

Financing Behavioral Health Integration and Collaborative Care Models

December 2019

Project Team

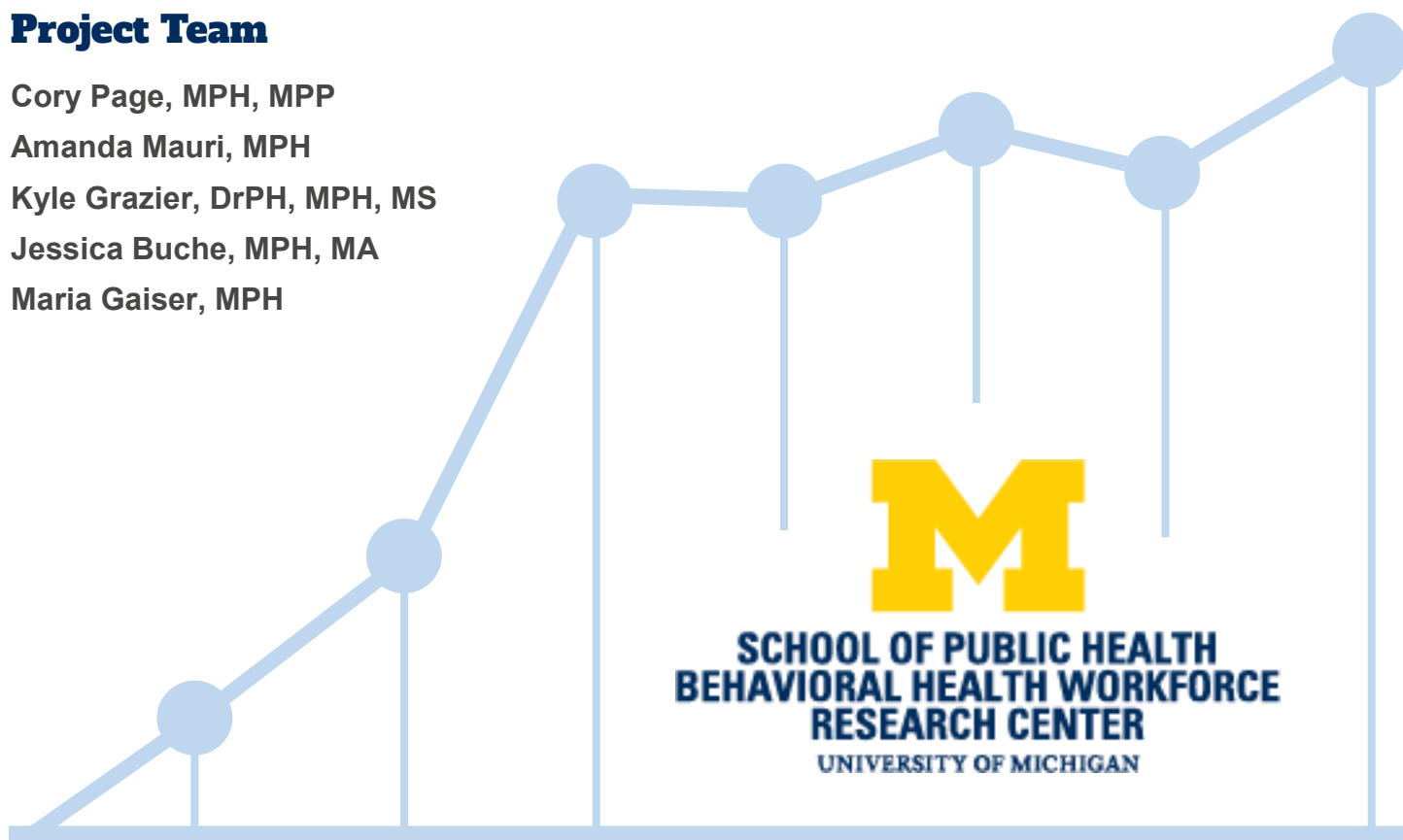
Cory Page, MPH, MPP

Amanda Mauri, MPH

Kyle Grazier, DrPH, MPH, MS

Jessica Buche, MPH, MA

Maria Gaiser, MPH



ACKNOWLEDGEMENTS

This work is funded by the Substance Abuse and Mental Health Service Administration (SAMHSA) and the Health Resources & Services Administration (HRSA) through HRSA Cooperative Agreement U81HP29300. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by SAMHSA, HRSA, U.S. Department of Health and Human Services, or the U.S. Government. For more information, please visit HRSA.gov.

SUGGESTED CITATION

University of Michigan Behavioral Health Workforce Research Center.
Financing Behavioral Health Integration and Collaborative Care Models. Ann Arbor, MI: UMSPH; 2019.

Table of Contents

Background	4
Resource Use: Conceptual Model	4
Resource Use: Reimbursement Codes	4
Integrated Behavioral Health: Model Typology	5
Methods	6
Resource Use: Conceptual Model	6
Resource Use: Reimbursement Codes	6
Typology.....	7
Results	8
Resource Use: Conceptual Model	8
Resource Use: Reimbursement Codes	8
Integrated Behavioral Health: Model Typology	11
Conclusions	12
Policy Considerations	12
Limitations	13
Future Research Considerations	13
References	14
Appendix 1: Literature Review Search Strategy	15
Appendix 2: Qualitative Interview Sample	16
Appendix 3: Qualitative Interview Methodology	18
Appendix 4: Qualitative Interview Results	19

Background

Novel approaches to providing integrated behavioral health care (IBH) offer promise in improving access to integrated and coordinated physical and mental health care in primary or other clinical settings. The range of these integrated care programs address mental healthcare–related stigma, encourage more effective and efficient care transitions, and create care teams who are acutely aware of their patient’s complete health status. Although research on these collaborative approaches has shown the benefits to individual and family clinical outcomes,¹ payment for the additional resources required to provide IBH services varies by payer, region, and often, provider license.² Identifying and costing the incremental resources required to provide what appears to be a superior approach to meeting the needs of those with behavioral health needs warrant study.^{3–5}

In 2018–2019, the University of Michigan Behavioral Health Workforce Research Center conducted a study to investigate current billing and payment approaches to covering IBH services. The study presents: (1) a resource use model to estimate the incremental costs used in providing IBH; (2) collection and analysis of IBH, using procedure codes, relative value units, and fees paid by Medicare and Medicaid geographic payment areas to the most common types of providers of these services; and (3) based on a systematic search of the literature, a typology of types of organizations, facilities, and providers most likely providing IBH or collaborative care services. Semi-structured telephone interviews, which provided insights into the planning, delivery, and financing for IBH services were also conducted as part of this study. More information on these interviews is included in the Appendix.

