Appendix Table A1. Detailed information on construction of variables

Variable	Survey Question and construction detail	Data Source
Dependent variables		
Received Mental Health Treatment Anywhere in the Last 12 months	Respondents were asked "In the past 12 months, that is since {12 MONTH REFERENCE DATE}, did you receive any mental health treatment or counseling?" • Yes • No	2014 Health Center Patient Survey
On-Site Patient Utilization of Mental Health Services	Among patients that responded they receiving mental health treatment of counseling, patients were asked: " What kind of treatment and/or counseling was it? You may select one or more. Was it …?" • Individual counseling • Group counseling • Family or couples counseling • Prescription medication • Inpatient treatment in a general hospital or mental health treatment facility Those who indicated their treatment were individual, group, family or couples counseling, or prescription medication were asked: "How many of your treatment or counseling sessions you received did you get at {REFERENCE HEALTH CENTER}? Would you say…?" • All of the visits • Some of the visits • None of the visits	2014 Health Center Patient Survey
Independent variables		
Mental Health Provider Staffing	Due to highly skewed and multimodal distributions, an indicator variable was created for whether a health center had: • No mental health full-time equivalent (FTE) per 2,000 patients • Less than one mental health FTE per 2,000 patients	2013 Uniform Data System

	• At least one mental health FTE per 2,000 patients The cutoff of one FTE was chosen to distinguish between part-time and full-time staffing. Mental health staff include psychiatrists, licensed clinical psychologists, licensed clinical social workers, other licensed mental health providers	
Type of mental health provider	Full time equivalent of the following types of mental health staff: • Psychiatrist • Psychologists • Other licensed mental health providers (including clinical social workers)	2013 Uniform Data System
Health center characteristics		
Number of patients per FTE primary care providers (PCP) ratio	Patient per PCP ratio was categorized into: • Small (under 1,200, reference) • Medium (1,200-1,999) • Large (2,000 or more) These panel size categories were based on the 25th and 75th percentile of the distribution due to skewness. Number of patients per FTE PCP. PCPs include: family physicians, general practitioners, internists, nurse practitioners, and physician assistants.	2013 Uniform Data System
Clinical support staff to PCP ratio	Clinical support staff to PCP ratio was categorized into: • 2 FTE or less (reference) • >2 - ≤ 4 FTE • >4 FTE Due to skewness, this variable was categorized based on cutoffs that reflected groupings within the distribution. Clinic support staff included: • Registered nurses • Licensed practical and vocational nurses	2013 Uniform Data System

	• Home health and visiting nurses • Clinical nursing specialists • Public health nurses • Medical assistants • Nurses' aides	
Number of clinics within the health center organization.	Number of clinics within the health center organization was categorized based on groupings within the distribution: • Low (10 or fewer, reference) • Medium (11-19) • Large (20 or more)	2013 Uniform Data System
Percent of patients diagnosed with depression at the patient's health center where they were interviewed	Percent of patients diagnosed with depression was categorized as: • Low (5% or less, reference) • Medium (more than 5% but less than 15%) • High (15% or more)	2013 Uniform Data System
Percent of total revenue from Medicaid managed care contracts at the patient's health center where they were interview	Percent of total revenue from Medicaid managed care contracts was categorized as: • No revenue (reference) • Less than 25% • 25% or more The percent of total revenue from Medicaid managed care contracts at the patient's health center was used as a proxy for potential incentives to provide more integrated care.	2013 Uniform Data System
Urban/rural location of the health center	Whether the health center is in a rural location (yes/no)	2013 Uniform Data System
Predisposing factors		
Race/ethnicity	Race/ethnicity was categorized as: • Non-Hispanic White (reference) • Hispanic/Latino • Non-Hispanic Black • Other	2014 Health Center Patient Survey
Gender	Gender was categorized as male (reference) and female	2014 Health Center Patient Survey
Age	Age was categorized as: • 18-25 years • 26-49 years (reference) • 50-64 years	2014 Health Center Patient Survey
Marital status	Marital status was categorized as: • Married or has a domestic partner (reference) • Not married or no domestic partner (never	2014 Health Center Patient Survey

