WITHDRAWN: A Quality Improvement Study Evaluating Implementation of Collaborative Care Code Billing

Denise Chang

denisech@uw.edu

University of Washington https://orcid.org/0000-0003-3760-0301

Debra Morrison

University of Washington

Deborah Bowen

University of Washington

Heather Harris

University of Washington

EJ Dusic

University of Washington

Mariebeth B Velasquez

University of Washington

Anna Ratzliff

University of Washington

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EDITORIAL NOTE:

The full text of this preprint has been withdrawn by the authors while they make corrections to the work. Therefore, the authors do not wish this work to be cited as a reference. Questions should be directed to the corresponding author.

Abstract

Introduction: The Collaborative Care Model (CoCM) has a robust evidence base and is widely accepted as an effective strategy to treat common mental health disorders in primary care. With the growing adoption of the newer CoCM billing codes in healthcare systems, there has yet to be an in-depth analysis of the impact of the implementation of these codes.

Aim: To examine the feasibility of implementing Collaborative Care billing codes and the impact on clinical and process-of-care outcomes as well as revenue.

Setting: This study was done in a large, urban academic health system, in primary care clinics with established Collaborative Care programs. Comparisons were made between clinics that billed psychotherapy codes (N=4) and clinics that billed CoCM billing codes (N=4).

Program Description: This quality improvement study was designed to evaluate the implementation of the new CoCM billing codes by comparing clinics using different billing strategies.

Program Evaluation: We employed a retrospective observational study design, examining data before and after the CoCM billing implementation. Primary outcomes for this study were the amount of services delivered and the estimated revenue generated. Additionally, we examined the amount and type of activities billed under CoCM. Qualitative data was obtained through clinician interviews to understand their perspective of this type of large-scale billing implementation.

Discussion: The results of this study demonstrate that implementation of the CoCM billing codes is operationally feasible, and there was no significant difference in the amount of services or revenue generated. These preliminary findings indicate that adopting new billing codes did not have an adverse impact on the delivery of patient care or revenue, though further evaluations are needed to understand the longer-term impact of CoCM billing on clinic operations and reimbursement.

Introduction

The Collaborative Care Model (CoCM) is one of the most adopted models of integrated behavioral health care since the publication of the IMPACT trial in 2002 showed its effectiveness in a large randomized control trial[1]. Yet it was not until 2017 that the Centers for Medicare and Medicaid (CMS) first introduced billing codes specifically designed to support CoCM[2]. These new codes, billed on a monthly basis for the full range of services provided in this care model, account for time spent on both direct and indirect patient services (such as care coordination, care team communication and psychiatric consultation). CoCM billing offers an opportunity to be reimbursed for services that are unbillable using psychotherapy billing codes and could help make the provision of CoCM services more financially sustainable. A few studies on the use of the CoCM billing codes[3–5] have cited significant barriers that primary care clinics face in implementing this billing model, including the challenges of obtaining and documenting patient consent, difficulties with billing workflow changes, and the need for engagement of multiple stakeholders (clinicians, leadership, billing, coding, compliance, IT, etc.). Not surprisingly, many CoCM practices have therefore chosen to continue to bill only for the direct patient services provided by the Behavioral Health Care Manager (BHCM) using traditional psychotherapy codes.

The exclusive use of psychotherapy billing codes results in critical pieces of CoCM services being provided without reimbursement and limits the workforce that can perform the role of the BHCM to independently licensed providers. The appropriate utilization of CoCM billing codes could encourage more practices to implement CoCM with full fidelity, broaden the available work force, and provide revenue to sustain the model in more primary care sites, thus allowing a broader reach for these effective services.

This quality improvement study describes one healthcare system's experience in implementing CoCM billing codes. The impact on healthcare delivery and on financial revenue are described using both quantitative and qualitative data. The primary aim was to compare clinics that adopted the CoCM billing codes to clinics that continued billing only traditional psychotherapy codes and evaluate how this difference in billing may have impacted 1) the amount of patient care delivered and 2) the estimated revenue associated with these services. The secondary aim was to look more closely at categorization of the minutes associated with the CoCM billing codes and how the BHCM's time was being utilized. Lastly, interviews with primary care providers and behavioral health providers supplied perspectives on the CoCM billing code implementation and its effect on the clinic workflow and the delivery of patient care.

