Online Appendix

Detailed Study Methods

Patients eligible for the study did not include individuals living in Section 8/Housing and Urban Development-Veterans Administration Supportive Housing (HUD-VASH) units since they had stable housing and were no longer homeless based on the HUD definition of homeless. Veterans receiving intensive case management (e.g. mental health services for a serious persistent mental illness) at enrollment were also excluded since that level of engagement with VA care could dilute the peer effect compared with veterans not as engaged in care.

Sites were chosen due to their high volume of homeless patients. Two study sites were located in an east coast city and two sites were located in a west coast city. A total of 50 patients were randomized at PACT site 1; 56 patients, PACT site 2; 120 patients, H-PACT site 1; and 149 patients, H-PACT site 2. Randomization assignments were in sealed, masked envelopes that were opened by primary care staff at time of enrollment. Once assigned to a randomization arm, providers were not blinded to treatment since they discussed patient care issues with the peer mentors. All participants received $20 gift cards upon completion of a baseline survey.

Training for peer mentors was based on the MISSION-Vet manual. MISSION services included exercises designed to promote recovery. Mentor training emphasized modules most relevant to primary care-based interventions (e.g., motivational interviewing, patient empowerment, enhancing self-efficacy, and negotiating for behavior change), and also covered interacting with PACT team members, navigating care within the VA system, placing limits and defining the scope of intervention in patient interactions, and handling emergencies. Research assistants at

each site received training on observing and monitoring peer mentor interactions to ensure ongoing study fidelity. Mentors met regularly with assigned patients and were also expected to be available for ad hoc contacts initiated by the study participants, so actual contact frequency was dictated by the care plan as well as patient preference. Mentors also participated in PACT/H-PACT team meetings and served as liaisons between the study participants and his/her primary care team. Each mentor was responsible for community-based follow-up for their assigned patients. Peer mentors were responsible for an average of 20 (±18) veterans (range 1-45) that varied by the length of their employment and the amount of hours they worked. Two female mentors were specifically matched to veterans of the same gender, and only one mentor saw veterans of the opposite sex. Not all peers were employed throughout the duration of the study.

Health care utilization outcomes included number of visits to primary care, specialty care, mental health/substance abuse, intensive program, homeless program, telephone, fee basis, inpatient admissions, ambulatory care sensitive conditions (ACSC) admissions, ED, ambulatory-care sensitive condition ED visits, and 30-day VA prescription drug fills.

Table A1. Patient cohort baseline characteristics, N=375

Patient characteristics at baseline	Peer mentor (N=195)		Usual care (N=180)		χ^2/test statistic	Df	Chi-square p-value
Characteristic	N	%	N	%			
Type of primary care site					.5	1	.47
PACT[a]	52	27%	54	30%			
H-PACT[a]	143	73%	126	70%			
Age (mean±SD)	52.0±9.6		52.2±9.5		t = .2	373	.88
Gender					.5	1	.50
Male	188	96%	171	95%			
Female	7	4%	9	5%			
Race/Ethnicity					.7	4	.95
White	88	45%	78	43%			
Black	66	34%	66	37%			
Hispanic	8	4%	9	5%			
Other[b]	33	17%	27	15%			
Months spent homeless in past 5 years (mean±SD)	28.8±22.6		27.3±21.7		t = -.7	369	.52
Current marital status					9.2	2	.01
Married	10	5%	8	4%			
Divorced/separated/widowed	78	40%	100	56%			
Never married	107	55%	72	40%			
Housing Type					4.8	4	.30

Unsheltered	26	13%	24	13%			
Emergency Shelter	44	23%	28	16%			
Transitional Housing	60	31%	68	38%			
Other	65	33%	60	34%			
Any Mental Health Condition	157	83%	137	78%	1.3	1	.25
Depression	135	70%	118	67%	.3		.60
Anxiety	123	64%	108	61%	.4		.55
PTSD[a]	91	52%	81	48%	.6		.45
Bipolar Disorder	39	21%	30	18%	.7		.42
Schizophrenia	19	10%	18	10%	<.01		.97
Chronic Conditions						1	
Emphysema/asthma/COPD[a]	34	18%	46	26%	3.5		.06
Hepatitis/cirrhosis	51	26%	41	23%	.4		.51
Diabetes	20	11%	20	11%	<.1		.83
High blood pressure	63	33%	62	35%	.2		.68
Heart disease/angina/heart attack	18	10%	16	9%	<.1		.89
Seizures	20	10%	12	7%	1.4		.23
Arthritis	87	45%	71	41%	.7		.41
Stomach ulcers/digestion	40	21%	30	17%	1.0		.32
Physical health score (mean±SD)[c]	3.2±1.1		3.2±1.2		t = -.7	371	.46
Total VA costs 6 months prior to randomization (mean±SD) [a]	$15,632± $23,252		$12,57± $13,111		t = -1.6	311	.11

[a] PACT, Patient Aligned Care Team; H-PACT, Homeless Patient Aligned Care Team; PTSD, posttraumatic stress disorder; COPD, chronic obstructive pulmonary disease; VA, Department of Veterans Affairs

[b] Other includes multi-racial patients, Asians, and unknown.

[c] Physical health score on a scale of 1-5, where 1= excellent.

Table A2. Summary of peer mentor contacts over a six-month period, N=195

Type of contact	Mean	SD
Number of all contacts/patient	5	8
Number of in-person contacts/patient	4	8
Number of phone contacts/patient	0	1
Number of minutes/patient where topic was discussed:		
Patient health/medication	17	37
Mental health	16	39
Substance abuse	13	27
Appointment reminders	12	18
Housing issues	26	43
Basic needs	12	26
Gaining work experience	8	17
Contacting VA benefits[a]	12	22
Social issues	4	40
Total number of face-to-face minutes	132	269
Total number of phone minutes	11	33
Number of minutes documenting	23	48
Number of minutes in training	4	15
Number of minutes meeting with care team	2	6

[a] VA, Department of Veterans Affairs