	married, separated, widowed, or divorced)	
Limited English proficiency	Limited English proficiency was dichotomized as no (reference) vs yes	2014 Health Center Patient Survey
Education attainment	Education attainment was categorized as: • Less than high school (reference) • High school graduate • More than high school	2014 Health Center Patient Survey
Recommend health center to friends or family	Recommending the health center to the patient's friends or family was categorized as: • Would definitely recommend health center to family or friends (reference) • Would not recommend or would only somewhat recommend health center to family or friends	2014 Health Center Patient Survey
Enabling factors		
Poverty level	Poverty level was categorized as: • At or below the 100% federal poverty guideline vs. higher (reference)	2014 Health Center Patient Survey
Type of insurance	Health insurance was categorized as: • Medicaid • Uninsured (reference) • Other or missing response	2014 Health Center Patient Survey
Need factors		
Psychiatric distress	Kessler 6 diagnostic tool • Low (score less than 5, reference) • Moderate (score of 5-12) • Severe (Score of 13 or more)	2014 Health Center Patient Survey
Needed substance use disorder treatment or counseling	Patient reported wanting or needing substance use disorder treatment or counseling	2014 Health Center Patient Survey
Self-reported health status	Patient's self-reported health status categorized as: • Excellent or very good • Good, fair or poor (reference)	2014 Health Center Patient Survey

Appendix Table B1. Kessler 6 Diagnostic Tool

Kessler 6 Questions	Response Options	Diagnostic Criteria*
During the past 30 days, how often did you feel [….]?	Response Options:	Score less than 5: No psychological distress
1. So sad that nothing could cheer you up?	a. All of the time	Score of 5-12: Moderate psychological distress
2. Nervous?	b. Most of the time	
3. Restless or fidgety?	c. Some of the time	Score of 13+: Severe psychological distress
4. Hopeless?	d. A little of the time	
5. That everything was an effort?	e. None of the time	
6. Worthless?		

Notes:
* Diagnostic criteria based on analysis by Prochaska, Sung, Max, Shi & Ong.(1)
Appendix Table B1 shows the questions, response options, and diagnostic criteria for the Kessler 6 psychological distress scale. Although the original K6 scale was used to detect severe psychological distress at a score of 13 or higher, Prochaska et al. argued that this cutoff of 13 misses people who are still experiencing "clinically relevant" psychological distress and that a score of 5-12 was still indicative of moderate psychological distress.

Table C1: Association Between Mental Health (MH) Staffing and Patients Receiving Mental Health Treatment Anywhere within Last 12 Months (vs None) Weighted Multilevel GSEM Logistic Regression (n=4,575)

	OR	Robust SE	p-value	95% Confidence Interval	
Any licensed mental health staff (ref: no mental health staff)					
Less than 1 MH FTE per 2,000 patients	1.22	0.28	0.39	0.78	1.92
At least 1 MH FTE per 2,000 patients	2.24*	0.88	0.04	1.04	4.84
Health center					
Organizational capacity					
PCP panel size (ref: < 1,200 patients)					
1,200 – 1,999 patients	0.62	0.16	0.07	0.38	1.04
≥ 2,000 patients	0.66	0.22	0.20	0.34	1.26
Ratio of clinic support staff to PCP FTE (ref: ≤2)					
>2 - ≤4	1.17	0.24	0.44	0.78	1.76
> 4	1.39	0.40	0.25	0.79	2.44
Rural location	0.99	0.18	0.96	0.69	1.42
Number of center's clinic sites (ref: ≤10)					
11-19	0.81	0.16	0.31	0.55	1.21
≥20	0.78	0.20	0.33	0.47	1.29
Demand for mental health services: % of patients at center with a diagnosis of depression (ref: ≤ 5%)					
> 5% - < 15%	2.07***	0.46	0.00	1.34	3.21
≥15%	2.38**	0.84	0.01	1.19	4.77
Funding incentives for integrated care: % of total revenue from Medicaid managed care (ref: none)					
<25%	1.29	0.25	0.20	0.88	1.90
≥25%	0.90	0.34	0.77	0.43	1.87
Patients					
Predisposing factors					
Female sex (ref: male)	1.15	0.21	0.45	0.80	1.65
Age (ref: 26-49)					
18-25	0.66	0.18	0.13	0.39	1.13
50-64	0.72*	0.11	0.03	0.53	0.97
Race/Ethnicity (reference: non-Hispanic white)					
Hispanic/Latino	0.57**	0.13	0.01	0.36	0.88
Non-Hispanic Black	0.46***	0.10	0.00	0.31	0.69
Other	0.75	0.17	0.21	0.48	1.18
Marital status: not married or domestic partner (ref: married or domestic partner)	1.32	0.24	0.12	0.93	1.87
Education (ref: less than high school)					
High school graduate	0.99	0.17	0.97	0.71	1.39

