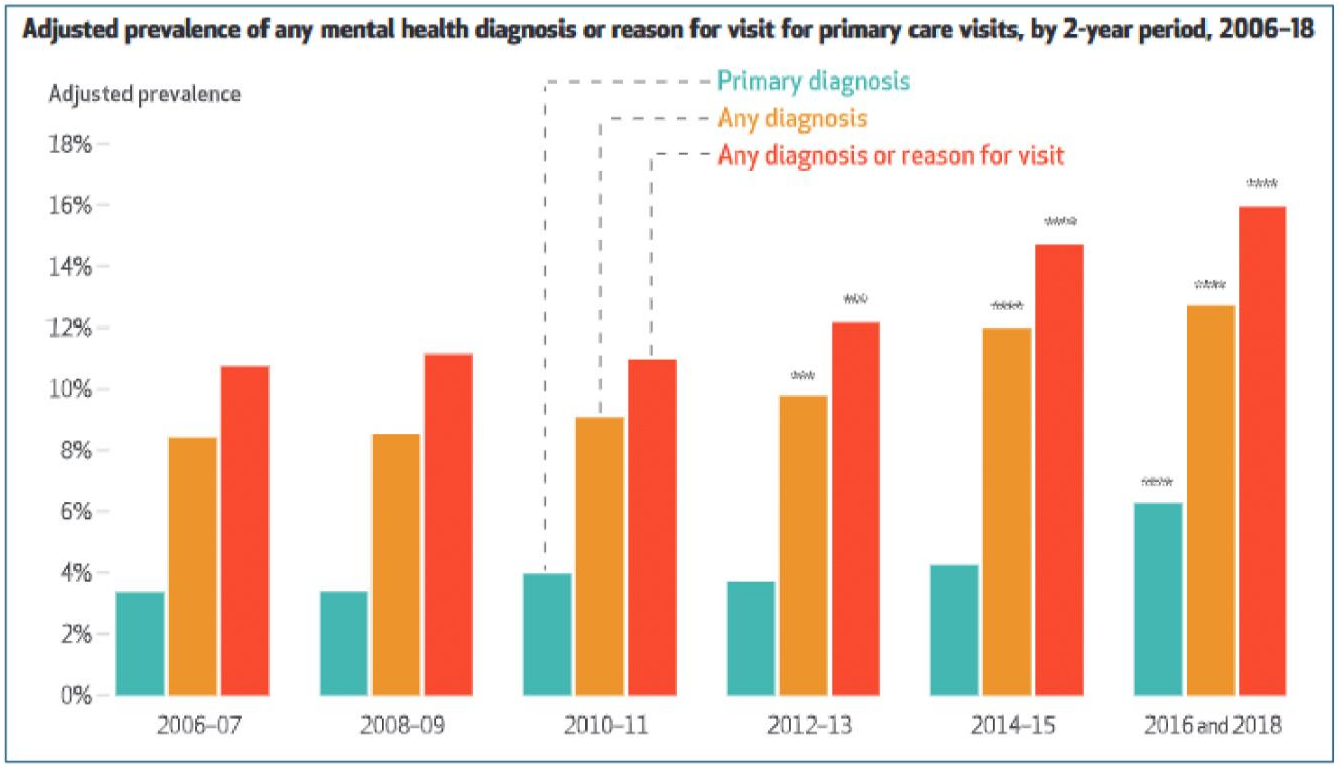
MHTARI
Mental Health Treatment and Research Institute

MHPF

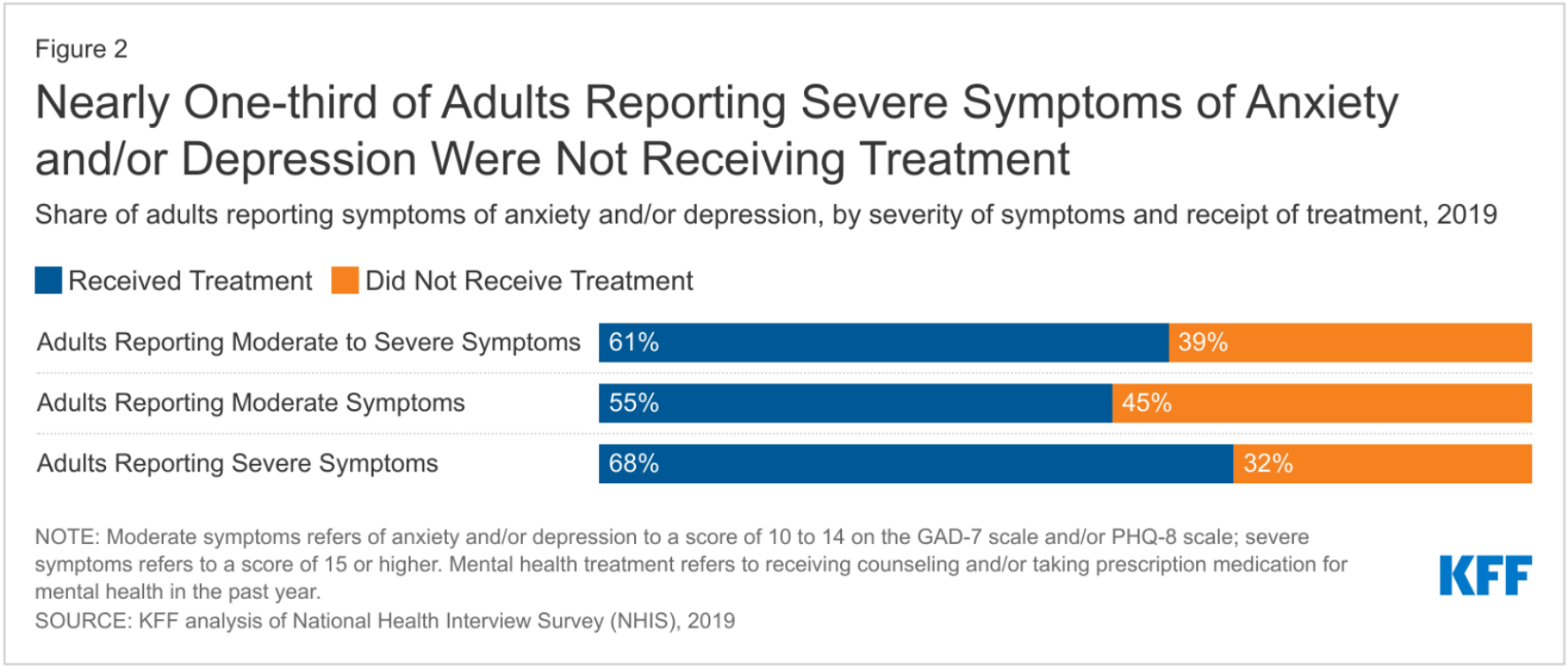
Bowman Family Foundation

Rising Mental Health Needs in Primary Care



Source: Rotenstein, L. S., Edwards, S. T., & Landon, B. E. (2023). Adult primary care physician visits increasingly address mental health concerns. *Health Affairs, 42*(2), 163-171. https://doi.org/10.1377/hlthaff.2022.00705