Research has increasingly shown the value of coordinating or integrating behavioral health services with medical, health, primary care, and psychotherapeutic delivery models.¹ Providing payment or reimbursement for the additional resources used in this evidence-based integration poses challenges. Diagnosis, procedure, and billing codes have been extended only recently to recognize new configurations or combinations of work and practice units.

Current financing models suggest that providers can bill for integrated care using different strategies.² Investigating the different funding arrangements available is essential to understanding the landscape of reimbursement approaches available to practitioners. Further, estimating the costs of and payment for integrated care associated with each of these models will provide insight into the facilitators and inhibitors impacting the expansion and sustainability of delivering integrated care models.

This study adds to the literature and to behavioral health practice by using quantitative and qualitative methods to examine the resources required to deliver these new models of IBH services. By examining the variations in procedure codes and fees paid by government payers across states for the incremental integrated care services, the study identifies possible inefficiencies in paying differently for similar services.

Resource Use: Conceptual Model

One method for estimating the resources required for integrated care is through a conceptual model. Such a model could consider treatment approach, care team composition, provider commitments (full-time equivalents [FTEs]), provider salary, patient caseload, patient complexity, provider geography, supply cost, and facility costs, to name some elements. One prominent example of a resource use model is the financial modeling workbook jointly created by the Advancing Integrated Mental Health Solutions (AIMS) Center at the University of Washington and the American Psychiatric Association, which is available online.⁶ This modeling workbook is designed for collaborative care programs, which are a particular subset of integrated care programs. A more generalized model could assist future or current integrated care programs to estimate their per-patient or per-unit costs of providing integrated care services.

Resource Use: Reimbursement Codes

One approach to determining the marginal resource consumption in collaborative or integrated care is to estimate the costs involved in their delivery in specific settings, telephonic or face to face, by specific providers, in specific locations; whether a patient is new, continuing, complex, or requires other unrelated services also determines resource use. The methodologies underlying the Current Procedural Terminology (CPT) codes, and the Resource-Based Relative Value Scale, owned and maintained by the American Medical Association, provide consistent estimates of the costs of provider work, practice expense, and liability insurance expenses. These three different cost components are referred to as relative value units (RVUs).

The Centers for Medicare and Medicaid Services (CMS)-determined RVUs are further adjusted for labor resources influenced by costs of living and wage differences geographically through Geographic Practice Cost Indices (GPCIs). GPCIs vary by Medicare locality, causing some states to have multiple GPCIs, and others to only have one. Lastly, a standardized monetary rate factor converts the weighted value index to monetary fees or prices per procedure. The 2019 Medicare conversion factor is \$36.0391. The CMS physician fee schedule translates these costs to price per integrated care service, price being the proxy for the marginal resources use for a standard unit of integrated care. Figure 1 provides an example of the calculation of price using Model 1 collaborative care services.

Figure 1. Price of Collaborative Care Management Code 99492

CPT code: 99492

Service: 1st psyc collab care mgmt. in month; 70 min

Price for 99492=

$[(\text{Work RVU} * \text{Work GPCI}) + (\text{Non-Facility PE RVU} * \text{PE GPCI}) + (\text{MP RVU} * \text{MP GPCI})] * \text{Conversion Factor}$

RVU Work = 1.7

RVU Non facility PE = 2.69

RVU MP = .11

Total RVU Non facility = 4.50

MAC locality = 0111206 (Northern California; Berkeley)

GPCI Work= 1.075

GPCI PE = 1.325

GPCI MP= 0.421

The Medicare Physician Fee Schedule 2019 conversion factor is 36.0391

Price for 9949= $[(1.7 * 1.075) + (2.69 * 1.325) + (.11 * .421)] * 36.0391$

= $(1.8275 + 3.56425 + 0.04631) * 36.0391$

= \$195.98

The American Medical Association CPT workgroups sought to define codes for care coordination services and collaborative care services that were important, yet not reimbursed. They defined two sets of codes in 2012: one for services delivered in transition from a facility to a home (transition care management 99495 and 99496)⁷ and one for care coordination of patients with complex chronic care management (codes 99487 and 99489).⁸ In 2015, a chronic care management CPT code (99490) was added to those codes used in primary care practice but also in child and adolescent psychiatric practices.⁸

As the use of and evidence for IBH models expanded, the need for financing grew more apparent. In January 2017, CMS added behavioral health integration to Medicare's care management program through three codes assigned to collaborative care management services (99492-99494) and one for general behavioral health integration.⁹ In January 2018, CMS allowed Federally Qualified Health Centers to receive payment for chronic care management or general BHI services when ≥ 20 minutes of these services are furnished. In addition, Federally Qualified Health Centers could receive payment for psychiatric Collaborative Care Model services.¹⁰

Integrated Behavioral Health: Model Typology

One element that may help understand different reimbursement approaches for integrated care is through the creation of a typology. Many care types fall under the umbrella category integrated care. Variation in integrated care programs include whether all services are delivered in the same or different settings, the providers involved, and reimbursement mechanism.¹¹⁻¹³ The myriad integrated care types demonstrate the necessity of a typology to organize this variation. Typologies contribute to the social sciences by clarifying

concepts, delineating underlying dimensions of larger categories, and creating systems for measurement and comparison.¹⁴ Researchers interested in understanding reimbursement approaches for integrated care can use typology to refine measures used in examinations into the relationship between integrated care program design and payment.

Methods

Resource Use: Conceptual Model

Using the Advancing Integrated Mental Health Solutions Center/American Psychiatric Association financial modeling workbook as a template, as well as a managerial accounting approach in which fixed and variable costs contribute to total costs, researchers constructed a conceptual resource use model that could estimate the per-patient/per-unit cost of any integrated care team. To increase the validity of the tool, geographic location was used to modify the salary of all members of the care team.

Fixed costs included investments in electronic health record technology, purchasing/renovating physical facilities, the purchase of any equipment necessary for integrated care, and the costs of hiring and training necessary staff. As these fixed costs were not applicable to care delivery, they were omitted from the final model.

Resource Use: Reimbursement Codes

To determine the resource use and costs for the various types of integrated and collaborative care in the context of CPT codes, codes were selected to bundle procedures and their resources by type of integrated care. The CPT codes used to determine the marginal resources used for IBH were grouped as follows:

Model 1: Psychiatric collaborative care: CPT Codes 99492 OR 99493¹+ 99494;

Model 2: Transition care management: CPT Codes 99495 OR 99496;

Model 3: Complex chronic conditions management: CPT Codes 99487 OR 99489; and

Model 4: Chronic care management: CPT Code 99490.

Medicaid data on these services for all states and the District of Columbia were collected by searching each state's Medicaid eligibility and benefit policies, provider handbooks, and associated fee schedules. For a number of states, the new psychiatric collaborative care and IBH health codes were not listed in the schedules. Researchers then gathered RVUs for the IBH procedure codes from the CMS Physicians Fee Schedule, publicly available online as the CMS Lookup Tool.¹⁵ These data can be found in Table 1.

