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On-Going Palliative Care Enhances Perceived Control and Patient Activation in Patients with Symptomatic Heart Failure

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Introduction: Few studies have assessed the effectiveness of palliative care (PC) on perceived control (i.e. one's perceived influence over outcomes or events in the environment) and activation (i.e. ability to self-manage) in patients with symptomatic heart failure (HF). **Hypothesis:** We hypothesized that patients with advanced HF who received on-going PC services (i.e. ≥ 2 PC consults) vs. no access or limited access to PC services (i.e. single PC consultations) would have greater improvements in perceived control and activation and greater reductions in symptom burden 3 months post-discharge for HF exacerbation. **Methods:** Forty-two patients - average age 53.9 ± 8.0 years; predominantly male (72%); White (61%); married (69%) -

Table 1. Comparison of Perceived Control and Activation Levels at Baseline and Three Months

Variable	Participants Receiving ≤ 1 Palliative Care Consultation (n = 13)		Participants Receiving ≥ 2 Palliative Care Consultations (n = 29)		F (P Value) (time)	F (P Value) (G x T)
	Baseline	3-Month	Baseline	3-Month		
Perceived Control (CAS-R)*	26.5 $\pm$ 5.9	29.2 $\pm$ 5.0	24.9 $\pm$ 7.4	37.4 $\pm$ 9.1	65.1 (< 0.001)	26.5 (< 0.001)
Patient Activation (PAM) †	39.3 $\pm$ 6.4.3	41.4 $\pm$ 7.5	37.3 $\pm$ 7.3	50.2 $\pm$ 10.4	27.0 (< 0.001)	14.4 (< 0.001)

*Control Attitude Scale-Revised; †Patient Activation Measure

Table 2. Participants with Improvements in Activation Levels at 3-Month Follow-up

Participants Receiving ≤ 1 Palliative Care Consultation (n = 13)								Participants Receiving ≥ 2 Palliative Care Consultations (n = 29)							
Baseline Activation Level* n (%)	3-Month Activation Level* n (%)							Baseline Activation Level* n (%)	3-Month Activation Level* n (%)						
	1	2	3	4	Change in Activation %		Change in Activation† Mean $\pm$ SD		1	2	3	4	Change in Activation %		Change in Activation† Mean $\pm$ SD
					Increased	Decreased							Increased	Decreased	
1 10 (77)	6 (60)	4 (40)	0 (0)	0 (0)	40%	0%	-1.8 $\pm$ 6.1	1 24 (83)	8 (33)	13 (54)	3 (13)	0 (0)	67%	0%	22.6 $\pm$ 4.9
2 3 (23)	2 (67)	1 (33)	0 (0)	0 (0)	0%	66.7%	-8.1 $\pm$ 5.5	2 5 (17)	0 (0)	0 (0)	4 (80)	1 (20)	100%	0%	16.2 $\pm$ 6.4

* Patient activation scores were derived from the Patient Activation Measure (range, 0 to 100) and are divided into four levels. Level 1 (score ≤ 47.0) is associated with not believing that one has a role to play in self-management of their condition. Level 2 (score 47.1-55.1) is associated with a lack of knowledge and confidence to take action in self-management of their condition. Level 3 (score 55.2-67.0) is associated with beginning to take action in self-management. Level 4 (scores ≥ 67.1) is associated with maintain behavior change, although individuals may still experience difficulties overcoming obstacles; for the current study, none of the participants had scores in levels 3 and 4.

†Any increases or decreases in patient activation scores have taken into account the baseline activation levels.

completed an outpatient PC consultation following their routine post-discharge visit with their HF provider. Participants were encouraged to schedule follow-up visits with the PC team to optimize symptom control. Data on perceived control, activation, and symptom burden were collected at baseline and three months. **Results:** Findings showed that the patients who received ≥ 2 PC consultations had greater improvements in perceived control and activation than their counterparts (Table 1 and 2); these increases were associated with greater reductions in symptom burden (Table 3). **Conclusion:** Our findings suggest that on-going PC interventions show promise in being able to enhance perceived control and activation in patients with advanced HF and open the possibility for planning larger studies to assess the effect of PC on these variables as possible mediators to improvements in self-care and clinical outcomes in a similar sample.

Table 3. Correlational matrix key for the key variables (N=42)

Variable	1	2	3	4	5	6	7
1 Gender	1.000						
2 Race	-0.010	1.000					
3 Palliative Care	-0.147	-0.222	1.000				
4 Perceived Control (baseline)	-0.071	0.430 [†]	-0.107	1.000			
5 Patient Activation	-0.173	0.359*	-0.069	0.618 [†]	1.000		
6 Perceived Control (3-months)	-0.026	0.157	0.432 [†]	0.604 [†]	0.487 [†]	1.000	
7 Patients Activation (3-months)	-0.067	0.087	0.383*	0.417 [†]	0.412 [†]	0.838 [†]	1.000

*P < .05.

[†]P < .001.