More than high school	1.65**	0.30	0.01	1.15	2.35
Limited English proficiency (ref. no limited English proficiency)	0.35***	0.11	0.00	0.19	0.65
Would not or only somewhat recommend HC to family or friends (ref: would definitely recommend)	0.86	0.18	0.45	0.57	1.28
Enabling factors					
Federal poverty level less than or equal to 100% (ref: greater than 100%)	1.16	0.20	0.40	0.82	1.64
Insurance coverage status (ref: uninsured)					
Medicaid	2.88***	0.59	0.00	1.93	4.30
Other or missing response	1.49	0.35	0.09	0.94	2.35
Need factors					
MH Status by Kessler severity score (ref: mild or no psychological distress)					
Moderate psychological distress	3.55***	0.64	0.00	2.48	5.06
Severe psychological distress	11.22***	2.69	0.00	7.02	17.94
Reported last year wanting or needing substance abuse treatment or counseling (ref.: did not report)	5.40***	1.26	0.00	3.42	8.52
Excellent or very good self-reported health (ref: good, fair, poor health)	0.73	0.16	0.15	0.48	1.12
M1[grantee_id]	2.72	(constrained)			
constant	0.03	0.02	0.00	0.01	0.08
var(M1[grantee_id])	2.19	1.18		1.67	3.31

Notes:
Source: Uniform Data System 2013 and Health Resources and Services Administration Health Center Patient Survey 2014
GSEM = Generalized Structural Equation Model
MH = Mental Health, FTE= Full Time Equivalent, HC = Health Center
Statistically significant at *p<0.05; **p<0.01; ***p<0.001

Table C2: Association Between Type of Mental Health (MH) Staff and Patients Receiving Mental Health Treatment Anywhere within Last 12 Months (vs None) Weighted Multilevel GSEM Logistic Regression (n=4,575)

	OR	Robust SE	p-value	95% Confidence Interval	
Type of mental health staff					
Any psychiatrist FTE on staff (ref. none)	1.21	0.26	0.38	0.80	1.83
Any clinical psychologist FTE on staff (ref. none)	0.95	0.19	0.82	0.64	1.42
Any other licensed MH provider FTE on staff (ref. none)	0.99	0.28	0.98	0.57	1.74
Health center					
Organizational capacity					
PCP panel size (ref: < 1,200 patients)					
1,200 – 1,999 patients	0.59	0.16	0.05	0.35	0.99
≥ 2,000 patients	0.61	0.20	0.14	0.32	1.17
Ratio of clinic support staff to PCP FTE (ref: ≤2)					
>2 - ≤4	1.15	0.24	0.51	0.76	1.74
> 4	1.29	0.38	0.39	0.72	2.29
Rural location	0.99	0.20	0.95	0.67	1.46
Number of center's clinic sites (ref: ≤10)					
11-19	0.82	0.17	0.34	0.54	1.23
≥20	0.84	0.23	0.53	0.49	1.44
Demand for mental health services: % of patients at center with a diagnosis of depression (ref: ≤ 5%)					
> 5% - < 15%	2.18***	0.51	0.00	1.38	3.46
≥15%	2.80**	1.09	0.01	1.31	6.00
Funding incentives for integrated care: % of total revenue from Medicaid managed care (ref: none)					
<25%	1.31	0.27	0.19	0.88	1.95
≥25%	0.85	0.32	0.66	0.40	1.78
Patients					
Predisposing factors					
Female sex (ref: male)	1.14	0.21	0.48	0.79	1.64
Age (ref: 26-49)					
18-25	0.66	0.18	0.12	0.38	1.12
50-64	0.71*	0.11	0.03	0.53	0.97
Race/Ethnicity (reference: non-Hispanic white)					
Hispanic/Latino	0.57**	0.13	0.01	0.36	0.89
Non-Hispanic Black	0.46***	0.09	0.00	0.31	0.69
Other	0.76	0.18	0.23	0.48	1.19