Researchers then collected GCPI rates for all Medicare localities from the same Look-Up Tool. As the Medicaid rates were applicable to an entire state, and RVUs were consistent across the country for their respective CPT code, the GCPIs needed to be converted from their Medicare localities to a more generalized statewide value. To this end, researchers collected county-level population data for each state from the American Community Survey. An "average GCPI" was calculated for each state by multiplying each GCPI by its respective county population, adding these county calculations together, and then dividing by total state population. The resulting figure represented a state average GCPI as weighted by population distribution.

For example, New Jersey has two GCPIs: 1.041 for Bergen, Essex, Hudson, Hunterdon, Middlesex, Morris, Passaic, Somerset, Sussex, Union, and Warren counties and 1.024 for all other counties. The population contained within the 1.041 GCPI is 5,500,266 people, and the population contained in the 1.024 GCPI is 3,408,254. After summing the rates multiplied by their respective population, and then dividing by the total state population, the population-weighted average GCPI for New Jersey is 1.034.

Researchers then divided the reimbursement rates collected from each state's Medicaid fee schedules by the RVU for that code and the population-weighted GCPI for the state. The final price calculated for these codes represented the price variation that could not be explained by federal price setting. In other words, these calculated figures showed exactly how state Medicaid plans were valuing integrated care services relative to

¹ This does not include additional physician codes (e.g., evaluation and management, psychiatric diagnostic codes) or administrative staff codes (96160, 96127, 96160, 96161)

other states. These relative state reimbursement rates were transformed into box and whisker plots, with interquartile ranges used to determine which state rates served as outliers.

Table 1: Descriptions and Values of Integrated Behavioral Health and Psychiatric Collaborative Care Codes

Model	CPT	Description	RVU Work	RVU Expense	RVU Liability	Total RVUs
Model 1 – Psychiatric	99492 ⁶	First psychiatric collaborative care management in month; 70 minutes	1.07	2.69	0.11	3.86
	99493 ⁶	Subsequent psychiatric collaborative care management; 60 min	1.53	1.96	0.10	3.59
	99494 ⁶	First subsequent psychiatric collaborative care; each additional 30 minutes	0.82	0.99	0.05	1.86
Model 2 – Transition Care Management	99495 ⁴	Transitional Care Management; moderate complexity, decision making psychosocial, medical. Includes Telehealth	2.11	2.38	0.13	4.62
	99496 ⁴	Transitional Care Management, high complexity; decision making; psychosocial, medical. Includes Telehealth	3.05	3.27	0.20	6.52
Model 3 – Complex Chronic Conditions Management	99487 ⁵	Complex chronic care management services, Moderate or high complexity medical decision making; 60 minutes of clinical staff time directed by a physician or other qualified healthcare professional, per calendar month	1.00	1.52	0.06	2.58
	99489 ⁵	Each additional 30 minutes of clinical staff time directed by a physician or other qualified healthcare professional, per calendar month (listed separately in addition to code for primary procedure)	0.50	0.76	0.03	1.29
Model 4 – Chronic Care Management	99490 ⁵	Chronic care management services, at least 20 minutes of clinical staff time directed by a physician or other qualified healthcare professional, per calendar month	0.61	0.52	0.04	1.16

Typology

Following consultation with an informationist at the Taubman Health Sciences Library at the University of Michigan, researchers conducted a literature review of the gray and scholarly literature on IBH models with the goal of developing a typology of these models' key characteristics. A keyword search was conducted in PubMed on January 30, 2018. No additional articles from the gray literature or bibliographies of yielded articles were added following February 8, 2019. Appendix 1 describes the search terms and algorithm used.

Inclusion criteria for the literature review were for the original article to be written in English and for the purpose of the manuscript to describe an existing IBH model. Book chapters, dissertations, editorials, letters to the editor, and empirical evaluations with minimal intervention description were excluded. Because the researchers were interested in the current landscape of integrated care models, only articles published after January 1, 2015 were included. A standardized article assessment form was used to extract data and it captured the following elements: eligible population, integrated care model specifics, geographic locations, clinical setting, staffing requirements, and financing structures. A qualitative synthesis of the extracted data was performed to identify key characteristics. The key characteristics were then used to develop a typology of integrated care models. This typology informed which organizations were contacted for semi-structured interviews.

This study also qualitatively examines the reported impacts and changes to selected organizations from providing IBH. The methodology and findings from the interviews appear in Appendices 2–4.

Results

Resource Use: Conceptual Model

The final conceptual model, meant to capture the per-unit/per-patient cost of providing integrated care services, can be found in Figure 2. This model only reflects the variable cost of providing IBH services.

Figure 2. Resource Use Model for One Unit of Integrated Behavioral Health Care

$$\text{Price}_{\text{IBH}} = A_{\text{medical provider health specialist}} * \text{FTE}_{\text{Location}} * \text{medical provider} + B_{\text{behavioral health specialist}} * \text{FTE}_{\text{Location}} * \text{behavioral} \\ + C_{\text{care manager}} * \text{FTE}_{\text{Location}} * \text{care manager} + \text{Supplies}$$

where resource use, Price, is a function of provider type, salary, site of services (facility type and location), and time to deliver integrated care services.

The variables A, B, and C refer to the percentage of the provider’s total resource commitment being dedicated to the provision of integrated care for one patient per time unit specified by the CPT code. The FTE variables refer to the salary for the provider, adjusted to fit the geographic location where the services are being provided. Any supplies that are consumed during the provision of integrated care services are included under the variable Supplies.

Pharmacological services are not to be included under the Supplies variable, unless those medications were administered during the encounter. Opioid agonists, such as buprenorphine, are one example of medications that are likely to be provided during a provider encounter. Most psychopharmacological services for non-severe behavioral health conditions, conversely, are received incident to care via prescriptions, as these medications are purchased by patients after their encounter with providers.

The model can be expanded to include more care team members, if necessary. For instance, some integrated care models divide care management responsibilities into two separate positions: a clerical worker who maintains the health records and coordinates necessary services, and an outreach worker who reaches out to the patient to remind them of appointments, activate healthy behaviors, and directs them as otherwise appropriate. Adding an additional care team member to the equation would involve adding the following term to the right side of the equation:

$$D_{\text{additional member}} * \text{FTE}_{\text{Location}} * \text{additional member}$$

Because the model can be expanded or reduced to account for any care team composition, it is applicable both to integrated care programs generally, and collaborative care programs specifically.