One Third of Adults in Need Receive No Treatment



Source: Panchal, N., Rae, M., Saunders, H., Cox, C., & Rudowitz, R. (2022, March 24). *How does use of mental health care vary by demographics and health insurance coverage?* Kaiser Family Foundation. https://www.kff.org/mental-health/issue-brief/how-does-use-of-mental-health-care-vary-by-demographics-and-health-insurance-coverage/

Higher Medical Costs of Patients with MHSUD Comorbidities

FIGURE 9 EXCERPTS FROM MILLIMAN: AVERAGE ANNUAL HEALTHCARE TREATMENT COSTS (SERVICES AND PRESCRIPTION DRUGS) PER INDIVIDUAL BY BEHAVIORAL HEALTH CATEGORY, 2017 TOTAL POPULATION

BH CATEGORY	INDIVIDUALS		AVERAGE ANNUAL HEALTHCARE COSTS		% OF COSTS FOR BEHAVIORAL HEALTH	COSTS RELATIVE TO "NO BH"
	NUMBER	%	BEHAVIORAL HEALTH	MEDICAL/ SURGICAL		MEDICAL/ SURGICAL
No BH	15,275,323	73%	$0	$3,552	0.0%	1.0x
Any MH	5,317,964	25%	$1,017	$11,204	8.3%	3.2x
Any SUD	908,499	4%	$1,989	$17,807	10.0%	5.0x
Both MH and SUD	492,465	2%	$3,413	$22,189	13.3%	6.2x
Total Population	**21,009,321**	**100%**	**$263**	**$5,669**	**4.4%**	**1.6x**

Source: Davenport S, Gray M, Melek S. "How do individuals with behavioral health conditions contribute to physical and total healthcare spending?" Milliman. Published August 13, 2020. https://www.milliman.com/-/media/milliman/pdfs/articles/millimanhigh-cost-patient-study-2020.ashx

Leveraging the Primary Care System

- **1 in 5 Massachusetts residents experience a MHSUD** annually; **only half receive care**.
- The **average gap** between diagnosis of a MH condition and treatment is **11 years**.
- Patients with **MHSUD and co-occurring medical conditions are the costliest to treat**.
- **Most office-based MHSUD care** is provided, and **most psychiatric drugs** are prescribed, by primary care providers (PCPs).
- Primary care is the **only source of MHSUD care** available for many Americans.
- Patients prefer to receive MHSUD care services **in the primary care setting**.
- A large majority **of patients who die by suicide** have visited a primary care provider in the prior year, with **almost half having done so in the prior month**

MHSUD Care vs. Other Specialty Medical Care

For patients with cardiac conditions, the PCP:

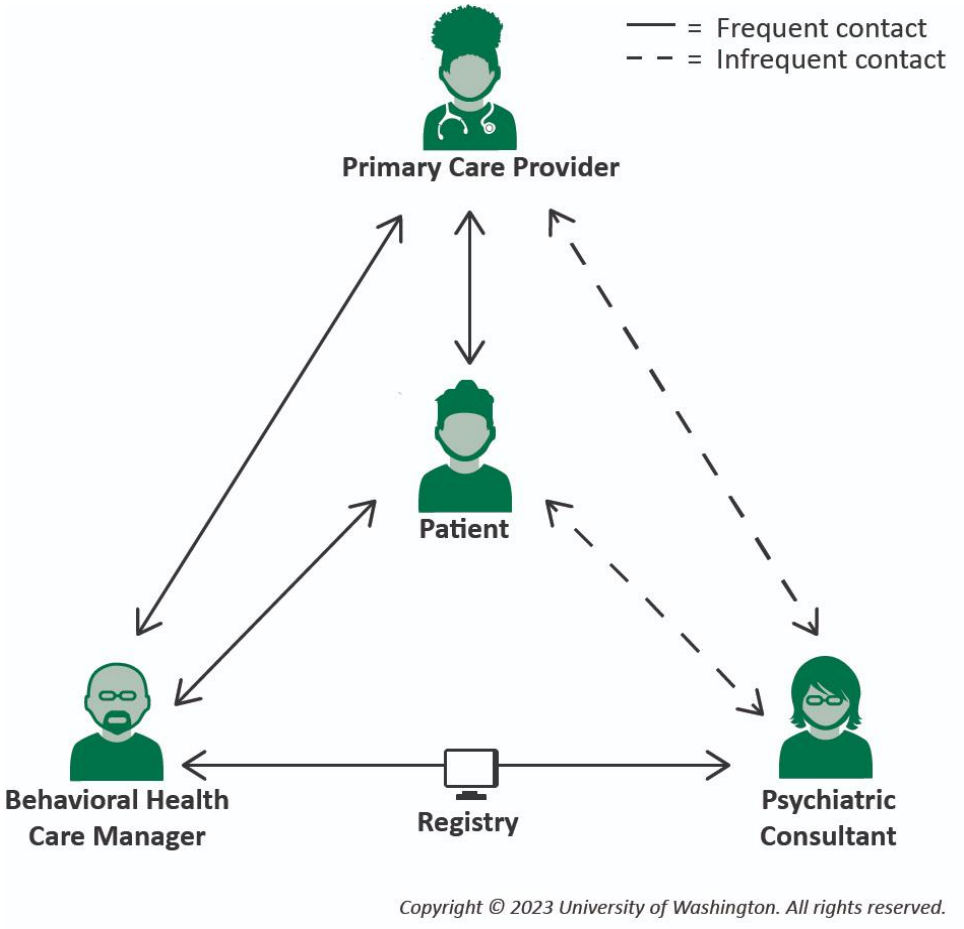
- Systematically screens for and measures cardiac symptoms
- Provides care for non-acute patients
- Refers more complex patients to a cardiologist for specialized care

There is no reason to treat MHSUDs differently.

