

Title: A health insurance navigation intervention tool (HINT) for survivors of childhood cancer: randomized pilot trial results from the Childhood Cancer Survivor Study

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Background: Childhood cancer survivors are vulnerable to being underinsured and health insurance-related financial burden. Low health insurance literacy reduces survivors’ ability to utilize health insurance. We conducted a pilot randomized controlled trial (RCT) to assess a virtually delivered health insurance navigation tool (HINT) intervention to improve health insurance literacy (HIL) and decrease financial burden.

Methods: Using a multiphase, mixed methods design, we developed and tested a theoretically-driven 4-session intervention that included: 1) Learning About Survivorship Healthcare Needs, 2) Learning About Your Plan in Relation to Policy, 3) Navigating Your Plan and Obstacles, and 4) Managing Care Costs. Eligible CCSS participants were insured and had wireless device access. We assessed feasibility and preliminary efficacy of HINT versus enhanced usual care (EUC; health insurance booklet) on HIL (16-item instrument assessing knowledge and confidence with health insurance terms and activity, ACA provisions knowledge (8-items), psychological financial burden (7-items assessing worry due to medical costs), and satisfaction with health insurance coverage (1 item) using multivariable linear regression.

Results: From 8/20 to 5/2021, 82 participants enrolled (39.7% participation rate); 53.7% female; 82% white, 7% Hispanic, and 7% black; 52.4% <40 years of age; and 57.3% from a Medicaid expansion state. 25.6% reported previously being uninsured. 57.3% were diagnosed <10 years of age, and 40.1% had ≥1 severe chronic health condition. There were gaps in health insurance literacy (HIL mean 28.5, sd=9.0; 16-60 (high-low); 39.0% were not familiar with the Affordable Care Act (ACA), and many lacked ACA provisions knowledge (e.g., appeals for coverage denials (56.1%). 82% completed 4 sessions; 92.6% completed the 5-month follow-up survey. Compared to EUC, HINT significantly improved HIL, ACA provisions knowledge, psychological financial hardship, and health insurance satisfaction (p’s ≤ 0.03).

	HINT		EUC		Multivariable Coeff (95% CI)*
	BL	FU	BL	FU	
	M(SD)	M(SD)	M(SD)	M(SD)	
HIL	29.2 (9.7)	19.8 (5.1)	27.8 (8.3)	26.1 (7.7)	-7.6 (-4.11, -11.1) p<0.001
Financial Burden	1.7 (2.17)	1.2 (1.9)	1.0 (1.6)	1.2 (1.9)	-0.9 (-1.6, -0.3) p<0.006
ACA Knowledge	3.2 (1.7)	5.1 (1.2)	3.6 (1.41)	4.0 (1.6)	1.2 (0.4, 2.0) p<0.003
Insurance Satisfaction	2.9 (1.1)	2.2 (1.1)	2.4 (1.1)	2.3 (1.0)	-0.57 (-0.5, -1.1) p=0.03

Conclusions: Findings affirm health insurance literacy gaps among a national sample of insured long-term survivors. Results support the feasibility and preliminary efficacy of HINT on improving health insurance literacy, satisfaction, and psychological financial burden. HINT is the first intervention to demonstrate improvements in long-term survivors' health insurance literacy and psychological financial burden.