Marital status: not married or domestic partner (ref: married or domestic partner)	1.31	0.24	0.13	0.92	1.87
Education (ref: less than high school)					
High school graduate	1.00	0.17	1.00	0.72	1.40
More than high school	1.66**	0.30	0.01	1.16	2.37
Limited English proficiency (ref. no limited English proficiency)	0.35***	0.11	0.00	0.19	0.65
Would not or only somewhat recommend HC to family or friends (ref: would definitely recommend)	0.85	0.17	0.44	0.57	1.27
Enabling factors					
Federal poverty level less than or equal to 100% (ref: greater than 100%)	1.16	0.20	0.40	0.82	1.64
Insurance coverage status (ref: uninsured)					
Medicaid	2.88***	0.59	0.00	1.92	4.31
Other or missing response	1.48	0.35	0.09	0.94	2.35
Need factors					
MH Status by Kessler severity score (ref: mild or no psychological distress)					
Moderate psychological distress	3.57***	0.65	0.00	2.50	5.10
Severe psychological distress	11.25***	2.69	0.00	7.04	17.98
Reported last year wanting or needing substance abuse treatment or counseling (ref.: did not report)	5.40***	1.26	0.00	3.42	8.53
Excellent or very good self-reported health (ref: good, fair, poor health)	0.74	0.16	0.17	0.49	1.13
M1[grantee_id]	2.72	(constrained)			
constant	0.04	0.02	0.00	0.01	0.10
var(M1[grantee_id])	2.26	1.20		1.68	3.56

Notes:

Source: Uniform Data System 2013 and Health Resources and Services Administration Health Center Patient Survey 2014

GSEM = Generalized Structural Equation Model

MH = Mental Health, FTE= Full Time Equivalent, HC = Health Center

Statistically significant at *p<0.05; **p<0.01; ***p<0.001

Table D1: Association Between Mental Health (MH) Staffing and At Least Some On-Site Patient Utilization of Mental Health Services (vs All Off-Site) Weighted Multilevel GSEM Logistic Regression (n=1,130)

	OR	Robust SE	p-value	95% Confidence Interval	
Any licensed mental health staff (ref: no mental health staff)					
Less than 1 MH FTE per 2,000 patients	4.50***	2.19	0.00	1.73	11.70
At least 1 MH FTE per 2,000 patients	13.48***	9.74	0.00	3.27	55.54
Health center					
Organizational capacity					
PCP panel size (ref: < 1,200 patients)					
1,200 – 1,999 patients	0.59	0.24	0.19	0.27	1.30
≥ 2,000 patients	0.56	0.31	0.30	0.19	1.67
Ratio of clinic support staff to PCP FTE (ref: ≤2)					
>2 - ≤4	0.66	0.27	0.30	0.30	1.46
> 4	1.32	0.84	0.66	0.38	4.57
Rural location	2.04	0.78	0.06	0.97	4.30
Number of center's clinic sites (ref: ≤10)					
11-19	1.28	0.48	0.50	0.62	2.67
≥20	1.80	0.81	0.19	0.74	4.35
Demand for mental health services: % of patients at center with a diagnosis of depression (ref: ≤ 5%)					
> 5% - < 15%	1.21	0.49	0.64	0.54	2.68
≥15%	2.21	1.21	0.15	0.76	6.48
Funding incentives for integrated care: % of total revenue from Medicaid managed care (ref: none)					
<25%	0.87	0.30	0.68	0.45	1.69
≥25%	0.93	0.52	0.89	0.31	2.76
Patients					
Predisposing factors					
Female sex (ref: male)	1.46	0.37	0.14	0.89	2.38
Age (ref: 26-49)					
18-25	0.25***	0.11	0.00	0.10	0.60
50-64	0.90	0.28	0.74	0.49	1.67
Race/Ethnicity (reference: non-Hispanic white)					
Hispanic/Latino	2.01*	0.62	0.02	1.10	3.67
Non-Hispanic Black	1.47	0.47	0.23	0.78	2.76
Other	3.77**	1.83	0.01	1.45	9.78
Marital status: not married or domestic partner (ref: married or domestic partner)	0.90	0.28	0.73	0.49	1.64
Education (ref: less than high school)					
High school graduate	1.18	0.39	0.62	0.61	2.27

More than high school	1.14	0.36	0.67	0.62	2.12
Limited English proficiency (ref. no limited English proficiency)	4.31**	2.41	0.01	1.44	12.88
Would not or only somewhat recommend HC to family or friends (ref: would definitely recommend)	0.21***	0.07	0.00	0.12	0.39
Enabling factors					
Federal poverty level less than or equal to 100% (ref: greater than 100%)	0.57*	0.16	0.04	0.34	0.98
Insurance coverage status (ref: uninsured)					
Medicaid	0.90	0.34	0.77	0.42	1.89
Other or missing response	1.53	0.78	0.40	0.57	4.16
Need factors					
MH Status by Kessler severity score (ref: mild or no psychological distress)					
Moderate psychological distress	1.35	0.49	0.42	0.66	2.75
Severe psychological distress	2.66**	1.04	0.01	1.23	5.73
Reported last year wanting or needing substance abuse treatment or counseling (ref.: did not report)	0.64	0.21	0.18	0.33	1.23
Excellent or very good self-reported health (ref: good, fair, poor health)	0.39*	0.15	0.02	0.18	0.84
M1[grantee_id]	2.72	(constrained)			
constant	0.19	0.16	0.06	0.03	1.04
var(M1[grantee_id])	7.47	1.66		3.42	26.78