The Collaborative Care Model (CoCM)

- An **evidence-based model** within primary care that supports early identification, diagnosis, and treatment of MH conditions—helping prevent symptom escalation and health crises
- Supported by **100+ RCTs** demonstrating improved health outcomes and reduced healthcare costs compared to usual care

How CoCM Works



- ✓ **Addresses workforce shortages** by expanding behavioral health capacity with care managers and consultative psychiatry for team-based care
- ✓ **Reduces PCP burnout** by sharing care tasks and supporting complex mental health management
- ✓ **Improves outcomes** across populations, including publicly insured, rural, underserved, and minority groups

Lyons et al. (2023), "Unique collaborative care system: Solution to the youth mental health crisis," https://www.psychiatrictimes.com/view/unique-collaborative-care-system-solution-to-the-youth-mental-health-crisis;
Holmes & Chang (2022), "Effect of mental health collaborative care models on primary care provider outcomes: An integrative review," https://doi.org/10.1093/fampra/cmac026;
Whitebird et al. (2017), "Clinician burnout and satisfaction with resources in caring for complex patients," https://doi.org/10.1016/j.genhosppsych.2016.03.004;
Abah & Onwelumadu (2025), "Collaborative care for health equity: Integrated care for underserved populations," https://www.intechopen.com/chapters/1194187

Low Cost MHSUD Intervention

- CoCM patient episodes are billed once a month
- Episodes can last 1 month or more than a year – however:
  - Over 80% of episodes are ≤6 months*
  - 4.1 months is the length of an average patient episode*
    - This figure includes all patients, including those in care more than a year
- Examples: Aggregate cost of 4-month episode**
  - Medicare, and Medicaid plans reimbursing at 100% of Medicare
    - $475 - $650
  - Commercial plans reimbursing at 150% of Medicare
    - $725 - $975

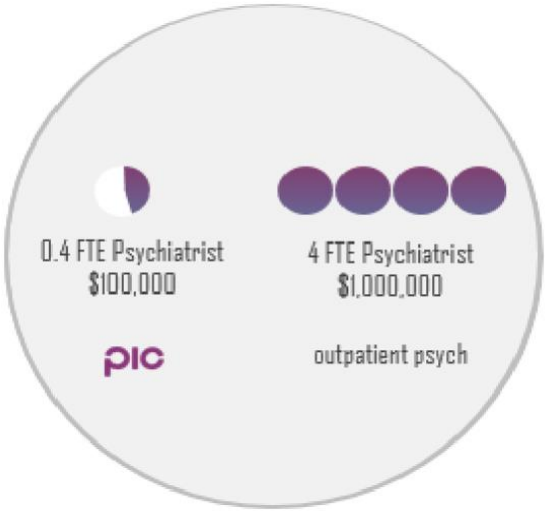
***Based on a large proprietary database of Medicaid, Medicare, and commercial patients**
****Based on various combinations of billing codes 99492, 99493, 99494 and G2214**

Tools for Measuring and Tracking Patient Outcomes

Tool	Description	Outcome Measures
PHQ-9 (Patient Health Questionnaire-9)	Assesses the severity of depression symptoms	50% improvement or 10-point reduction in score
GAD-7 (General Anxiety Disorder-7)	Assesses the severity of anxiety symptoms	50% improvement or 10-point reduction in score
PSC-17 (Pediatric Symptom Checklist)	A screening tool for identifying emotional, behavioral, and cognitive symptoms in children	Total Score: A change score of 6 or more indicates reliable change Subscales: Changes of 2 or more points indicate reliable change
PMQ-9 (Patient Mania Questionnaire-9)	A tool for evaluating symptoms of mood disorders, including mania	50% reduction in mood disorder symptoms (combined PHQ-9 and PMQ-9 scores)
PCL-5 (PTSD Checklist for DSM-5)	A screening tool for assessing symptoms of PTSD	50% or 20-point reduction in total score

Workforce Efficiency

CoCM Makes Efficient Use of Limited Psychiatrist Resources



Source: Penn Integrated Care Program, Penn Medicine, University of Pennsylvania. Courtesy of Matthew Press, MD.

One “full-time equivalent” psychiatric consultant can effectively impact MHSUD treatment for as many as 3-8 times more patients under CoCM than could be achieved through traditional 1:1 treatment.

Carlo, A. D., McNutt, C., & Talebi, H. (2024). Extending the clinical impact of behavioral health prescribing clinicians using the Collaborative Care Model (CoCM). *Journal of General Internal Medicine, 39*(8), 1525-1527. https://doi.org/10.1007/s11606-024-08649-2

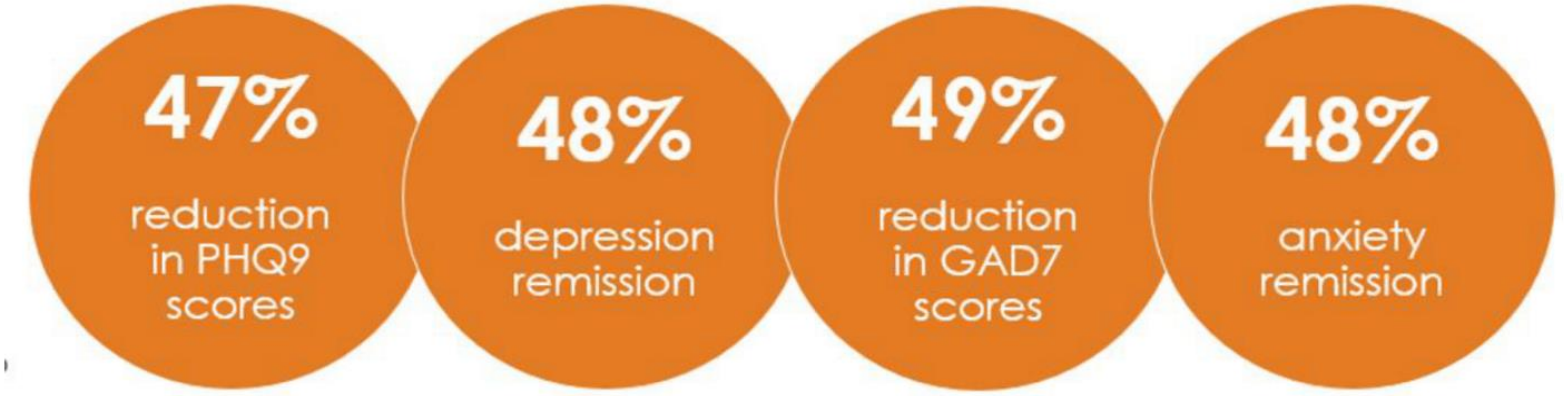
Fortney, J. C., Bauer, A. M., Cerimele, J. M., Pyne, J. M., Pfeiffer, P., Heagerty, P. J., Hawrilenko, M., Zielinski, M. J., Kaysen, D., Bowen, D. J., Moore, D. L., Ferro, L., Metzger, K., Shushan, S., Hafer, E., Nolan, J. P., Dalack, G. W., & Unützer, J. (2021). Comparison of teleintegrated care and telereferral care for treating complex psychiatric disorders in primary care: A pragmatic randomized comparative effectiveness trial. *JAMA Psychiatry, 78*(11), 1189-1199. https://doi.org/10.1001/jamapsychiatry.2021.2318