Methods

Setting:

The University of Washington (UW) Medicine community-based network of primary care clinics consists of > 10 clinics serving the greater Seattle Metro area and is part of a large academic healthcare system that attracts a diverse patient population from the surrounding geographic regions. UW Medicine launched the Collaborative Care Model in 2012, with licensed social workers serving in the BHCM role, and since 2016 has been utilizing psychotherapy codes to bill for their patient care visits. The average payer mix for the primary care clinics included in this study was 12.4% Medicaid (ranging 8.9–18.0%), 16.1% Medicare (ranging 9.8–25.7%), and 71% private insurance (ranging 55.9–78.4%). The one pediatric clinic included in the study had a payer mix of 63.3% Medicaid, 0.03% Medicare, 36.5% private insurance. Note that in Washington State most payers, including Medicaid, reimburse for CoCM billing codes.

Intervention:

In 2019, UW Medicine piloted the use of CoCM billing codes and this effort was led by a dedicated program manager along with the clinical leadership of the CoCM program. The team addressed all the core components of CoCM billing in collaboration with finance, compliance, and IT departments. In March of 2019, two clinics started implementing the CoCM billing codes in addition to the psychotherapy billing codes that were already being utilized. In the study, these are referred to as the Adult Hybrid clinic (Clinic I) and the Pediatric Hybrid clinic (Clinic J). In September 2019, after a six-month pilot phase, six additional clinics started billing using CoCM codes exclusively. Two of these clinics were excluded from the final evaluation due to incomplete data, leaving four CoCM billing clinics (Clinics A, B, C, and D). This group was compared to four clinics that continued with psychotherapy billing only (Clinics E, F, G, and H).

Study design:

This is a retrospective, observational study using data from the electronic health record (EHR) and billing data from two six-month time periods, one before CoCM billing implementation (July 2018 – December 2018) and one

after implementation (September 2019 – February 2020). The SQUIRE guidelines[6] shaped all of the procedures and products from this work.

Measures:

The study evaluated three primary outcome measures: average number of visits per month with the BHCM, average number of unique patients per month served by the BHCM, and average number of minutes of clinical service per month provided by the BHCM. The number of visits and unique patients seen was collected from EHR data. The definition of visits includes both billable visits as well as visit types that typically would not be billable (e.g., telephone calls). (**Table S1**). For the clinics using psychotherapy billing codes, the number of minutes of clinical service provided by the BHCM was estimated based on the Current Procedural Terminology (CPT)[7] codes billed (the session length associated with CPT code was converted to estimated number of minutes) (**Table S2**). For CoCM billing clinics, the number of minutes was obtained from the EHR, where the BHCM directly recorded the actual time spent.

The estimated revenue from the billable services was calculated in two different ways. For the psychotherapy billing clinics, the reimbursement rates published in the Centers for Medicare and Medicaid Services (CMS) 2021 Physician Fee Schedule[8] were applied to the actual number of psychotherapy CPT codes submitted (**Table S3**). For the clinics using CoCM billing codes, the actual number of CoCM minutes recorded in the EHR were used to determine the appropriate CoCM billing code (**Table S4**) and then the reimbursement rates from the CMS 2021 fee schedule were applied (**Table S5**).

For the clinics billing the CoCM codes, two secondary measures were included as a way of evaluating processes-of-care: 1) a detailed breakdown of the types of clinical activities attributed to CoCM billing and 2) the minutes of service that went unbilled in any given month, either because they did not meet the minimum threshold or were over the maximum threshold for billing. The minutes recorded by the BHCM were entered directly into the EHR and assigned to one of four clinical categories: time spent with patient and/or family, care coordination, chart review, or case review with provider and/or psychiatry[9].