Notes:

Source: Uniform Data System 2013 and Health Resources and Services Administration Health Center Patient Survey 2014

GSEM = Generalized Structural Equation Model

MH = Mental Health, FTE= Full Time Equivalent, HC = Health Center

Statistically significant at *p<0.05; **p<0.01; ***p<0.001

Table D2: Association Between Type of Mental Health (MH) Staff and At Least Some On Site Patient Utilization of Mental Health Services (vs All Off Site) Weighted Multilevel GSEM Logistic Regression (n=1,130)

	OR	Robust SE	p-value	95% Confidence Interval	
Type of mental health staff					
Any psychiatrist FTE on staff (ref. none)	3.31***	1.37	0.00	1.47	7.46
Any clinical psychologist FTE on staff (ref. none)	1.03	0.35	0.94	0.53	1.99
Any other licensed MH provider FTE on staff (ref. none)	1.89	0.80	0.13	0.82	4.33
Health center					
Organizational capacity					
PCP panel size (ref: < 1,200 patients)					
1,200 – 1,999 patients	0.52	0.21	0.11	0.23	1.17
≥ 2,000 patients	0.44	0.26	0.16	0.14	1.38
Ratio of clinic support staff to PCP FTE (ref: ≤2)					
>2 - ≤4	0.55	0.23	0.16	0.24	1.27
> 4	0.83	0.57	0.78	0.21	3.19
Rural location	2.19	0.88	0.05	1.00	4.80
Number of center's clinic sites (ref: ≤10)					
11-19	1.25	0.48	0.57	0.58	2.66
≥20	1.53	0.72	0.37	0.61	3.85
Demand for mental health services: % of patients at center with a diagnosis of depression (ref: ≤ 5%)					
> 5% - < 15%	1.20	0.50	0.66	0.53	2.73
≥15%	2.48	1.29	0.08	0.89	6.86
Funding incentives for integrated care: % of total revenue from Medicaid managed care (ref: none)					
<25%	0.99	0.35	0.98	0.50	1.97
≥25%	0.78	0.43	0.65	0.27	2.30
Patients					
Predisposing factors					
Female sex (ref: male)	1.46	0.37	0.14	0.89	2.41
Age (ref: 26-49)					
18-25	0.24***	0.11	0.00	0.10	0.57
50-64	0.88	0.28	0.70	0.48	1.64
Race/Ethnicity (reference: non-Hispanic white)					
Hispanic/Latino	2.04*	0.63	0.02	1.12	3.73
Non-Hispanic Black	1.47	0.48	0.24	0.78	2.78
Other	3.92***	1.88	0.00	1.53	10.02

Marital status: not married or domestic partner (ref: married or domestic partner)	0.89	0.28	0.72	0.49	1.64
Education (ref: less than high school)					
High school graduate	1.22	0.41	0.56	0.62	2.37
More than high school	1.14	0.36	0.68	0.61	2.12
Limited English proficiency (ref. no limited English proficiency)	3.89*	2.17	0.02	1.30	11.61
Would not or only somewhat recommend HC to family or friends (ref: would definitely recommend)	0.20***	0.06	0.00	0.11	0.38
Enabling factors					
Federal poverty level less than or equal to 100% (ref: greater than 100%)	0.59	0.16	0.05	0.34	1.00
Insurance coverage status (ref: uninsured)					
Medicaid	0.84	0.33	0.66	0.39	1.81
Other or missing response	1.45	0.74	0.46	0.54	3.94
Need factors					
MH Status by Kessler severity score (ref: mild or no psychological distress)					
Moderate psychological distress	1.33	0.49	0.43	0.65	2.74
Severe psychological distress	2.53*	1.00	0.02	1.17	5.47
Reported last year wanting or needing substance abuse treatment or counseling (ref.: did not report)	0.63	0.21	0.18	0.33	1.23
Excellent or very good self-reported health (ref: good, fair, poor health)	0.39*	0.15	0.02	0.18	0.83
M1[grantee_id]	2.72	(constrained)			
constant	0.36	0.32	0.24	0.06	2.02
var(M1[grantee_id])	8.54	1.66		3.84	30.46