Patient Outcomes

Measure	Improvement Rate
Review of Score at 90 Days 50% or 10-point reduction on PHQ-9 or GAD-7	**47%**
Review of Score at 120 Days 50% or 10-point reduction on PHQ-9 or GAD-7	**52%**
Review of Patients Who Achieved Remission <5 on PHQ-9 or GAD-7	**38%**

Source: Concert Health. Based on 30,659 patient episodes over a 12-month period from January 1, 2024, to December 31, 2024.

Patient Outcomes



"This is the single most impactful program I've seen in my 25 years at Penn." –Penn PCP

Source: Penn Integrated Care Program, Penn Medicine, University of Pennsylvania. Courtesy of Matthew Press, MD.

Patient Outcomes by Population

- **Women**: 30% reduction in anxiety symptoms at 90 days
- **Adolescents**: 59% (PHQ-9) and 51% (GAD-7) had ≥50% symptom reduction at 90 days; rose to 62% (PHQ-9) and 54% (GAD-7) by 120 days
- **Older adults**: Depression scores dropped from 16.7 → 8.6 (moderately severe → mild)
- **Rural patients**: 74-83% with moderate/severe depression improved by 90 days
- **Publicly insured**: 33% of Medicaid patients and 40% of Medicare patients met PHQ-9/GAD-7 benchmarks at 90 days

Lee et al. (2023), "The effectiveness of collaborative care in publicly insured populations," https://doi.org/10.1353/hpu.2023.0042;
Standeven et al. (2023), "Reduction of anxiety symptoms among women within a collaborative care model and women's health settings," https://doi.org/10.1017/S1463423623000440;
Vanderwood, Joyner, & Little (2023), "The effectiveness of collaborative care delivered via telehealth in a pediatric primary care population," https://doi.org/10.3389/fpsyt.2023.1240902;
Vanderwood, Joyner, & Little (2025), "Remotely delivered collaborative care effectively addresses anxiety and depression among rural adults";
"Effectiveness of collaborative care in a geriatric primary care population" [Unpublished manuscript]

Treatment Outcomes by Modality in Depression and Anxiety

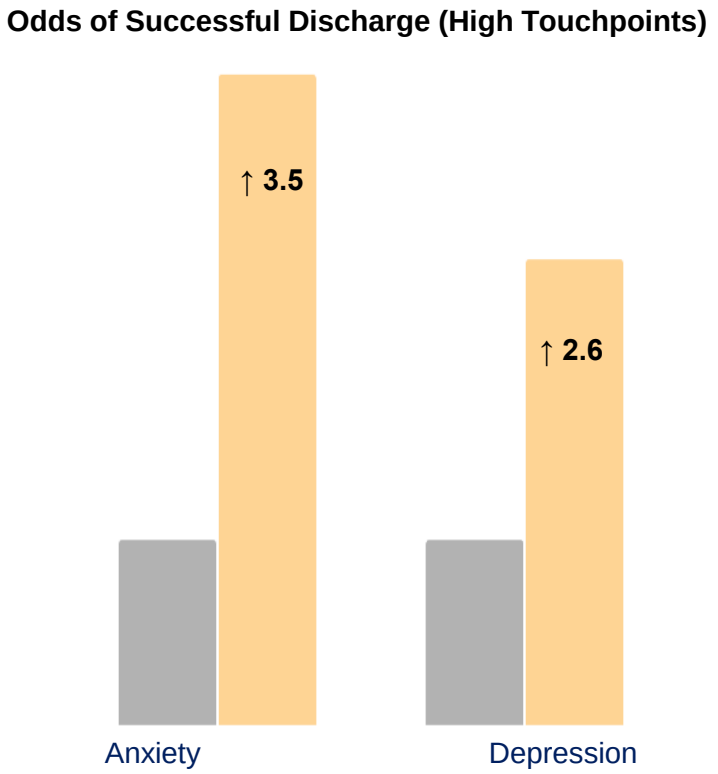
- **Patients receiving phone or video care** had significantly better symptom reduction than those seen face-to-face
- **Video-based care resulted in the highest rates of improvement** for anxiety and depression
- **Greater number of touchpoints and assessments** in early treatment (first 90-120 days) were associated with improved outcomes

Image from concerthealth.com

Vanderwood, K., & Little, V. (In Progress)

Clinical Variables for Successful Depression and Anxiety Treatment

- **More clinical touchpoints** were associated with increased odds of improvement for both anxiety and depression
- **Shorter appointments** (average touchpoint time) appeared to be more effective, suggesting brief, focused visits improve outcomes



Walker et al. (2024), "Factors influencing virtual collaborative care outcomes for depression and anxiety," https://doi.org/10.4103/jfmpc.jfmpc_1493_23; Hardy et al. (2024), "Clinical variables associated with successful treatment of depression or anxiety in Collaborative Care," https://doi.org/10.1007/s11414-024-09892-5

Treatment Response/Remission Predictors in Severe Depression

- Collaborative Care was **equally effective for patients with severe depression** (PHQ-9 > 20) as for those with moderate depression, when controlling for other factors