Qualitative, semi-structured interviews were conducted[10] with five to seven providers from each clinic to obtain their impressions of the CoCM billing implementation and how it affected their work and clinic workflow. Interviews were transcribed then coded in Dedoose, a qualitative analysis software. A codebook including both a priori and iterative themes was developed by research staff[11] in collaboration with study investigators. Interviews were coded by two of the study investigators independently, and inter-rater reliability was assessed for two interviews at the beginning, middle, and end of the coding process to determine the level of agreement between the two coders. When there were differences in applied codes the coders met and reconciled differences. Final interrater reliability was high, with a kappa value of 86.6%.

Analysis:

Due to some clinics not having a BHCM during some months, we calculated monthly averages across each of the two six- month study periods (baseline and follow-up). We then calculated average monthly values for the variables and evaluated differences between the psychotherapy billing clinics and the CoCM billing clinics using a Mann Whitney U test. Data from the hybrid clinics were included, though given the limited number of hybrid clinics, we did not evaluate statistical differences in this clinic group.

Ethical Considerations:

This protocol was reviewed and granted exemption by the University of Washington Human Subjects Division (STUDY00010726).

Results

Table 1 provides the background characteristics of these clinics at baseline, prior to the implementation of CoCM billing, including the monthly average number of total visits in the clinic, the monthly average number and percentage of total visits performed by the BHCM, and the clinical FTE of each BHCM. In the pre-implementation phase, the average number of BHCM visits at the psychotherapy billing clinics (clinics A-D) was higher than the averages at the CoCM billing clinics (clinics E-H). This was mostly due to staffing issues and vacant positions in clinics E-H during this six-month period, as evidenced by the average clinical full-time equivalent (cFTE).

Table 1
Clinic Characteristics at Baseline Pre-Implementation (July 2018 - December 2018)

Proposed Billing Type	Clinic	All Visits*	BHCM Visits †	% BH Visits ‡	CFTE of BHCM §
Psychotherapy Billing	A	1358	94	7%	1.00
	B	1912	62	3%	1.00
	C	2730	83	3%	0.99
	D	3139	65	2%	1.00
	Average	2285	76	3%	1.00
CoCM Billing	E	2342	42	2%	0.75
	F	2469	36	1%	0.17
	G	1647	29	2%	0.77
	H	3139	30	1%	0.33
	Average¶	2399	34	1%	0.51
Hybrid - Adult	I	2367	78	3%	1.00
Hybrid - Peds	J	1012	22	2%	1.00

*Average number of visits per month of all types.

†Average number of visits per month with the behavioral health care manager.

‡Percent of all visits that are behavioral health visits.

§Clinical FTE of the behavioral health care manager, on average over the 6 month time frame.

Averages for clinics A – D. These clinics are part of the group that continued with traditional psychotherapy billing

¶Averages for clinics E – H. These clinics are part of the group that switched to using Collaborative Care billing exclusively.

Table 2 shows details of each clinic in both study time periods with the average number of BHCM visits and unique patients seen across each six-month time period. The numbers were adjusted for BHCM cFTE per clinic to account for staffing differences. When comparing the averages across the psychotherapy and CoCM billing clinics, these two different clinic groups did not have a significant change in BHCM visits between the two time periods (for psychotherapy, $p = 0.46$; for CoCM, $p = 0.46$) or number of unique patients served (for psychotherapy, $p = 0.46$; for CoCM $p = 0.27$).

Table 2
Behavioral Health Care Manager Clinic Visits and Unique Patients Pre- and Post-CoCM Billing Implementation (Adjusted for cFTE)

		Pre-Implementation (July 2018 - Dec 2018)		Post-Implementation (Sept 2019 - Feb 2020)		Change from pre- to post-implementation	
Billing Type	Clinic	BHCM Visits*	Unique BHCM Patients †	BHCM Visits	Unique BHCM Patients	BHCM Visits N (%)	Unique BHCM Patients N (%)
Psychotherapy Billing	A	94	64	80	54	-14 (-15)	-10 (-16)
	B	62	43	83	54	21 (34)	11 (26)
	C	84	58	90	60	6 (7)	2(3)
	D	65	50	73	59	8 (12)	9 (18)
	Average ‡	76	54	82	57	6 (7)	3 (6)
CoCM Billing	E	56	37	57	36	1 (2)	-1 (-3)
	F	212	124	27	19	-185 (-87)	-105 (-85)
	G	38	29	70	47	32 (84)	18 (62)
	H	91	58	39	26	-52 (-57)	-32 (-55)
	Average §	99	62	48	32	-51 (-51)	-30 (-48)
Hybrid - Adult	I	78	51	71	44	-7 (-9)	-7 (-14)
Hybrid - Peds	J	22	15	23	14	1 (5)	-1 (-7)