Notes:

Source: Uniform Data System 2013 and Health Resources and Services Administration Health Center Patient Survey 2014

GSEM = Generalized Structural Equation Model

MH = Mental Health, FTE= Full Time Equivalent, HC = Health Center

Statistically significant at *p<0.05; **p<0.01; ***p<0.001

Table E1: Association Between Mental Health (MH) Staffing and Patients Receiving Any MH Treatment within Last 12 Months (vs None) Stratified Sample Analysis

	Entire Sample			Mild or Moderate Psychological Distress			Moderate Psychological Distress			Moderate or Severe Psychological Distress			Severe Psychological Distress		
	n=4,575			n=3,826			n=1,797			n=2,546			n=749		
	OR	Robust SE	p-value	OR	Robust SE	p-value	OR	Robust SE	p-value	OR	Robust SE	p-value	OR	Robust SE	p-value
Any licensed mental health staff (ref: no mental health staff)															
Less than 1 MH FTE per 2,000 patients	1.22	0.28	0.39	1.26	0.36	0.42	1.71	0.67	0.17	1.44	0.46	0.25	1.15	0.70	0.82
At least 1 MH FTE per 2,000 patients	2.242*	0.88	0.04	2.534*	1.07	0.03	4.621**	2.64	0.01	3.323*	1.69	0.02	0.98	0.74	0.98
Health center															
Organizational capacity															
PCP panel size (ref: < 1,200 patients)															
1,200 – 1,999 patients	0.62	0.16	0.07	0.550*	0.14	0.02	0.450*	0.17	0.03	0.60	0.20	0.11	1.11	0.58	0.85
≥ 2,000 patients	0.66	0.22	0.20	0.69	0.23	0.26	0.48	0.21	0.09	0.50	0.20	0.09	0.51	0.34	0.32
Ratio of clinic support staff to PCP FTE (ref: ≤2)															
>2 - ≤4	1.17	0.24	0.44	1.23	0.26	0.33	1.44	0.45	0.25	1.31	0.35	0.32	1.32	0.57	0.52
> 4	1.39	0.40	0.25	1.50	0.50	0.22	1.15	0.50	0.75	1.13	0.39	0.73	2.50	1.53	0.13
Rural location	0.99	0.18	0.96	1.00	0.21	0.98	0.85	0.26	0.58	0.88	0.23	0.62	1.31	0.54	0.50
Number of center's clinic sites (ref: ≤10)															
11-19	0.82	0.16	0.31	0.74	0.17	0.18	0.55	0.17	0.06	0.73	0.19	0.22	1.40	0.65	0.47
≥20	0.78	0.20	0.33	0.72	0.20	0.23	0.58	0.22	0.16	0.70	0.23	0.29	1.22	0.55	0.65
Demand for mental health services: % of patients at center with a diagnosis of depression (ref: ≤ 5%)															
> 5% - < 15%	2.074**	0.46	0.00	2.045**	0.51	0.00	2.174*	0.72	0.02	2.161**	0.59	0.01	4.442**	2.12	0.00
≥15%	2.383*	0.84	0.01	2.544*	0.97	0.02	2.24	1.10	0.10	2.17	0.93	0.07	4.540*	2.93	0.02
Funding incentives for integrated care: % of total revenue from Medicaid managed care (ref: none)															