Image from concerthealth.com

Walker, C., Little, V., & Lyons, J. (In Progress)

Impact on Suicide Risk, Attempts and Deaths: Three "Real World" Studies in Primary Care

Study Sponsor	Number of Patients Screened / "At Risk"	Key Outcome Measure	Reduction of Risk and Deaths
Concert Health 52 providers (health systems or practices) 16 states	**29,507** screened and included in CoCM analyses **3,809** identified as "at risk"	Suicidal ideation	**% of "at risk" patients with *reduced risk*** Avg. all doses[a] **56%** High dose[b] **76%** Percent of "at risk" patients who achieved remission[c] **49%**
University of Pennsylvania Health System 19 practices 2 states	**3,487** screened and included in CoCM analyses **368** identified as "at risk"	Suicidal ideation	**% of "at risk" patients with *reduced risk*** Avg. all doses[d] **52%** Percent of "at risk" patients who achieved remission[c] **37%**
Kaiser Permanente[e] 19 practices 1 state	**228,255** screened and included in integrated care analyses[f]	Suicide attempts and deaths (combined)	**Reduction of attempts and deaths** **25%**[g]

Source: Bowman Family Foundation, 2025

Concert Health Study
(Study Period: 11/21 - 11/23)

EXCERPTS:

“The impact of “dose” is a key finding—patients enrolled for one month or less were most likely to see no change in their risk flag. On the other hand, patients enrolled in care for at least half a year were far more likely to see an improvement in their risk flag—76% of such patients experienced an improvement.” “

Similar to months enrolled, patients that received more clinical touchpoints were more likely to see an improvement in their suicide risk score—83% of patients who received 15 or more touchpoints demonstrated improvement.”

“The analysis revealed no statistical association between age category and treatment outcome. This finding suggests that the Concert Suicide Care Pathway may be effective across all age groups, indicating its broad applicability and potential effectiveness regardless of age.”

Source: Little et. al., “Addressing suicide risk: A study of dose response in collaborative care,” 2024

University of Pennsylvania Health System Study
(Study Period: 2018 - 2022)

EXCERPTS:

"…PIC [CoCM at Penn] has since expanded to more than 35 urban and suburban primary care practices…"

"Among both patient groups, length of time in CoCM and number of sessions were each associated with patients were treated for over six months."

"Importantly, we found that among patients with suicidal ideation at baseline, those identifying as Hispanic/ Latinx…had greater declines in depression and anxiety severity. Additionally, among patients without suicidal ideation at baseline, those identifying as Black…had significantly greater declines in depression severity. These findings complement a burgeoning literature showing that patients identifying as racial or ethnic minorities, including those identifying as Black or Latinx, show improved access to mental health care and clinical outcomes in CoCM. A recent review concluded that the evidence supporting the effectiveness of CoCM for mental health treatment among patients identifying as racial or ethnic minorities is larger than for any other intervention."

Source: Khazanov et al., "Change in suicidal ideation, depression, and anxiety following collaborative care in the community," 2024

Kaiser Permanente Study
(Study Period: 1/15 - 7/18)

EXCERPTS:

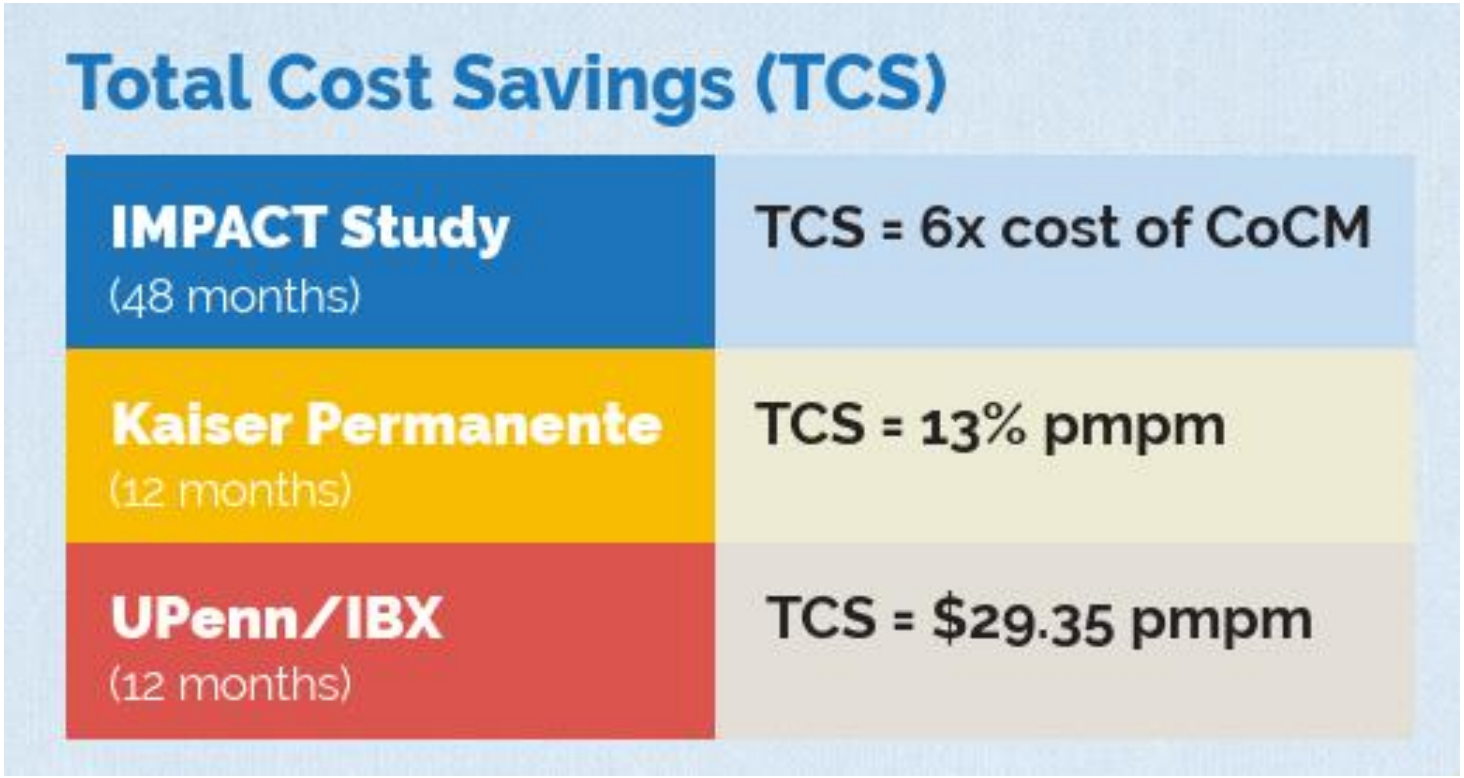
"…the objective of this study was to analyze the out comes of integrating SC [suicide care] in primary care, beginning with population-based screening for depression, followed by suicide risk assessment and collaborative safety planning."

