

Table 4. Distribution of risk factors for women with and without severe maternal morbidity by age group among women with prior cesarean delivery, term, singleton, vertex gestations.

Variable	Younger women (< 35 years) N = 104,465				P Value*	Older women (≥ 35 years) N = 37,070		
	No Severe Complications (N = 102,117)		Severe Complications (N = 2,348, 2.2%)			No Severe Complications (N = 36,096)		Severe Complications (N = 974, 2.6%)
Elective cesarean delivery:								
ERCD ^a , n (%)	74,855	(73.3%)	1,619	(69.0%)	< .001	25,850 (71.6%)	624 (64.1%)	< .001
Delivery route:					< .001			<0.001
ERCD	74,855	(73.3%)	1,619	(69.0%)		25,850 (71.6%)	624 (64.1%)	
Successful VBAC ^b	8,881	(8.7%)	119	(5.1%)		3,217 (8.9%)	65 (6.7%)	
Failed VBAC	18,381	(18.0%)	610	(26.0%)		7,029 (19.5%)	285 (29.3%)	
Socio-demographic:								
Age category, n (%)					.625			.013
0-19	2,284	(2.2%)	55	(2.3%)				
20-24	20,375	(20.0%)	484	(20.6%)				
25-29	37,387	(36.6%)	830	(35.3%)				
30-34	42,071	(41.2%)	979	(41.7%)				
35-39						28,259 (78.3%)	732 (75.2%)	
40-44						7,468 (20.7%)	225 (23.1%)	
45+						369 (1.0%)	17 (1.7%)	
Age of mother, Mean (SD) ^c	28.0	(4.1%)	28.0	(4.2%)	.708	37.7 (2.4)	38.0 (2.5)	<0.001
Race/Ethnicity, n (%)					< .001			<0.001
Hispanic	60,667	(59.4%)	1,373	(58.5%)		15,804 (43.8%)	445 (45.7%)	
Multiple Race	1,802	(1.8%)	43	(1.8%)		619 (1.7%)	21 (2.2%)	
Black, non-Hispanic	6,045	(5.9%)	228	(9.7%)		1,519 (4.2%)	69 (7.1%)	
American Indian	438	(0.4%)	8	(0.3%)		81 (0.2%)	0 (0.0%)	
Asian	8,529	(8.4%)	177	(7.5%)		6,443 (17.8%)	162 (16.6%)	
Pacific Islander	514	(0.5%)	21	(0.9%)		150 (0.4%)	7 (0.7%)	
White, non-Hispanic	22,742	(22.3%)	463	(19.7%)		10,792 (29.9%)	257 (26.4%)	
Other	60	(0.1%)	1	(0.0%)		25 (0.1%)	0 (0.0%)	
Unknown	1,320	(1.3%)	34	(1.4%)		663 (1.8%)	13 (1.3%)	
Highest education level, n (%)					.045			0.001
Less than high school	28,263	(27.7%)	682	(29.0%)		7,310 (20.3%)	245 (25.2%)	
High school	28,343	(27.8%)	665	(28.3%)		5,730 (15.9%)	157 (16.1%)	
College or more	42,055	(41.2%)	907	(38.6%)		21,543 (59.7%)	540 (55.4%)	
Missing/Unknown	3,456	(3.4%)	94	(4.0%)		1,513 (4.2%)	32 (3.3%)	
Medicaid insurance, n (%)	58,743	(57.5%)	1,381	(58.8%)	.073	12,690 (35.2%)	369 (37.9%)	<0.001
Prenatal care index, n (%)					< .001			0.058
Inadequate	10,152	(9.9%)	285	(12.1%)		2,307 (6.4%)	70 (7.2%)	
Intermediate	8,032	(7.9%)	207	(8.8%)		2,446 (6.8%)	79 (8.1%)	
Adequate	45,957	(45.0%)	967	(41.2%)		16,027 (44.4%)	389 (39.9%)	
Adequate Plus	34,613	(33.9%)	784	(33.4%)		14,211 (39.4%)	402 (41.3%)	
Missing Info	3,363	(3.3%)	105	(4.5%)		1,105 (3.1%)	34 (3.5%)	
Year, n (%)					.837			0.277
2010	50,752	(49.7%)	1,172	(49.9%)		17,944 (49.7%)	467 (47.9%)	
2011	51,365	(50.3%)	1,176	(50.1%)		18,152 (50.3%)	507 (52.1%)	
Pre-existing or pregnancy-related conditions:								
DM ^d (any), n (%)	9,722	(9.5%)	228	(9.7%)	.757	6,462 (17.9%)	202 (20.7%)	0.023