*Average number of visits per month with the behavioral health care manager (adjusted for cFTE).

†Average number of unique patients per month served by the behavioral health care manager (adjusted for cFTE).

‡ Averages for clinics A – D. These clinics are part of the group that continued with traditional psychotherapy billing.

§ Averages for clinics E – H. These clinics are part of the group that switched to using Collaborative Care billing exclusively.

Table 3 shows estimated minutes billed per month, adjusted for cFTE. Similar to Table 2, there were no significant differences in minutes billed ($p = 1.00$) or revenue generated ($p = 0.71$) for psychotherapy billing clinics (clinics A-D) from pre- to post-period. The CoCM billing clinics (clinics E-H) showed some individual variability, but the average for this group of clinics also showed no significant differences between the two time periods (for minutes billed $p = 0.27$; for revenue generated $p = 0.27$)

Table 3
– Estimated Minutes and Revenue Pre- and Post-CoCM Billing Implementation (Adjusted for cFTE)

		Pre-Implementation (July 2018 – Dec 2018)		Post-Implementation (Sept 2019 - Feb 2020)				Change from pre- to post-implementation	
Billing Type	Clinic	Psycho-therapy Mins Billed	Revenue	Psycho-therapy Mins Billed	Revenue	CoCM Mins Billed	Revenue	Mins billed	Revenue
Psycho-therapy Billing	A	3640	$9,247	3123	$7,806	–	–	-14%	-16%
	B	2333	$5,937	3320	$8,579	–	–	+ 42%	+ 44%
	C	3042	$7,496	2808	$6,928	–	–	-4%	-4%
	D	2243	$5,509	2467	$6,136	–	–	+ 10%	+ 11%
	Average*	2814	$7,047	2929	$7,362	–	–	+ 9%	+ 6%
CoCM Billing	E	2497	$6,409	–	-	2288	$5,485	-8%	-14%
	F	9353	$24,341	–	-	1167	$2,707	-88%	-89%
	G	932	$2,360	–	-	1682	$4,000	+ 81%	+ 70%
	H	3318	$7,709	–	-	1467	$3,515	-56%	-54%
	Average†	4025	$10,205	–	-	1651	$3,927	-18%	-62%
Hybrid - Adult	I	3190	$7,890	2753	$6,843	225	$570	-7%	-6%
Hybrid - Peds	J	778	$1,999	1025	$2,619	857	$2,036	+ 142%	+ 133%

*Averages for clinics A – D. These clinics are part of the group that continued with traditional psychotherapy billing.

†Averages for clinics E – H. These clinics are part of the group that switched to using Collaborative Care billing exclusively.

Table 4 further categorizes the types of activities that were billed under CoCM. The distribution of activities across CoCM-only billing clinics (clinics E-H) was fairly uniform, with the exception of clinic F spending considerably more time in case review and clinic H with a similar amount of time spent in chart review. The adult hybrid clinic used CoCM billing about 50% of the time, with activities billed to CoCM split almost evenly between direct services and case reviews, though overall using psychotherapy codes twice as often as CoCM billing codes for direct services (51% vs 23%). The pediatric hybrid clinic used CoCM billing 90% of the time, with the two highest categories of activities billed to CoCM being direct service and care coordination, overall using CoCM billing codes three times as often as psychotherapy codes for direct service (34% vs. 10%).