"…population-based SC was implemented at the same time as care for substance use (alcohol, cannabis, and other drug use) as part of a behavioral health integration initiative (detailed below). Before this initiative, the health system had no population-based screening or systematic follow-up for these conditions in primary care."

"When patients reported some level of prior month intent or planning for a suicide attempt on the C-SSRS, primary care clinicians were instructed to connect patients with designated members of the care team for same-day safety planning. Licensed independent clinical social workers…were trained to function as integrated mental health clinicians, specifically to prioritize engaging at-risk patients in safety planning, as well as provide short-term counseling and linkage to specialty mental health and substance use treatment."

Source: Angerhofer Richards et al., "Effectiveness of integrating suicide care in primary care," 2024

Impact on Total Healthcare Costs



Source: Bowman Family Foundation, 2024

IMPACT Study
(2008)

Figure 3. 4-Year Healthcare Costs[a]

Table 2

	Cost, $			
		Randomized Group		
Cost Category	**Overall Mean**	**Intervention**	**Usual Care**	**Difference**
Outpatient				
IMPACT intervention	--	$522 (495 to 550)	$0 (0 to 0)	$522 (495 to 550)
Mental Health	$661	$558 (362 to 753)	$767 (561 to 974)	-$209 (-494 to 75)
Pharmacy	$7,284	$6,942 (6,062 to 7,822)	$7,636 (6,287 to 8,984)	-$694 (-2,304 to 916)
Other	$14,306	$14,160 (12,899 to 15,421)	$14,456 (12,909 to 16,002)	-$296 (-2,291 to 1,700)
Total[b]	**$22,516**	**$22,182** (20,368 to 23,996)	**$22,859** (20,470 to 25,247)	**-$677** (-3,676 to 2,323)
Inpatient				
Medical	$8,452	$7,179 (5,450 to 8,908)	$9,757 (6,455 to 13,059)	-$2,578 (-6,305 to 1,149)
Mental health and substance abuse	$114	$61 (-8 to 129)	$169 (-2 to 340)	-$108 (-292 to 76)
Total Healthcare During 4 Years				
Overall Total	$31,082	$29,422 (26,479 to 32,365)	$32,785 (27,648 to 37,921)	**-$3,363** (-9,282 to 2,557)

IMPACT indicates Improving Mood: Promoting Access to Collaborative Treatment.

[a]Data are given as mean (95% confidence interval) unless otherwise indicated.

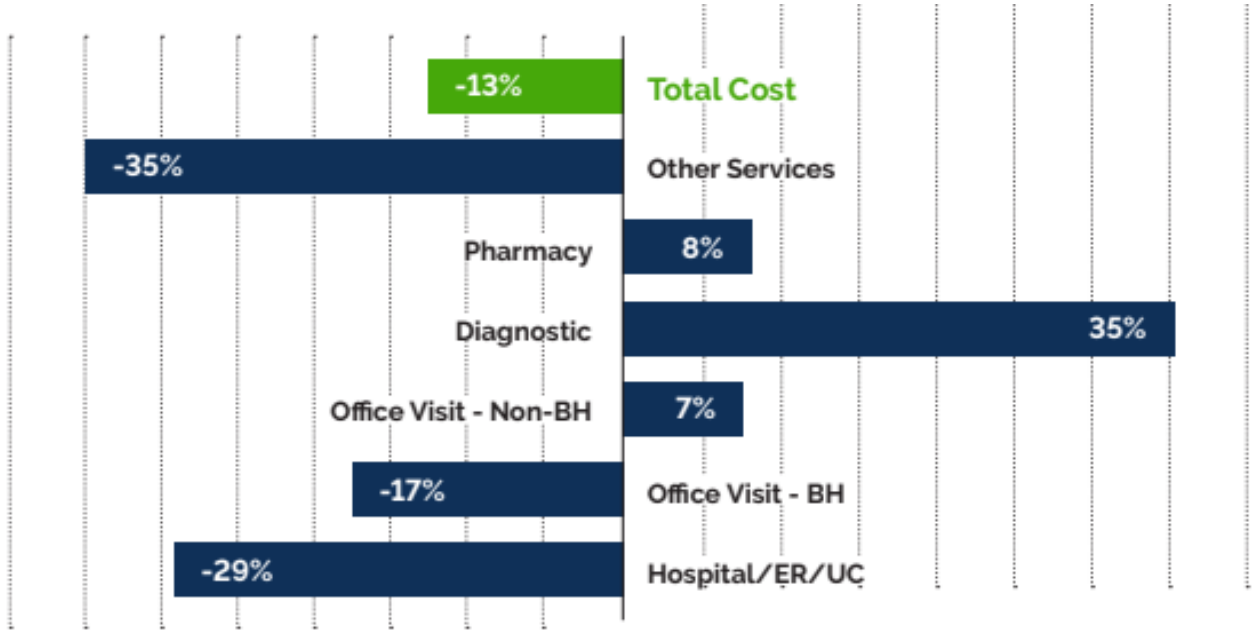
[b]Total outpatient costs include IMPACT intervention costs which only apply in the intervention group.

Source: Unützer et al., 2008[24]

Source: Unutzer et al., "Long-term cost effects of collaborative care for late-life depression," 2013

Kaiser Permanente Study
(2015)

% Change in PMPM Costs for DCM Population vs. Comparison Group



Source: Kaiser Permanente. Previously unpublished information and data from a study undertaken in 2015 regarding total healthcare costs: "Collaborative Care Model Versus Treatment-As-Usual," 2024

UPenn/IBX Study
(2023)

During 12 months following initiation of CoCM, THCs were $29.35 lower pmpm (non-statistically significant) for CoCM patients versus matched patients receiving treatment as usual, despite the fact that CoCM patients received more mental health care (i.e., savings accrued in physical health care spending).