Resource Use: Reimbursement Codes

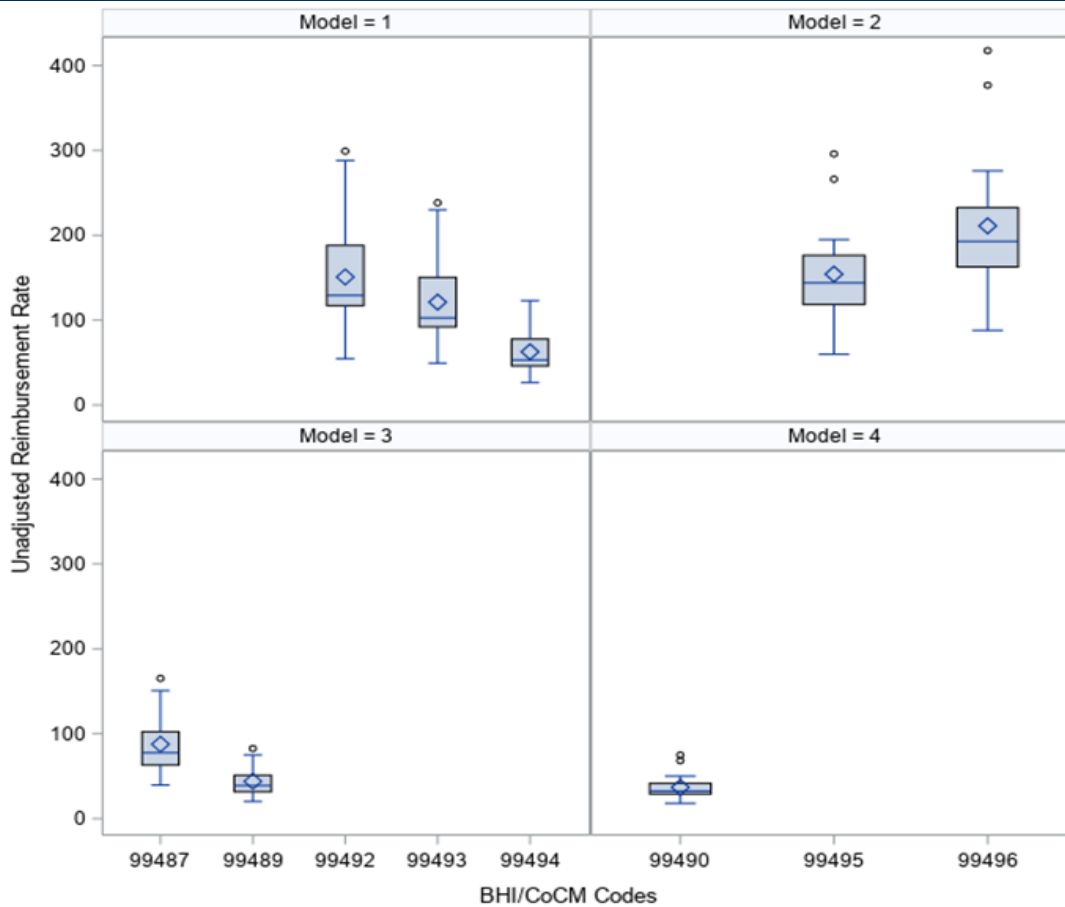
Before controlling for RVUs and GPCIs, the reimbursement rates for integrated care CPT codes varied widely by state (Table 2). The model that garnered the highest reimbursement rate, on average, was the transition care management model. This model also saw some of the widest variation. Montana and Kansas were frequently upper-bound outliers with rates far above those of the rest of the country (Figure 3).

Table 2: State Medicaid Rates for Integrated Care CPT Codes, Unadjusted

Model	CPT	n (states)	Mean	Standard Deviation	Median	IQR	Lower Outliers	Upper Outliers
Model 1 – Psychiatric Collaborative Care	99492	17	\$150.91	\$73.44	\$129.11	71.12	N/A	WA
	99493	17	\$121.24	\$57.65	\$102.71	58.40	N/A	WA
	99494	17	\$62.74	\$29.70	\$53.01	31.72	N/A	N/A
Model 2 – Transition Care Management	99495	16	\$154.18	\$60.19	\$143.87	50.62	N/A	KS, MT
	99496	17	\$211.05	\$86.81	\$192.76	69.62	N/A	KS, MT
Model 3 – Complex Chronic Conditions Management	99487	12	\$87.69	\$38.30	\$77.62	34.40	N/A	KS, MT
	99489	12	\$43.89	\$19.04	\$38.87	17.30	N/A	MT
Model 4 – Chronic Care Management	99490	20	\$36.85	\$14.05	\$32.44	12.46	N/A	KS, MT

CPT, Current Procedural Terminology; IQR, interquartile range

Figure 3. Ranges of State Medicaid Rates for Integrated Care CPT Codes, Unadjusted



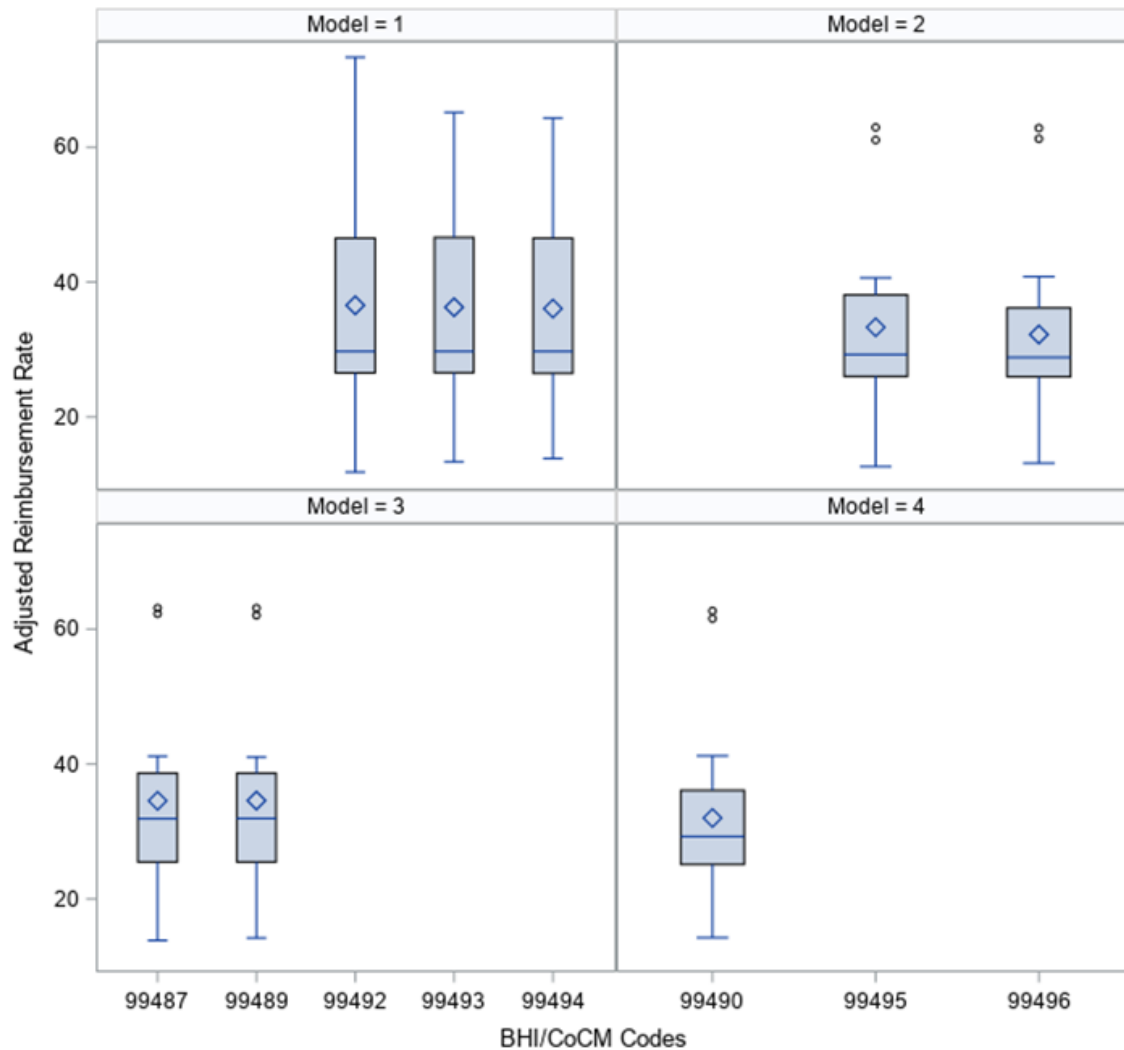
BHI, behavioral health intervention; CoCM, Collaborative Care Model, CPT; Current Procedural Terminology

