

Online Supplementary Material

Barnet B, Liu J, DeVoe M, Duggan AK, Gold MA, Pecukonis E. Motivational intervention to reduce rapid subsequent births to adolescent mothers: a community-based randomized trial. *Ann Fam Med*. 2009;7(5):436-445.

<http://www.annfammed.org/cgi/content/full/7/5/436/DC1>

Supplemental Appendix. Construction of Complier Average Causal Effect (CACE) Models

To construct CACE models, we used maximum-likelihood methods to estimate causal hazards ratios.^{1,2} Adolescent mothers in each intervention group who received at least 2 CAMI sessions were defined as compliers. We used a 2-CAMI cutoff to lessen the risk that a reduced number of CAMI sessions might be confounded by the participant experiencing a repeat pregnancy and therefore ceasing to be eligible to receive additional sessions. Because adherence differed between the 2 intervention groups, we used group-specific covariates at the level of a trend to identify compliers and then computed the probability of compliance for participants in the control group. Weighted Cox proportional hazards models were estimated with intervention group–adherent participants assigned a weight of 1 and control group participants weighted by their estimated probability of complying, given their observed values.¹

References

1. Little RJ, Rubin DB. Causal effects in clinical and epidemiological studies via potential outcomes: concepts and analytical approaches. *Annu Rev Public Health*. 2000;21:121-145.
2. Ten Have TR, Joffe M, Cary M. Causal logistic models for non-compliance under randomized treatment with univariate binary response. *Stat Med*. 2003;22(8):1255-1283

Supplemental Table 1. Group Differences in Baseline Characteristics of Adherent (Received 2 or more CAMI sessions) and Nonadherent Intervention Participants

Baseline Characteristic	CAMI+			CAMI-Only		
	Adherent n = 53	Nonadherent n = 27	P Value	Adherent n = 36	Nonadherent n = 51	P Value
Age, years (SD)	17.0 (1.1)	17.4 (1.2)	.10	17.0 (1.3)	17.0 (1.1)	.80
Insured by Medicaid, %	85	68	.10	86	90	.74
Plans to use hormonal contraception, %	63	66	.81	64	45	.10
Prior pregnancy, %	33	40	.63	19	37	.10
Substance use in past 30 days (alcohol or marijuana), %	4	0	.31	8	10	.82
Depressive symptoms (CES-D \geq 24), %	28	19	.42	33	41	.51
Social support satisfaction score (SD) ^a	16.2 (2.3)	15.1 (2.6)	.10	15.8 (2.6)	14.7 (3.2)	.10
Ever diagnosed with STD, %	15	26	.27	29	49	.08
DMCI score (SD) ^b	85.7 (11.7)	87.8 (10.6)	.44	83.4 (9.1)	87.7 (10.4)	.05

CES-D = Center for Epidemiologic Studies Depression Scale; DMCI = Decision-Making-Competency Inventory; STD = sexually transmitted disease..

^a Range from 6.0 to 18.0; higher scores indicate greater satisfaction.

^b Range from 55.0 to 113.0; higher scores are more favorable (greater competency, greater self-efficacy).