Table 4
– Categorization of CoCM Activities

		% of Minutes Spent on Types of CoCM Activities				% of Minutes Spent on Psychotherapy Billing
Type of Billing	Clinic	Direct Service	Care Coordination	Chart Review	Case Review with Provider and/or Psychiatrist	–
CoCM Billing	E	94%	0%	1%	5%	N/A
	F	87%	0%	1%	12%	N/A
	G	93%	1%	1%	5%	N/A
	H	82%	0%	12%	5%	N/A
	Average	89%	0%	4%	7%	–
Hybrid - Adult	I	23%	1%	0%	23%	51%
Hybrid - Peds	J	34%	29%	14%	13%	10%

Table 5 tracks how often each of the CoCM billing CPT codes were used, based on the minutes of service provided by the BHCM. This table also shows the percentage of services that were either above the maximum or below the minimum threshold for CoCM billing. Note that during the study period the minimum threshold for billing was 36 minutes in the first month of service and 31 minutes in a subsequent month of service. However, in 2021, CMS released the new G2214 code, which allows for billing between 16–30 minutes in any service month. The table shows how many minutes fell below the previous minimum threshold but would now be allowable under the new G2214 code, thereby showing what percentage of previously unbilled minutes would now qualify for billing. The CoCM billing clinics had an average of 4% of minutes fall in this category, in contrast to the adult hybrid clinic that had 12% and the pediatric hybrid clinic with 21%. Of note, the two hybrid clinics had the least number of minutes (both 1%) over the maximum threshold, while the CoCM billing clinics had an average of 7%.

Table 5
CoCM CPT Code Utilization

	Mins Under Threshold (including % that would have been billed with G2214*)					
Clinic	Mins under	G2214	99492/ 99493	99492/ 99493 + 99494	99492/99493 + 99494x2	Mins Over Threshold
E	2%	1%	45%	9%	30%	13%
F	15%	6%	41%	20%	14%	5%
G	4%	6%	50%	25%	8%	6%
H	3%	4%	64%	20%	7%	2%
Average	6%	4%	50%	19%	15%	7%
Adult Hybrid	72%	12%	13%	1%	1%	1%
Pediatric Hybrid	58%	21%	17%	2%	0%	1%

*The G2214 code was released in 2021 and was not available at the time of this study

Provider Perspectives on CoCM Billing Implementation:

Interview findings were categorized into five themes. Below are a few representative quotes for each theme. Additional quotes are listed by theme in supplemental **Table S6.**

Theme #1: The impact of CoCM billing on workflow

Most primary care providers (PCPs) did not experience any change to their usual billing practices, while some report minimal changes to their workflow.

"... it's pretty simple. As far as anything different that I do with that, I'm sure that the social workers and/or the psychiatrists might have some other input on that." - PCP

BHCM's described the time and energy spent on administrative billing tasks in the CoCM model as minimal and feel that it provides value to their work by compensating services they provide.

"I feel like it's just super minor inconvenience. Otherwise, I don't see it as a big deal at all. I really think that it puts value to our work, and I think that it puts value to the importance of the amount of time that we put into our work." - BHCM

Theme #2: Perceived concerns related to CoCM Billing

A few PCPs mentioned concerns with the operational efficiency and administrative burden of the billing process of CoCM.

“The real downside for me is there's extra things to click and sign on and do in the EMR [electronic medical record]. There's the potential there for some mixed messaging or confusion, but I feel like our clinic team works together really well.” - PCP

Many PCPs spoke about a lack of transparency, reporting that they are unfamiliar with the technical and financial components of CoCM billing.

“I would like some more transparency on it. I don't think that it's been purposefully hidden or anything. I just have not actually heard any updates.” - PCP

Theme #3: Perceived financial sustainability of CoCM billing

Responses about the perceived financial sustainability of CoCM billing ranged from positive assertions about its sustainability to doubtful speculations.