After controlling for RVU and GCPI, the reimbursement rates displayed far less variability between CPT codes (Table 3). Based on the formula in Figure 1, researchers expected the controlled values to be comparable to the 2019 Medicare conversion factor of \$36.0391. However, this was not the case for many states. On average, adjusted reimbursement rates for three of the four models were less than the conversion rate, suggesting these clinical practices may be subject to a financial disincentive. Psychiatric collaborative care had the greatest average reimbursement rate, followed by complex chronic care management. Kansas and Montana remained as upper-bound outliers, suggesting their geography (GPCI) was not the main driver of their elevated values (Figure 4).

Table 3: State Medicaid Rates for Integrated Care CPT Codes, Adjusted

Model	CPT	n (states)	Mean	Standard Deviation	Median	IQR	Lower Outliers	Upper Outliers
Model 1 – Psychiatric Collaborative Care	99492	17	\$35.36	\$18.70	\$29.71	20.00	N/A	N/A
	99493	17	\$36.27	\$17.50	\$29.71	20.05	N/A	N/A
	99494	17	\$36.08	\$17.20	\$29.71	20.03	N/A	N/A
Model 2 – Transition Care Management	99495	16	\$33.31	\$13.24	\$29.27	11.05	N/A	KS, MT
	99496	17	\$32.22	\$13.60	\$28.83	10.21	N/A	KS, MT
Model 3 – Complex Chronic Conditions Management	99487	12	\$34.56	\$15.09	\$31.89	11.66	N/A	KS, MT
	99489	12	\$34.59	\$15.00	\$31.95	11.72	N/A	KS, MT
Model 4 – Chronic Care Management	99490	20	\$32.02	\$12.36	\$29.27	10.18	N/A	KS, MT
CPT, Current Procedural Terminology; IQR, interquartile range								

Figure 4. Ranges of State Medicaid Rates for Integrated Care CPT Codes, Adjusted



BHI, behavioral health intervention; CoCM, Collaborative Care Model; CPT, Current Procedural Terminology

Integrated Behavioral Health: Model Typology

Thirty articles met the inclusion for the literature review. Given the inclusion criteria, all articles were descriptive in nature and were published after 2015. Three characteristics of integrated care models were identified: (1) setting affiliate, (2) location, and (3) care type. Affiliate was defined as the institution housing or partnering with the clinical setting delivering integrated care. Potential affiliates included: Medicaid health homes, Veterans Health Administration, academic medical centers, or others. Location reflected the geographic setting of the practice delivering integrated care. Locations were grouped into three categories: urban, rural, and multiple regional centers. Care type reflects variation in the relationships between members of the clinical team delivering integrated care. Researchers identified three general care type categories: (1) behavioral health specialist and primary care provider employed within the same department and institution, (2) behavioral health specialist and primary care provider employed in different departments in the same institution, and (3) behavioral health specialist and primary care provider employed by different institutions. Figure 5 represents the typology developed based on three above characteristics.

Figure 5: Typology of integrated care models

Affiliate institution	Location	Care type
Medicaid health home	Urban	Same department and institution
OR	OR	OR
Veterans Health Administration	Rural	Same department, different institution
OR	OR	OR
Academic medical center	Multiple settings	Different department and institution
OR		
Other		

Conclusions

Current financing models suggest that providers have options when billing for integrated care.² This study examined eight of these mechanisms.⁷⁻⁹ Little research has conceptualized and collected information on variation in these payment approaches.^{11, 12, 16} In this study, researchers examined how health systems bill for IBH services. First, researchers developed a resource use model to conceptualize how cost varies by integrated care setting as a function of care team compositions, patient severity, and geography. Second, researchers described actual cost for integrated care CPT codes across states to examine the current national landscape of reimbursement. Third, researchers developed a typology to organize integrated care types by affiliate institution, location, and care type.

The resource use model adds insight into not only the cost of integrated care, but how cost varies across integrated care programs. The model can be adapted to any care team composition and care type design, making it applicable across a diverse array of integrated care programs. Further, by separating supply cost, the model explicitly depicts the additional provider costs associated with delivering integrated care services. Entities designing new, or amending existing, integrated care programs can use the resource model to evaluate the cost of different integrated care scenarios.

Per the Medicaid reimbursement analysis, the mean adjusted reimbursed rates across the eight CPT codes evaluated were quite similar within states, suggesting that the mechanisms for integrated care payment may be aligned at the state Medicaid level. However, great variation persists across states by CPT code, as indicated by the large standard deviations across mean reimbursement rate for each analyzed CPT code. This suggests that some pricing bias exists in states that cannot be explained by CMS' federal price setting mechanism.

Lastly, the typology provides a useful framework for organizing variation in integrated care programs. This classification system could educate practitioners interested in implementing integrated care on the myriad program design options. Further, researchers could use the typology to better understand the comparisons they are making between integrated care programs, allowing for more standardized research and comparable results.

