ONLINE EXCLUSIVE

Does group prenatal care improve pregnancy outcomes?

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Evidence-based answer

Yes, it may decrease preterm births, especially among higher-risk women—minority women, women of low socioeconomic status, and adolescents (strength of recommendation [SOR]: **B**, 1 randomized, controlled trial [RCT] and 1 matched cohort study).

Evidence summary

The evidence supporting improved health outcomes resulting from group prenatal care is limited. We found 1 RCT,[1] 1 matched-cohort study,[2] and several pilot studies with descriptive analysis.[3-5] All data sets used a trademarked group prenatal care model, CenteringPregnancy. The **TABLE** summarizes the outcomes of group and individual prenatal care reported in the studies.

Fewer preterm births

One large, unblinded RCT investigated the effect of group prenatal care on a cohort of young, mostly minority women of low economic status. Women who received group prenatal care had fewer preterm births than those who received traditional care (number needed to treat [NNT]=25; *P*=.045).[1]

A single cohort study compared pregnant teenagers enrolled in the CenteringPregnancy program with 2 clinic convenience samples. The group care recipients had significantly lower preterm delivery rates (NNT=7; *P*<.02).[3] The study design, and therefore the detected relationship of group care to pregnancy-associated outcomes, may be particularly subject to selection bias.

Birth weight data are inconsistent

The matched cohort study recorded higher birth weights among infants born to mothers in group prenatal care.[2] Subset analysis of preterm infants born to mothers in group care showed average birth weights approximately 400 g higher than those in individual care (*P*<.05).[2] The RCT, however, found no clinically or statistically significant differences in birth weights between intervention and control groups.[1]

Group care boosts breastfeeding, knowledge, and satisfaction

The RCT and the cohort study showed increased rates of breastfeeding initiation (NNT=8 and 6, respectively).[1,3] The RCT demonstrated that patients in group care more often had adequate prenatal care (NNT=16).[1] One cohort trial found that women enrolled in group prenatal care used the emergency department less during the third trimester (NNT=2, *P*=.001).[4]

Several studies have reported improved pregnancy knowledge and high levels of satisfaction with group prenatal care. The RCT showed increased knowledge and readiness for labor, and higher satisfaction compared with individual

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Group prenatal care may decrease preterm births, especially among minority women, women of low socioeconomic status, and adolescents.

TABLE

Pregnancy outcomes: Group vs individual prenatal care

STUDY	STUDY DESIGN	OUTCOMES: GROUP VS INDIVIDUAL PRENATAL CARE	OR (95% CI)	NNT
Ickovics JR et al.[1]	RCT N=1047	Preterm births	0.67 (0.44-0.98)	25
		Preterm births in African American women	0.59 (0.38-0.92)	17
		Breastfeeding initiation	1.73 (1.28-2.35)	8
		Less-than-adequate prenatal care*	0.68 (0.50-0.91)	16
			RESULTS (*P* VALUE)	
Ickovics JR et al.[2]	Matched cohort N=458	Birth weight (g)	3228 vs 3159 (*P*<.01)	—
		Preterm birth weight (g)	2398 vs 1990 (*P*<.05)	—
Grady MA et al.[3]	Cohort study with clinic comparison N=124 (intervention)	Preterm births <37 wk (%)	10.5 vs 25.7 (*P*<.02)	7
		Low birth weight <2500 g (%)	8.8 vs 22.9 (*P*<.02)	7
		Breastfeeding at hospital discharge (%)	46 vs 28 (*P*<.02)	6
Rising SS[4]	Descriptive analysis N=111	3rd trimester emergency room visits (%)	26 vs 74 (*P*=.001)	2
Baldwin KA[5]	2-group pre-/post-test design N=98	Change in prenatal knowledge scores†	0.98 vs 0.4 (*P*=.03)	—

CI, confidence interval; NNT, number needed to treat; OR, odds ratio.

*Kotelchuck Adequacy of Prenatal Care Utilization Index, a validated scoring scale encompassing timing of initiation of care, number of visits, and quality and content of prenatal care. Kotelchuck M. An evaluation of the Kessner Adequacy of Prenatal Care Index and the proposed Adequacy of Prenatal Care Utilization Index. *Am J Public Health.* 1994;84:1414-1420.

†Patient Participation and Satisfaction questionnaire. Littlefield V, Adams B. Patient participation in alternative perinatal care: impact on satisfaction and health locus of control. *Res Nurs Health.* 1987;10:139-148.

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Several studies reported improved pregnancy knowledge and high levels of satisfaction with group prenatal care.

care (*P*<.001 for all outcomes).[1] Lower-quality studies of group care support these findings.[3-5]

An innovative model that requires further study

Group prenatal care is a relatively new, innovative model of care, and limited data are available for review. The evidence from 1 RCT and 1 cohort study supports the protective effect of group prenatal care against preterm delivery for women at higher risk of adverse pregnancy outcomes.[1,2] Trends toward improved health outcomes were found in lower-quality studies; the trends were large enough to have potential clinical significance. These preliminary findings should be evaluated as primary health outcomes in future research to define the optimal population for group care.

Recommendations

No published guidelines or textbook recommendations exist for group-based pre-

natal care. In other areas of medical care, including diabetes and low back pain, specialty societies such as the American Diabetes Association and systematic reviews have supported practice changes, including group visits, to improve care.[6,7] ■

References

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