“It is a sustainable and long-term way to continue to fund the program and the team and from the perspective of things getting more and more difficult as far as increased anxiety, increased depression, things like that. I think that, yes, there's high potential there. I just don't know the real numbers, I have no idea what to base that on, other than those things.” - BHCM

“The benefit, I would think, is that it would create a sustainable model that could pay for having these people in place that are playing this critical role that we're talking about, where we have a service now that makes the work that we already need to be doing so much better, and so much better supported.” -PCP

“Because, as in and of itself it's [Collaborative Care] not actually financially sustainable. So the institution has to stay even, even though it's bringing in some revenue, it's not self-sustained, we have to invest and it's worth investing into.” – PCP

Theme #4: PCP’s concerns about CoCM billing and equity

PCPs reported concern that CoCM billing may pose risk of enhancing healthcare inequities to marginalized patients.

“It’s made a difference for patients who qualify and who can access services through CoCM billing. It's made a big difference I think, for my patients who have used it. But it leaves a large amount of patients out. So I'm kind of neutral. I see it more as part of my job, not necessarily something I hugely believe in or hugely dislike. It's just, it's a part of our framework, and I have to do it to work, and I'm neutral, because it helps some people, it doesn't help other people.” - PCP

Theme #5: PCPs perception on consenting process

PCPs identified the consent process as the area where they invest the most energy. A few PCPs report feeling like the consent process initially disrupted their workflow and is incongruent with their clinical role.

“As I said you explain the logistics of the program and it takes a good what, 10 to 15, 10 to 12 minutes to explain this. And it feels a little, sometimes disgenuine because you spend all this time talking about their mood and how they're struggling. And then you switch a little bit and you're like ‘before I get going, I need to tell you this’. And maybe I've gotten better at doing it, but initially it did feel... we had to pull out this laminated card from our pocket

because we could never remember the words - so then that felt really strange. But now, as I said, I have my own spiel and I usually tell them a little brief thing." - PCP

However, most PCPS were positive in their overall evaluation.

"Where do I invest my energy? I don't think it takes much of the clinician's time, honestly. The physicians have it pretty easy. It's a big support for us. I mean, it's amazing, putting a dot phrase in takes five seconds. I mean, talking about it, but you're again facilitating something where if you are going to be able to help a patient in that way, what amount of time you would have to invest to make these things happen for someone?" - PCP

Discussion

Summary

The goal of this study was to evaluate the impact of CoCM billing by comparing clinics that implemented CoCM billing to those that continued with just psychotherapy billing. The results show no significant differences across the psychotherapy or CoCM billing clinics, in either patients served, estimated minutes billed, or revenue generated. Data from two hybrid billing clinics was also included, though due to the small number of clinics in this group it was not possible to make statistical comparisons to the other clinic groups. The qualitative data demonstrate that implementation of CoCM billing codes is feasible and that, while some clinicians found the process to be complex, most did not find it overly burdensome and thought the addition of CoCM billing provided financial benefit in sustaining the CoCM program.

Interpretation

This quality improvement study was focused on the initial data from our institution's CoCM billing implementation in order to better inform the implementation process and to assess any early impacts on patient care or financial reimbursement. Our study is the first known publication to compare clinics that utilize these different billing strategies, with the primary outcomes being number of visits, unique patients served, and potential estimated revenue. Overall, when comparing the clinic groups (psychotherapy billing vs. CoCM billing), there was no significant change from pre-to post-implementation in these primary outcomes. The lack of statistical difference amongst the clinic groups following CoCM billing implementation demonstrates that it was not a detriment to clinical service or revenue generated. However, looking at the individual CoCM billing clinics, there was wide variation in the data, which could have impacted the overall average for this group.

One major factor that impacted the data was the variable staffing of BHCMs and the differences in cFTE. In the pre-implementation phase, the average cFTE was much lower for clinics E-H, due to several BHCMs leaving during that time period. In fact, staff turnover in these clinics partly drove the decision to start CoCM billing implementation in these sites. In the post-implementation phase, clinics E-H again had lower average number of BHCM visits, likely explained by the fact that these clinics all had newly hired BHCMs who were learning the CoCM model while building new caseloads. While there were no significant differences in our primary outcomes between these two time periods, we postulate that these staffing changes had a negative impact on the average number of BHCM visits, unique patients served and ultimately CoCM revenue, since theoretically one would expect a fully employed BHCM that was otherwise not new to the job to have a higher average number of patient visits. Therefore, this variability in clinical staffing could have been a confounding factor affecting our ability to

interpret the impact of the CoCM billing implementation on these results. It underscores how staffing turnover can have considerable impacts on service delivery and ultimately revenue.