Policy Considerations

The findings suggest that policymakers designing reimbursement for integrated care should consider how variation in financing influences how providers submit different CPT codes that may be used for similar integrated care services. For example, some models of integrated care require the use of supplemental CPT codes for services rendered, whereas others cover "bundles" of care services. Providers, wishing to both

render sufficient clinical services to clients, may be incentivized to choose a model that allows for such fee-for-service additions over a model that more strictly determines which services are allowable under its codes. CMS may wish to investigate which codes are commonly submitted for integrated care services with multiple reimbursement options and modify their bundling based on these provider financing practices.

Similarly, state policymakers who work with CMS to set reimbursement rates for Medicaid services should be wary of how rate manipulation may lead to inefficiencies both in the market and in health systems. Given the variation in adjusted means for the models of integrated care tracked across states shown in Table 3, some non-federal source of pricing bias may be contributing to Medicaid rates. The Table 3 parameters suggest Model 1, psychiatric collaborative care, is being valued more highly relative to other models. This could dissuade physicians or health systems from engaging with the other models; providers could choose psychiatric collaborative care as a way of maximizing revenue, even if this model is not the ideal clinical model for their patient mix. Payment parity across integrated care model reimbursement codes is crucial to eliminating this example of a perverse microeconomic incentive.

Medicaid Health Homes could use the resource use model developed by this research to compare different integrated care approaches. Knowing their expected treatment population, these Health Homes could choose whether a complex chronic care model (recommended for higher severity cases) would be better than a less intensive model, or what proportion of their FTE clinicians would need to commit to each patient. Care teams could also be decided using the model; Health Homes could compare the theoretical marginal costs of committing to a collaborative care model (requiring a primary care provider, psychiatric consultant, and care manager) versus committing to a more general integrated care model that would not require such a strictly defined care team. Publicly available data from the Bureau of Labor Statistics or American Community Survey would allow the Health Home to determine mean salaries for different occupations around their location, allowing for competitive price setting. By empowering health systems to assess potential variables costs across models, the resource use model can inform the selection of a system's financing design.

Limitations

The Medicaid reimbursement rate analysis has two limitations owing to the diverse sources from which the data were extracted. First, the GPCI values were reported from CMS as representing geographies as large as states or as small as a single county, whereas state Medicaid fee schedules reported reimbursement rates as being standard across an entire state. To better control for this difference when multiple GPCI values were available for a single state, researchers weighted the GPCI values by the population of those specific regions and calculated an "average" GPCI value for the entire state. This method may have introduced imprecision into the analysis.

The Medicaid fee schedules from which the data were collected also varied in quality. Some were for the current fiscal year (2019), whereas others were several years old. This lack of standardization may also have introduced imprecision into the analysis.

Future Research Considerations

Future work could extend upon this research in three ways. First, researchers could pair the resource use model with the investigation into existing billing and payment approaches for integrated care. This exercise would compare the cost and reimbursement differential associated with specific integrated care programs. Second, an investigation could explore factors contributing to the alignment of integrated care CPT codes within states and variation in the same CPT codes across states. Insights into these patterns may shed light on factors contributing to the implementation in integrated care across the country. Third, researchers could pair the categories outlined in the typology with reimbursement types. This additional dimension will aid researchers interested in comparing integrated care models that are similar, or vary, by reimbursement approach.

References

1. Archer J, Bower P, Gilbody S, et al. Collaborative care for depression and anxiety problems. *Cochrane Database Syst Rev*. 2012 Oct 17;10:CD006525. doi:10.1002/14651858.CD006525.pub2.
2. AIMS center. Basic Coding for Integrated Behavioral Health Care | University of Washington AIMS Center. <https://aims.uw.edu/resource-library/basic-coding-integrated-behavioral-health-care>. Accessed October 15, 2019.
3. Katon W, Unutzer J. Consultation psychiatry in the medical home and accountable care organizations: achieving the triple aim. *Gen Hosp Psychiatry*. 2011;33(4):305-310. doi: 10.1016/j.genhosppsy.2011.05.011.
4. Reiss-Brennan B, Brunisholz KD, Dredge C. Association of integrated team-based care with health care quality, utilization, and cost. *JAMA*. 2016;316(8):826-834. doi: 10.1001/jama.2016.11232.
5. Grazier KL, Smith JE, Song J, Smiley ML. Integration of depression and primary care: barrier to adoption. *J Prim Care Community Health*. 2014;5(1):67-73. doi: 10.1177/2150131913491290.
6. AIMS Center. Financial Modeling Workbook | University of Washington AIMS Center. <https://aims.uw.edu/collaborative-care/financing-strategies/financial-modeling-workbook>. Accessed October 15, 2019.
7. Centers for Medicare and Medicaid Services. Transitional Care Management Services. <https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/Transitional-Care-Management-Services-Fact-Sheet-ICN908628.pdf>. Published January 2019. Accessed October 15, 2019.
8. Centers for Medicare and Medicaid Services. Chronic Care Management Services. <https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/ChronicCareManagement.pdf>. Published July 2019. Accessed October 15, 2019.
9. American Psychiatric Association. FAQs for billing the Psychiatric Collaborative Care Management (CoCM) codes (99492, 99493, 99494, and G0512 in FQHCs/RHCs) and General Behavioral Health Intervention (BHI) code (99484, and G0511 in FQHCs/RHCs). June 2019.
10. Usa M. Federally Qualified Health Centers (FQHC) Center. <https://www.cms.gov/Center/Provider-Type/Federally-Qualified-Health-Centers-FQHC-Center.html>. Published September 27, 2019. Accessed October 15, 2019.
11. SAMHSA-HRSA Center for Integrated Health Solutions. What is Integrated Care? <https://www.integration.samhsa.gov/about-us/what-is-integrated-care>. Accessed October 15, 2019.
12. SAMHSA-HRSA Center for Integrated Health Solutions. Integrated Care Models. <https://www.integration.samhsa.gov/integrated-care-models>. Accessed October 15, 2019.
13. Busetto L, Luijkx KG, Elissen AMJ, Vrijhoef HJM. Intervention types and outcomes of integrated care for diabetes mellitus type 2: a systematic review. *J Eval Clin Pract*. 2016;22(3):299-310. doi:10.1111/jep.12478.
14. Collier D, LaPorte J, Seawright J. Putting typologies to work: concept formation, measurement, and analytic rigor. *Political Res Q*. 2012;65(1):217-232. doi:10.1177/1065912912437162.
15. Centers for Medicare and Medicaid Services. License for Use of Current Procedural Terminology, Fourth Edition ("CPT®"). <https://www.cms.gov/apps/physician-fee-schedule/license-agreement.aspx>. Accessed October 15, 2019.
16. Paulus A, van Raak A, Keijzer F. ABC: The pathway to comparison of the costs of integrated care. *Public Money Manag*. 2002;22(3):25-32. doi:10.1111/1467-9302.00315.