<25%	1.29	0.25	0.20	1.24	0.26	0.30	1.32	0.40	0.35	1.36	0.36	0.24	1.46	0.63	0.38
≥25%	0.90	0.34	0.77	0.64	0.24	0.23	0.91	0.40	0.84	1.21	0.47	0.63	1.42	0.95	0.60
Patients															
Predisposing factors															
Female sex (ref: male)	1.15	0.21	0.45	1.10	0.23	0.64	1.18	0.33	0.56	1.20	0.26	0.40	1.39	0.44	0.29
Age (ref: 26-49)															
18-25	0.66	0.18	0.13	0.56	0.17	0.06	0.58	0.21	0.12	0.75	0.23	0.35	2.04	1.29	0.26
50-64	0.716 *	0.11	0.03	0.72	0.12	0.06	0.66	0.15	0.07	0.68	0.14	0.06	0.78	0.26	0.45
Race/Ethnicity (reference: non-Hispanic white)															
Hispanic/Latino	0.566 *	0.13	0.01	0.526 **	0.13	0.01	0.419 **	0.12	0.00	0.480 **	0.13	0.01	1.31	0.78	0.65
Non-Hispanic Black	0.463 ***	0.10	0.00	0.365 ***	0.08	0.00	0.271 ***	0.08	0.00	0.405 ***	0.10	0.00	0.99	0.38	0.98
Other	0.75	0.17	0.21	0.64	0.16	0.07	0.70	0.21	0.23	0.82	0.21	0.44	2.20	1.25	0.17
Marital status: not married or domestic partner (ref: married or domestic partner)	1.32	0.24	0.12	1.34	0.28	0.15	1.42	0.40	0.22	1.37	0.31	0.16	1.33	0.42	0.37
Education (ref: less than high school)															
High school graduate	0.99	0.17	0.97	0.78	0.16	0.24	0.62	0.16	0.06	0.95	0.20	0.83	2.19	0.96	0.07
More than high school	1.646 **	0.30	0.01	1.37	0.28	0.12	1.24	0.33	0.42	1.678 *	0.35	0.01	2.808 *	1.18	0.01
Limited English proficiency (ref: no limited English proficiency)	0.355 ***	0.11	0.00	0.453 *	0.15	0.02	0.385 **	0.14	0.01	0.302 ***	0.10	0.00	0.102 ***	0.06	0.00
Would not or only somewhat recommend HC to family or friends (ref: would definitely recommend)	0.86	0.18	0.45	0.85	0.20	0.48	0.71	0.22	0.26	0.75	0.18	0.23	0.71	0.31	0.44
Enabling factors															
Federal poverty level less than or equal to 100% (ref: greater than 100%)	1.16	0.21	0.40	1.15	0.24	0.50	1.00	0.25	0.99	1.05	0.20	0.79	0.98	0.32	0.95
Insurance coverage status (ref: uninsured)															

Medicaid	2.878***	0.59	0.00	3.029***	0.67	0.00	3.386***	0.96	0.00	2.972***	0.74	0.00	3.695***	1.32	0.00
Other or missing response	1.49	0.35	0.09	1.45	0.39	0.17	1.94	0.69	0.06	1.70	0.48	0.06	1.54	0.71	0.36
Need factors															
MH Status by Kessler severity score (ref: mild or no psychological distress)															
Moderate psychological distress	3.546***	0.64	0.00	3.517***	0.64	0.00									
Severe psychological distress	11.22***	2.69	0.00							3.495***	0.79	0.00			
Reported last year wanting or needing substance abuse treatment or counseling (ref.: did not report)	1.26	0.00	5.891***	1.62	0.00	8.737***	3.34	0.00	6.448***	1.82	0.00	5.864***	2.97	0.00	0.00
Excellent or very good self-reported health (ref: good, fair, poor health)	0.16	0.15	0.84	0.18	0.43	0.67	0.22	0.23	0.521*	0.15	0.03	0.44	0.25	0.14	0.15
M1[grantee_id]	2.72			2.72			2.72			2.72			2.72			
var(M1[grantee_id])	2.191***	0.37	0.00	2.442***	0.50	0.00	4.825***	1.94	0.00	3.477***	0.95	0.00	4.734**	2.57	0.00

Notes:

Source: Uniform Data System 2013 and Health Resources and Services Administration Health Center Patient Survey 2014

GSEM = Generalized Structural Equation Model

MH = Mental Health, FTE= Full Time Equivalent, HC = Health Center

Statistically significant at *p<0.05; **p<0.01; ***p<0.001

Table E2: Association Between Mental Health (MH) Staffing and Patients Receiving Any MH Treatment within Last 12 Months (vs None) Stratified Sample Analysis