Variable	Younger women (< 35 years)				Older women (≥ 35 years)			
	N = 104,465				N = 37,070			
	No Severe Complications (N = 102,117)		Severe Complications (N = 2,348, 2.2%)		P Value*	No Severe Complications (N = 36,096)		Severe Complications (N = 974, 2.6%)
DM category, n (%)					.280			0.050
None	92,395	(90.5%)	2120	(90.3%)		29,634 (82.1%)	772 (79.3%)	
Chronic ± Gestational DM	1,278	(1.3%)	38	(1.6%)		799 (2.2%)	29 (3.0%)	
Gestational DM only	8,444	(8.3%)	190	(8.1%)		5,663 (15.7%)	173 (17.8%)	
HTN ^c (any), n (%)	4,762	(4.7%)	193	(8.2%)	< .001	2,570 (7.1%)	139 (14.3%)	< .001
HTN category, n (%)					< .001			< .001
None	97,355	(95.3%)	2155	(91.8%)		33,526 (92.9%)	835 (85.7%)	
Chronic/Superimposed HTN	1,531	(1.5%)	61	(2.6%)		1,127 (3.1%)	49 (5.0%)	
Gestational HTN only	2,834	(2.8%)	121	(5.2%)		1,189 (3.3%)	78 (8.0%)	
Unspecified HTN	397	(0.4%)	11	(0.5%)		254 (0.7%)	12 (1.2%)	
Obesity, n (%)	31,546	(30.9%)	721	(30.7%)	.848	9,270 (25.7%)	236 (24.2%)	.306
Extreme obesity, n(%)	6,301	(6.2%)	139	(5.9%)	.621	1,641 (4.5%)	46 (4.7%)	.788
Heart disease, n (%)	403	(0.4%)	98	(4.2%)	< .001	204 (0.6%)	50 (5.1%)	< .001
Mental health disorder, n (%)	3,260	(3.2%)	155	(6.6%)	< .001	1135 (3.1%)	57 (5.9%)	< .001
Renal disease, n (%)	128	(0.1%)	10	(0.4%)	< .001	36 (0.1%)	6 (0.6%)	< .001
Hepatic disease, n (%)	157	(0.2%)	9	(0.4%)	.006	53 (0.1%)	3 (0.3%)	.201
Herpes, n (%)	1,350	(1.3%)	45	(1.9%)	.013	642 (1.8%)	15 (1.5%)	.578
Obstetrical conditions:								
Abruption, n (%)	316	(0.3%)	39	(1.7%)	< .001	137 (0.4%)	15 (1.5%)	< .001
Post-term, n (%)	3,750	(3.7%)	111	(4.7%)	.007	1,236 (3.4%)	43 (4.4%)	.094
Antepartum bleed, n (%)	452	(0.4%)	52	(2.2%)	< .001	208 (0.6%)	21 (2.2%)	< .001
Isoimmune disease, n (%)	1,539	(1.5%)	42	(1.8%)	.269	582 (1.6%)	17 (1.7%)	.745
Soft tissue condition, n (%)	5,089	(5.0%)	222	(9.5%)	< .001	2,876 (8.0%)	124 (12.7%)	< .001
Fetal conditions:								
Polyhydramnios, n (%)	478	(0.5%)	16	(0.7%)	.136	267 (0.7%)	13 (1.3%)	.034
Oligohydramnios, n (%)	1,372	(1.3%)	29	(1.2%)	.651	588 (1.6%)	15 (1.5%)	.829
IUGR ^g , n (%)	722	(0.7%)	16	(0.7%)	.884	276 (0.8%)	11 (1.1%)	.200
Excessive fetal growth, n (%)	1,603	(1.6%)	43	(1.8%)	.314	740 (2.1%)	24 (2.5%)	.370

Note. ^aERCD = Elective repeat cesarean delivery, ^bVBAC = Vaginal birth after cesarean, ^cSD = Standard deviation, ^dDM = Diabetes mellitus, ^eHTN = Hypertension, ^fIUGR = Intrauterine growth restriction, ^gChi-square and two-sided two-sample t tests for categorical and continuous variables, respectively