In addition to variation in staffing, there was variation in the type of activities the BHCMs reported. For example, two clinics (clinic I and J) recorded considerably more time in case reviews (23% and 13% respectively) than most of the other clinics. This could have been because these two hybrid clinics were the first to implement CoCM billing (starting nearly 6 months before the other clinics) and were the most familiar and experienced at tracking their time for CoCM billing. By comparison the CoCM-only billing clinics (clinics E-H) were averaging 5% for time spent in case reviews, but as previously stated these BHCMs were new to the role and had relatively fewer patients on their caseload. Additionally, new BHCMs may be less efficient and less adept at consistently and accurately recording their time. The variations in the amount of time spent by BHCMs highlight the importance of training BHCMs to have a consistent approach to their CoCM practice, including how to accurately document and bill for their activities. Also, having regular oversight of BHCM activities and the use of real-time data and/or quality metrics would help elucidate areas where a BHCM may need additional support and training.

While we did not have enough hybrid clinics to do statistical comparisons, there are a few observations worth noting. In clinic J, the pediatric BHCM performed a substantial amount of care coordination (29%) and chart review (14%), clinical activities that were previously unbillable until the release of CoCM billing codes. This seems to explain the 142% increase in minutes billed and the resulting 133% increase in estimated revenue seen in the post-CoCM implementation period. Moreover, 21% of this clinic's recorded CoCM minutes fell under the minimum threshold to bill (using the original threshold) but would now be eligible for billing using the new G2214 code released in 2021. CoCM billing thresholds are important to consider when choosing a billing strategy, as there are both a minimum and a maximum number of minutes that can be billed per calendar month. In summary, having data on how much time BHCMs spend, and on what type of activities, can help an organization choose which billing modality would be most optimal for their practice.

Overall, the hybrid clinics' use of both sets of codes might prove to be the most sustainable and flexible of the billing models, with the ability to more completely capture revenue for this diverse set of clinical activities. However, given the complexity of implementation of the CoCM billing, the hybrid model is more complicated and requires more training and regular oversight. More research on the hybrid billing model will be needed to better understand the potential advantages and disadvantages.

The qualitative results show that clinicians have generally positive opinions about CoCM billing. Some shared concerns about the operational efficiency and administrative work associated with the billing process and some raised concerns about transparency and patient equity, but most felt like the process was not overly burdensome and added value for their patients and/or clinical practice. These responses call attention to the importance of clinician "buy-in" for complex implementations. Clear communication and soliciting feedback could address concerns and be an important strategy to maintain the quality and sustainability of the implementation.

Limitations:

As noted in the discussion, there are several important limitations to this study. The small sample size and short time periods likely amplified the variation caused by staffing issues and the lack of familiarity with CoCM billing. Including more clinics in the evaluation and/or having a longer period of evaluation might have provided more reliable data on differences between clinics.

Conclusions

While additional evaluations will be needed to assess the longer-term impact of CoCM billing, our preliminary findings indicate that adopting new billing codes did not adversely impact the delivery of patient care or financial revenue. CoCM billing implementation requires significant resources to execute and sustain, but it has the potential to enhance clinical services and benefit the financial stability of clinics. The availability of CoCM billing codes could encourage more practices to implement CoCM and to do so with full fidelity, while also expanding the potential workforce. This multi-clinic study supports the use of CoCM billing codes, with or without traditional psychotherapy codes.

Declarations

Ethical considerations: This protocol was reviewed and granted exemption by the University of Washington Human Subjects Division (STUDY00010726).

Consent for publication: Not applicable

Availability of data and materials: The datasets used and/or analyzed during this study are available from the corresponding author on reasonable request.

Competing Interests: Dr. Anna Ratzliff receives royalties from Wiley for her book on Integrated Care. All other authors declare that they have no competing interests.

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