	Entire Sample			Patients with Depression or Generalized Anxiety			Patients with Panic Disorder, Schizophrenia, or Bipolar Disorder		
	n=4,575			n=2,071			n=1,013		
	OR	*Robust SE*	*p-value*	*OR*	*Robust SE*	*p-value*	*OR*	*Robust SE*	*p-value*
Any licensed mental health staff (ref: no mental health staff)									
Less than 1 MH FTE per 2,000 patients	1.22	0.28	0.39	1.30	0.34	0.31	2.11	0.93	0.09
At least 1 MH FTE per 2,000 patients	2.242*	0.88	0.04	2.550*	1.11	0.03	3.37	2.30	0.07
Health center									
Organizational capacity									
PCP panel size (ref: < 1,200 patients)									
1,200 – 1,999 patients	0.62	0.16	0.07	0.80	0.22	0.41	0.67	0.27	0.33
≥ 2,000 patients	0.66	0.22	0.20	0.80	0.29	0.54	0.65	0.35	0.43
Ratio of clinic support staff to PCP FTE (ref: ≤2)									
>2 - ≤4	1.17	0.24	0.44	1.31	0.30	0.25	1.05	0.43	0.91
> 4	1.39	0.40	0.25	1.55	0.55	0.22	1.59	0.98	0.46
Rural location	0.99	0.18	0.96	0.87	0.18	0.50	0.91	0.29	0.76
Number of center's clinic sites (ref: ≤10)									
11-19	0.82	0.16	0.31	0.90	0.21	0.64	0.74	0.29	0.43
≥20	0.78	0.20	0.33	0.86	0.27	0.63	0.64	0.31	0.37
Demand for mental health services: % of patients at center with a diagnosis of depression (ref: ≤ 5%)									
> 5% - < 15%	2.074**	0.46	0.00	1.866*	0.45	0.01	1.75	0.65	0.13
≥15%	2.383*	0.84	0.01	1.94	0.71	0.07	1.12	0.73	0.87
Funding incentives for integrated care: % of total revenue from Medicaid managed care (ref: none)									
<25%	1.29	0.25	0.20	1.38	0.32	0.16	1.71	0.62	0.14
≥25%	0.90	0.34	0.77	0.89	0.38	0.78	1.31	0.99	0.72
Patients									
Predisposing factors									
Female sex (ref: male)	1.15	0.21	0.45	0.81	0.15	0.26	1.12	0.31	0.67

Age (ref: 26-49)									
18-25	0.66	0.18	0.13	0.64	0.21	0.18	1.16	0.61	0.78
50-64	0.716*	0.11	0.03	0.627**	0.11	0.01	0.78	0.24	0.43
Race/Ethnicity (reference: non-Hispanic white)									
Hispanic/Latino	0.566*	0.13	0.01	0.72	0.22	0.28	0.88	0.49	0.82
Non-Hispanic Black	0.463***	0.10	0.00	0.77	0.19	0.28	0.84	0.29	0.63
Other	0.75	0.17	0.21	1.31	0.34	0.30	2.12	1.02	0.12
Marital status: not married or domestic partner (ref: married or domestic partner)	1.32	0.24	0.12	1.28	0.25	0.22	1.05	0.28	0.87
Education (ref: less than high school)									
High school graduate	0.99	0.17	0.97	1.31	0.26	0.18	0.66	0.25	0.28
More than high school	1.646**	0.30	0.01	1.752*	0.40	0.02	1.31	0.52	0.50
Limited English proficiency (ref. no limited English proficiency)	0.355***	0.11	0.00	0.462*	0.18	0.04	0.276*	0.17	0.03
Would not or only somewhat recommend HC to family or friends (ref: would definitely recommend)	0.86	0.18	0.45	0.94	0.21	0.77	0.90	0.32	0.76
Enabling factors									
Federal poverty level less than or equal to 100% (ref: greater than 100%)	1.16	0.21	0.40	1.09	0.20	0.62	1.29	0.36	0.36
Insurance coverage status (ref: uninsured)									
Medicaid	2.878***	0.59	0.00	2.907***	0.74	0.00	3.726***	1.33	0.00
Other or missing response	1.49	0.35	0.09	1.83	0.57	0.05	1.26	0.54	0.59
Need factors									
MH Status by Kessler severity score (ref: mild or no psychological distress)									
Moderate psychological distress	3.546***	0.64	0.00	1.680*	0.36	0.01	1.59	0.61	0.23
Severe psychological distress	11.22***	2.69	0.00	3.405***	0.93	0.00	2.996**	1.11	0.00
Reported last year wanting or needing substance abuse treatment or counseling (ref.: did not report)	5.401***	1.26	0.00	3.782***	1.09	0.00	7.233***	3.52	0.00
Excellent or very good self-reported health (ref: good, fair, poor health)	0.73	0.16	0.15	1.18	0.39	0.61	1.22	0.54	0.65
M1[grantee_id]	2.72			2.72			2.72		

var(M1[grantee_id])	2.191***	0.37	0.00	2.391***	0.59	0.00	5.248***	2.09	0.00

Notes:

Source: Uniform Data System 2013 and Health Resources and Services Administration Health Center Patient Survey 2014

GSEM = Generalized Structural Equation Model

MH = Mental Health, FTE= Full Time Equivalent, HC = Health Center

* p<0.05, ** p<0.01, *** p<0.001