MHSUD Costs	$19.91 Higher for PIC Group
PIC Medical (CoCM)	$34.11 (PIC Group Only)
Non-MHSUD Costs	$72.46 Lower for PIC Group
Inpatient Costs *	$91.34 Lower for the PIC group
Total Healthcare Costs *	$29.35 Lower for PIC Group

*Non-statistically significant

Source: Wolk et al., "Impact of the collaborative care model on medical spending," 2023

CoCM Implementation – Experiences and Outcomes

Clinical Case

Quaker Medical Associates: Leading the Way in Clinical Outcomes

- Depression Outcomes (1-Year Data)
  - 80% of patients with moderate to severe depression improved within one year:
    - 40% achieved full remission
    - 40% improved to mild symptoms
- Anxiety Outcomes (1-Year Data)
  - 60% of patients showed meaningful improvement:
    - 40% achieved remission
    - 20% improved to mild symptoms

Buffalo Pediatrics: Faster Symptom Reduction than National Benchmarks

- 58% of depression patients improved within 4 months, with 29% achieving remission.
- 57% of anxiety patients improved within 5 months, with 14% achieving remission.

"Collaborative Care is an outstanding example of what we are trying to accomplish in value-based care. It enhances the scope of preventative care provided in primary care settings, minimizes the unnecessary use of specialty care, reduces overall costs, and most importantly, improves care for our patients. —Larry Zielinski, CEO, Primary Care IPA

Source: Primary Care IPA

Financial Case

CoCM's Financial Sustainability: Achieving Stability within Months

Time Frame	Caseload	Billable Episodes (76%)	Profitability
30 Days	51 patients	39 episodes	- 47.2%
60 Days	65 patients	49 episodes	-17.9%
90 Days	75 patients	57 episodes	+3.98%
11 Months	80 patients	61 episodes	+30.4%

Beyond breaking even, CoCM sites reported a 3.98% profit margin at 90 days. By 11 months, sites reported a 30.4% surplus, proving long-term financial sustainability.

Scalability Across Patient Populations

Patient Population	Break-Even Point	Avg. Monthly Billing Revenue (90 days)
Adult	52 patients	$4,560.01
Pediatric	53 patients	$4,037.98

PCIPA's patient mix consists of 65% pediatric (ages 0–17) and 35% adult (ages 18–65), with Medicaid coverage ranging from 6% to 26%, reinforcing the need for scalable behavioral health integration.

Source: Primary Care IPA

Massachusetts Stakeholder Engagement and Findings

MA Stakeholder Engagement

Thought & Policy Leaders

- AIMS Center, U. Washington
- Alliance for Patients
- Blue Cross Blue Shield MA Foundation
- Bowman Family Foundation
- Concert Health
- Dell Medical School
- Massachusetts Health Policy Commission
- MetroWest Foundation
- Meadows Mental Health Policy Institution
- National Council for Mental Well-Being
- Network for Excellence in Health Innovation (NEHI)
- The Goodness Web

Payer Organizations

- Blue Cross Blue Shield of MA (BCBSMA)
- BMC Health Plan
- CHA Health Plan
- Carelon Behavioral Health (formerly Beacon Health Options)
- Centers for Medicare & Medicaid Services (CMS)
- Community Care Cooperative (C3)
- Fallon Health
- Massachusetts Association of Health Plans (MAHP)
- Mass Behavioral Health Partnership (MBHP)
- Mass General Brigham (MGB) Health Plan
- MassHealth
- Optum

Health Care Providers

- Baystate Health
- Boston Children's Hospital
- Boston Medical Center
- Cambridge Health Alliance
- Family Practice Group of Arlington, MA
- Massachusetts Behavioral Health Partnership (MBHP), a Carelon Behavioral Health Company
- Massachusetts Child Psychiatry Access Program (MCPAP)
- Massachusetts League of Community Health Centers
- Mass General Brigham
- Tufts Medicine

Consensus on CoCM Opportunities

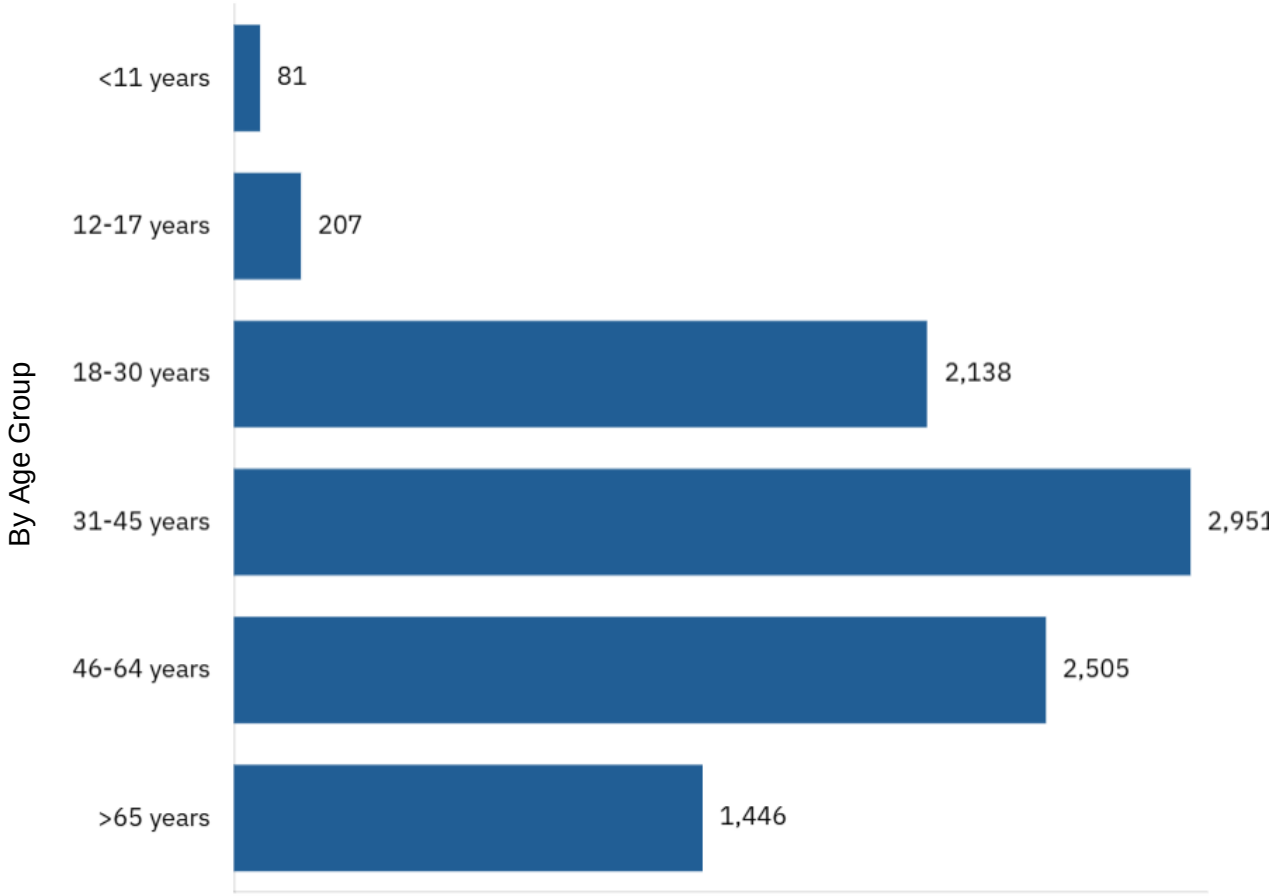
Payers, providers, and thought or policy leaders agreed on several points that would help overcome challenges to advance Collaborative Care:

1. **Financial Support:** Startup funds to cover initial costs and ensure practices do not lose money during ramp-up implementation.
2. **Education and Training:** Increasing awareness about CoCM's value and benefits with focus on prevention and early intervention, diagnosis, and treatment.
3. **Champions within Practices:** Both a business champion and a primary care clinical champion are essential for initiating and sustaining CoCM.
4. **Simplification of the CoCM Model:** Avoiding over-complication in roles, billing, and credentialing processes. Better understanding of how much flexibility is allowable while still maintaining fidelity to core components of CoCM.
5. **Integration with EHR Systems:** Developing infrastructure to integrate CoCM platforms with existing electronic health records.

Consensus on CoCM Opportunities (continued)

6. **Removal of Cost-Sharing**: Encouraging broader adoption by eliminating patient cost-sharing for CoCM services.
7. **Value of Peer Testimonials**: Sharing success stories from peer-providers who have successfully implemented CoCM.
8. **Technical and Financial Assistance**: Providing TA and financial support to practices to underwrite CoCM implementation including billing, registry, training for practice transformation, recruitment of BH care manager and psychiatric consultation.
9. **Workforce Development**: Addressing the shortage of qualified behavioral health professionals. Clarify role of CoCM care manager. Increase access to psychiatrists.
10. **State Government, Legislative or Regulatory Support**: Facilitating adoption through public endorsement of the CoCM model, supportive policies, payments, and regulations to incentivize CoCM adoption more widely.

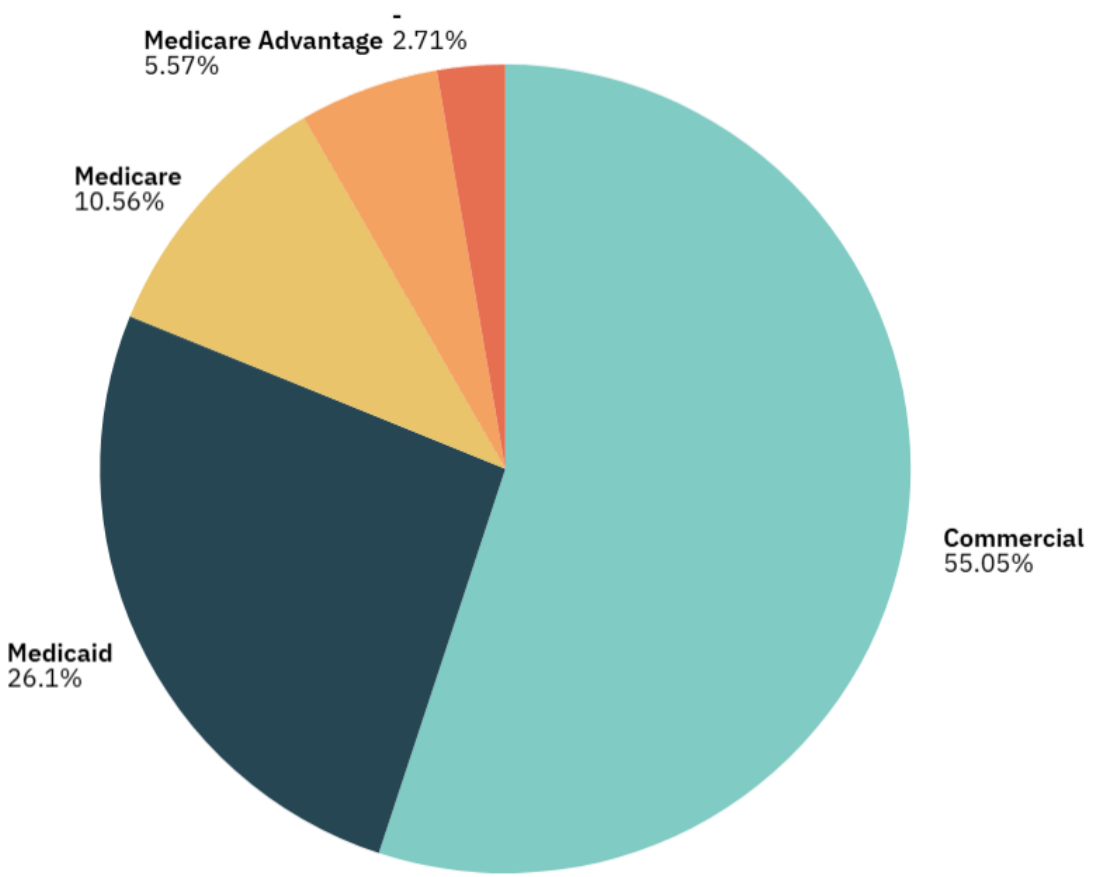
Massachusetts Population



Source: Concert Health

Massachusetts Population

By Insurance Type



Source: Concert Health

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