Appendix 1: Literature Review Search Strategy

PubMed Search Strategy

Date Searched: January 30, 2019

Final number of results: 3,841

((("Care coordination"[title/abstract] OR "managed care"[title/abstract] OR "managed care programs"[mesh] OR "coordinated care"[title/abstract] OR "care management"[title/abstract] OR ((behavioral[title/abstract] OR "behavioral medicine"[mesh]) AND (integration[title/abstract] OR coordination[title/abstract] OR integrated[title/abstract])) OR "accountable care organizations"[title/abstract] OR "accountable care organizations"[mesh])) AND ("mental health"[title/abstract] OR "mental health services"[mesh] OR "Mental illness"[title/abstract] OR "mental disorders"[title/abstract] OR "mental disorders"[mesh] OR (substance[title/abstract] AND (abuse[title/abstract] OR use[title/abstract] OR disorder*[title/abstract])) OR "substance-related disorders"[mesh] OR detox[title/abstract]))

Appendix 2: Qualitative Interview Sample

Introduction:

Thank you for taking the time to participate in this interview. I'm <name and job position of the interviewer> and also on the phone call are <names, affiliations, and reasons why they're on the call>. This interview should last for under an hour. As I mentioned in my introduction, our group is interested in learning about integrated behavioral health and primary care today. Our aim is to develop a model that helps us predict the cost of integrated care. Your expertise will help us better what we need to include in that model and how that differs across organizations. Specifically, our goal for this interview is to learn more about your organization's efforts to integrate behavioral health and primary care.

With your permission, I would like to record today's phone call so that I can focus my full attention on the conversation rather than on taking notes. Do I have your permission to record the interview?

Topic 1: Organizational Information

Questions:

- What is your organizational setting (e.g., academic medical center, VA, Medicaid, other)?
- What occupations do you hire that are involved in patient care (e.g., clinical staff, case manager)?
- What patient populations does your organization serve?

Topic 2: Integrated Care Model

Questions:

- What does your organization consider behavioral health care? Physical health care?
- Please describe in detail your organization's integrated care model.
 - What are the major components or pieces of this coordination?
 - Which members of your organization's workforce deliver integrated care for your patients? What are each of these occupations' roles in the delivery of integrated care?
 - What kind of training does your organization conduct to support your workforce's efforts to integrate care?
 - Do you have any licensure requirements for staff involved in integrated care delivery?
 - Do you evaluate your integrated care program?
 - Do other patients receive integrated behavioral health and primary care that is not considered integrated care? If so, what is the proportion of your patient who receive this care, excluding those who receive integrated care?

Topic 3: Financing Integrated Care

Questions:

- How do you pay for integrated care?
 - Do you submit claims to the relevant payer organizations?
 - If so, which provider/organization (e.g., primary care physician, behavioral health specialist) involved in integrated care submits the CPT code for reimbursement?
 - Do you have a federal/state grant that covers integrated care financing?

- Has your reimbursement source varied over time? For example, did you initially pilot your integrated care program through a federal grant, but now submit claims for reimbursement?
- How is each staff member (e.g., physician, behavioral health specialist, care manager) paid (e.g., per patient, per service, salaried)?
 - If submitting claims for reimbursement, does this vary by payer?

Topic 4: Thoughts on Integrated Care Financing

Questions:

- What are the most important lessons learned from your organization's efforts to provide and pay for integrated care?
- What do you know now that you wish that your organization knew before it began its efforts to integrate care from a financing perspective?
- Do you have any thoughts on the ideal way to reimburse for integrated care?

Topic 5: Other Contacts

Questions:

- Are there other members of your organization that you think would be useful for us to connect with?
- Do you know of other organizations that provide integrated care that you think would be interested in talking with us? Could we have their contact information?

Conclusion:

Thank you for taking the time to talk to meet about integrated care today. Is there anything else you would like to add to our discussion today or something I didn't ask you about which you would like to discuss on this topic?

Thank you again. Please feel to reach me by e-mail at <e-mail> if you have additional questions or comments.

Appendix 3: Qualitative Interview Methodology

Settings providing integrated care were identified through the scholarly and grey literature. Two integrated care models from each affiliate institution were selected for sample participation. Additional sample participants were identified using a snowball strategy approach, whereby participants were asked at the conclusion of each interview to identify other potential participants.

In the end, five organizations agreed to participate in the interview:

1. The AIMS Center at the University of Washington, a center renowned for studying, evaluating, and developing collaborative care models
2. University of Washington Medicine, an academic medical center providing collaborative care across 13 sites in the state of Washington
3. Washington State Health Care Authority, the body responsible for administering Washington's Medicaid program
4. Intermountain Healthcare, a non-profit health system in Utah that combines dozens of hospitals and primary care clinics into an integrated care system, complete with its own insurance plans
5. Cherokee Health Systems, a Federally Qualified Health Center and community mental health center located in Tennessee, composed of 45 integrated care clinical sites.

Researchers conducted 45 to 60-minute telephone interviews using a semi-structured format that followed a written interview guide. Interviews were recorded with consent and transcribed using Scribie. The interview guide covered the following themes:

1. organizational information;
2. integrated care model features;
3. financing arrangement; and
4. broader thoughts on integrated care financing.

Appendix 4: Qualitative Interview Results

Although the interviewed organizations represented diverse points on the typology, their opinions about integrated care and its financing coalesced on several topics throughout the four themes of the survey.

Organizational Information

Each health system interviewed provided integrated care services across multiple sites. Although some systems had programs dedicated to specific vulnerable subpopulations (pediatric, geriatric, and obstetric/gynecological programs, to name a few,) they all focused primarily on treating the population around their primary care sites. Payer mixes per facility varied; some sites saw more Medicaid and Medicare covered patients, whereas other sites saw more privately insured patients. Only one of the health systems interviewed was using a collaborative care model; the other health systems utilized care teams staffed with behavioral health and primary care providers, but their team compositions were more flexible than the collaborative care model's prescriptive primary care physician, psychiatric consultant, and care manager structure.

Integrated Care Models

This section yielded the most diverse answers across interviews, and was made more complicated by the sheer number of care sites operated by each healthcare system. Generally speaking, the majority of behavioral health care was provided to patients by a primary care provider—not by a behavioral health specialist. Several organizations expressed the same goal behind integrated primary and behavioral health care: to meet the needs of patients with appropriate levels of treatment. If a patient presents at a clinic with low complexity and acuity, the primary care provider could treat said patient without consultations or referrals. With adequate training and support, primary care physicians in one health system were treating around 80% of behavioral health cases without direct team assistance.

