

Supplemental materials for

White VanGompel EC, Perez SL, Datta A, Carlock FR, Cape V, Main EK. Culture that facilitates change: a mixed methods study of hospitals engaged in reducing cesarean deliveries. *Ann Fam Med.* 2021;19(3):249-257.

Supplemental Table 1. Sampling Frame for Key Informant Interviews				
Birth Volume	Responders		Non-responders	
	Urban	Rural	Urban	Rural
Low/Med				
Total in Strata:	7	7	1	1
Sampled:	1 Hospital	2 Hospitals	1 Hospital	1 Hospital
Recruited:	1 RN Only	1 RN/MD Pair; 1 RN Only	0	1 RN Only
High				
Total in Strata:	18	1	20	0
Sampled:	2 Hospitals	0	4 Hospitals	0
Recruited:	1 MD Only	0	3 RN/MD Pairs	0
Total Interviewed:	2	3	6	1
Abbreviations: MD, physician; RN, labor and delivery nurse				

Supplemental Table 2. Characteristics of Sample Individuals and Hospitals by Hospital Success			
Individual Characteristics			
Maternity Role: N (%)	Non-Responders (n = 342)	Successful (n = 553)	P-value
Labor/Delivery Nurse	281 (82.2%)	364 (65.8%)	< 0.001
Obstetrician	41 (12.0%)	99 (17.9%)	
Certified Nurse Midwife	1 (0.3%)	16 (2.9%)	
Family Medicine Physician	0 (0.0%)	18 (3.2%)	
Anesthesiologist	5 (1.5%)	18 (3.2%)	
Nurse Educator	4 (1.2%)	13 (2.3%)	
Nurse Manager Educator	10 (2.9%)	25 (4.5%)	
Years of Practicing Maternity Care (Physicians and Midwives): Mean (SD)	20.30 (11.11)	15.94 (11.62)	0.030
Years of Working Maternity Care (Nurses): Mean (SD)	15.95 (11.72)	15.12 (11.17)	0.34
Hospital Characteristics	Non-Responder (n = 22)	Successful (n = 33)	P-value
NTSV CS Rate: Mean (SD)	0.31 (0.05)	0.29 (0.05)	0.20
Nursery Acuity Level: N (%)			
Basic Nursery	2 (12.5%)	8 (27.6%)	0.053
Intermediate Nursery	2 (12.5%)	11 (37.9%)	
Community NICU	11 (68.8%)	8 (27.6%)	
Regional NICU	1 (6.2%)	2 (6.9%)	
Birth Volume: N (%)			
Small	1 (6.2%)	4 (13.8%)	0.082
Medium	1 (6.2%)	9 (31.0%)	

Large	14 (87.5%)	16 (55.2%)	
Location: N (%)			
Rural	1 (6.2%)	8 (27.6%)	0.13
Urban	15 (93.8%)	21 (72.4%)	
% Maternal BMI > 30: Mean (SD)	0.19 (0.07)	0.24 (0.08)	0.059
% Maternal Age > 35 Years: Mean (SD)	0.25 (0.09)	0.22 (0.08)	0.17
% Maternal Health Insurance Medicaid: Mean (SD)	0.382 (0.292)	0.476 (0.272)	0.29
Years Practicing at This Hospital: Mean (SD)	11.51 (3.769)	11.03 (4.61)	0.60
Abbreviations: BMI, body mass index; CS, cesarean section; NICU, newborn intensive care unit; NTSV, nulliparous term singleton vertex; SD, standard deviation.			

Supplemental Table 3. Labor Culture Survey Sub-scale Means by Hospital Success, Stratified by Labor and Delivery Nurses and Physicians

Sub-scale	Nurses			Physicians		
	Non-Responder (n = 281)	Successful (n = 378)	P-value	Non-Responder (n = 41)	Successful (n = 130)	P-value
Best Practices	4.08	4.08	0.98	3.35	3.72	0.003
Fear	1.55	1.51	0.52	2.27	1.70	0.001
Microculture	3.10	3.27	0.001	3.41	3.60	0.044
Physician Oversight	4.09	4.00	0.13	3.02	3.55	< 0.001
Maternal Agency	3.16	3.13	0.70	3.07	2.84	0.111
CS Safety	2.13	2.06	0.27	2.48	2.11	0.014

Abbreviations: CS, cesarean section