That said, behavioral health specialists are instrumental to the team-based care model that many integrated systems employ. For cases that are too complex for a primary care physician to manage alone, a patient can be triaged to a specialist for more intensive care. Some larger health systems offered multiple levels of behavioral health specialists, with master's-level counseling occupations handling less complex cases and psychiatrists handling the most complex. Other systems stuck primarily with one type of behavioral health provider—usually a psychiatrist or clinical psychologist.

Other members of care teams included nursing staff, community health workers, care management/coordinators, other medical specialists (e.g., endocrinologists), and more. The care managers' level of training and credential could serve to limit the types of tasks that could be shifted to them. For example, if a care manager does not have medical training or an appropriate credential, they may not be legally authorized to counsel patients on medication management. However, if the care manager's role was less about providing direct services and more about coordinating care, then this might not be an issue. Care managers employed by the interviewed systems were typically licensed social workers, practical nurses, or registered nurses.

Two systems also tried to involve the patient, their family, and their community with care being provided, making these disparate parties part of the care team. Patients were asked to establish health goals, which increased their retention in care. Families were educated about how best to support patients, or were used as points of contact if the patient was not responding to the care team. And community health workers could go out into the surrounding neighborhoods to build connections and promote prevention strategies.

The physical space(s) the care team occupied varied. Some integrated care sites had psychiatric providers embedded at the site, whereas others relied on telepsychiatry, and still others would refer patients to a nearby affiliated psychiatric care site. Sites utilizing telepsychiatry were typically very distant from other health system sites. Such remote care provision is only possible if state laws and rules are favorable towards telemedicine; states where originating and distant sites are clearly defined in their regulations, standards of

practice for privacy are clearly established, and reimbursement parity is enacted are often more fertile ground for telemedicine practices. Another very common barrier to integrated care was plan limits on the number of providers a patient could see in one day—a policy meant to control costs by reducing unnecessary referrals. One health system could not begin to integrate their services in earnest until its state Medicaid plan was amended to remove this provision.

One consistent key to integrating care teams, according to all interviewees, was for medical professionals and behavioral health professionals alike to receive training on how to provide integrated care. Medical professionals often had to learn the competencies of their counseling team members and how to involve them in care. Behavioral health professionals had to learn how to provide behavioral health care in a primary care space, often necessitating shorter-than-usual sessions with clients and concise charting. Leadership also had to actively work to change the culture of the health system, promoting the importance of interdependent teams of providers over more traditional hierarchies.

Financing Arrangement

Most interviewed systems predominantly utilized the fee-for-service model of care reimbursement. Under this model, every care team member independently billed the patient as services were rendered. This was usually accomplished through the use of a comprehensive EHR system. Not only did EHRs allow for more services to be captured and billed, but they were essential to keep all care team members informed about a patient's diagnosis, treatment plan, and progress. One health system required all care team members to check on a patient's treatment plan progress, regardless of what the patient was seeing them for. For example, if the patient entered a radiologist's office for an imaging appointment, the radiologist might notice the patient is due for a counseling session but has yet to make an appointment. That radiologist would take time to schedule a counseling session for the patient to help the patient more strictly adhere to their treatment.

The fee-for-service model does have its faults, however. First, it is easier for larger organizations with an established EHR system to utilize than for smaller, less-staffed clinics. Many modern EHR systems have built-in prompts to help guide providers through the process of selecting and billing for the correct CPT or HCPCS codes. However, for clinics without access to these EHR systems, capitated payment models may help provide better value to providers.

Second, the fee-for-service model relies on standardized billing codes to function and these codes do not currently cover all services delivered in integrated care settings. Services that cannot be billed represent lost revenue for providers and their health systems. Several interviewees were grateful for CMS' addition of the care manager CPT codes to help fund collaborative care models; however, these same interviewees lamented that a lot of work done by psychiatrists on integrated care teams cannot be billed. For instance, although a psychiatrist can bill for providing a consultation, they cannot bill for warm handoffs of patients to other team members or for time spent in care team meetings discussing clients. These lost billings led one interviewed organization to regularly post financial losses for their integrated care project. By comparison, capitated payments, like diagnosis-related groups or bundled payments, would cover the full range of services provided to a patient and could serve as a more financially viable option for health systems/clinics.

Third, fee-for-service models contain an implicit incentive toward providing more services than may be necessary in order to maximize revenue. The interviewed health systems had several safeguards to avoid this problem in their integrated care programs. Providers were typically reimbursed through a set salary, meaning billing extra services would not affect their pay. Several interviewed systems also incorporated value-based payment incentives into their payroll. These value-based incentives would be given to providers as a reward, typically no larger than an additional 5% of the provider's base salary, if the provider both controlled costs and met quality of care metrics, like reducing readmissions. In this way, health systems were able to shift incentives away from over-providing services to providing a prudent amount of services for optimizing patient outcomes.

Broader Thoughts on Integrated Care Financing

The following three phrases were regularly repeated as closing thoughts in the interviews.

“Take your time.” Integrating behavioral health and primary care takes a lot of patient effort. From statutory

and regulatory changes to how care teams approach a single patient, integrating care affects every level of how care is provided. Besides navigating these multiple tiers of challenges, health systems attempting to integrate must also tackle the very culture of how their providers, and the rest of their system, view the nature of medical and behavioral health care. Acculturation to a new set of values does not occur quickly—especially if an organization has decades of tradition to the contrary. Leaders seeking to push for integrated care on the grounds that it would better serve patient populations and possibly save money must be willing to methodically problem solve through years of complications before seeing a fundamental transformation.

“Encourage leadership.” Integrating care does not simply happen from the top down, with an executive board issuing a new mission statement for every worker in the health system to follow. Integration also happens from the bottom up. Though having executive leaders breaking down structural barriers to integration is important, leadership among providers is also important in changing staff attitudes and culture. Just as having a universal EHR system is indispensable towards team-based care, so too is motivated human capital vital to overhauling an organization’s norms and operations.

“Put the mission before the money.” Given the complicated web of regulations and reimbursement streams that vary from state to state, interviewees stressed the importance of pursuing integrated care as a value-adding proposition without getting caught up on the details of how to pay for it. Interviewees were confident that any health system could find a way to pay for integrating their care if they were creative and diligent enough. Even the system that regularly posted financial losses for their integrated care team were seeing cost savings in other areas of their system, such as in their emergency rooms and intensive care units. Positive changes in population health, overall, were also observed. As the positive improvements in clinical outcomes and patient experience could not be denied, interviewed health systems all advocated for integrating behavioral health care into primary care, regardless of how difficult it might be to find a path to solvency. Furthermore, convincing all staff that integration is a worthy mission helps create buy-in and cooperation—without which any systemic transformation would be impossible. Committing to integration, rather than having a fully actualized financing strategy, is the first necessary step toward integrating.