

145 MEMU CESAREAN REGISTRY: DECISION TO INCISION TIMES AND INFANT OUTCOME SL BLOOM¹,¹for the NICHD MFMU Network, Bethesda, MD

OBJECTIVE: Our purpose was to determine if infant outcome at term was associated with the time interval between the decision to perform a cesarean delivery and the actual skin incision.

STUDY DESIGN: Between January 1, 1999 and June 30, 2000, a prospective observational study of all cesarean deliveries was conducted at 13 university centers. For the purpose of this analysis, those women in labor at term undergoing primary cesarean delivery for either emergency indications or dystocia were considered (n = 7450). Emergency deliveries included those performed for non-reassuring fetal heart rate, cord prolapse, or hemorrhage. The outcome of interest was a "sick baby" composite defined as one or more of the following: Apgar score less than 4 at 5 minutes, umbilical artery pH 7.0 or less, intubation in the delivery room (not for meconium prophylaxis), CPR, ventilator requirement in the first 24 hours, neonatal death, hypoxic-ischemic encephalopathy, intrapartum stillbirth, or sepsis.

RESULTS: See Table.

CONCLUSION: (1) A large proportion (69%) of cesareans performed in labor commenced more than 30 minutes after the decision to operate. (2) Approximately 35% of emergency cesareans began more than 30 minutes after the decision. (3) The incidence of the "sick baby" composite was highest in emergency cesareans performed within 15 minutes suggesting prioritization, but longer intervals were not related to an increase in the composite outcome. (4) Cesareans performed for dystocia after 60 minutes were associated with an increased incidence of the composite outcome compared to intervals 31-60 minutes.

Table

INCIDENCE OF SICK BABY COMPOSITE (%)

REASON FOR CESAREAN	0-15 MIN	16-30 MIN	31-45 MIN	46-60 MIN	>60 MIN
Emergency*	84/653 (12.9)	56/678 (6.3)	23/368 (6.3)	14/190 (7.4)	10/167 (6.0)
Dystocia**	10/208 (4.8)	37/773 (4.8)	34/1473 (2.3)	22/1205 (1.8)	60/1735 (3.5)

*Incidence at 16-30 min comparable to >30 min (P = .22).

**Incidence at >60 min comparable to 0-30 min and greater than 31-60 min (U-shaped relationship, P < .001).

146 THE MFMU CESAREAN REGISTRY: PRIMARY CESAREAN DELIVERIES ARE INCREASED IN PRIVATE PATIENTS RICHARD DAVIS FOR THE NICHD MFMU NETWORK¹,¹NICHD, Bethesda, MD

OBJECTIVE: To determine the rate and indications for primary cesarean section (1° C/S) as related to payor classification.

STUDY DESIGN: Public assistance was defined as Medicaid/Medicare payor or no insurance. Private insurance coverage was defined as non-Medicaid HMO, PPO or commercial insurance. Among 13 centers within the NICHD MFMU Units Network, 119,361 deliveries (excluding women with a prior C/S) occurred from January 1, 1999 through June 30, 2000. Univariate comparisons of the rates and indications for a 1° C/S were according to payor classification.

RESULTS: Of 17,336 1° C/S, 9,543 (55%) had public and 7,793 (45%) had private coverage. The 1° C/S rate was 13.4% in public and 16.2% in private patients, P < .0001. Among public patients, a 1° C/S rate >15% occurred at 2/13 (15%) centers and at 12/13 (92%) centers in private patients. C/S indications are listed in Table. Among 12,684 patients with a 1° C/S who labored, labor was induced in 27% of public and 30.5% of private patients, P < .0001 and with public patients having fewer elective inductions, 3.8% vs 12.2%, P < .0001. Private patients had more 1° C/S in the latent phase (24% vs 20%) or 2nd stage (24% vs 17%) and delivered between 1701 and 2300 hrs (33% vs 27%), P < .0001.

CONCLUSION: Public patients had a lower rate of 1° C/S than private patients. These groups differed in 5/10 indications for 1° C/S, the stages of labor at C/S, daily timing of C/S, centers with a 1° C/S rate >15%, and by elective induction of labor.

Table

Indications for 1° C/S in 17,336 public vs. private patients

INDICATION	PUBLIC N (%)	PRIVATE N (%)	P VALUE	RR (95% CI)
Cephalopelvic disproportion	642 (6.73)	925 (11.87)	<.0001	0.57 (0.51-0.62)
Failure to progress	2,781 (29.14)	1,816 (23.30)	<.0001	1.25 (1.19-1.32)
Non-reassuring fetal tracing	2,547 (26.69)	1,649 (21.16)	<.0001	1.26 (1.19-1.33)
Abnormal presentation	1,890 (19.81)	1,783 (22.88)	<.0001	0.87 (0.82-0.92)
Preeclampsia/hypertension	305 (3.20)	294 (3.77)	.387	0.85 (0.72-0.99)
Previa	170 (1.78)	167 (2.14)	.0863	0.83 (0.67-1.03)
Abruption	134 (1.40)	112 (1.44)	.8549	0.98 (0.76-1.25)
Suspected macrosomia	184 (1.93)	148 (1.90)	.8890	1.02 (0.82-1.26)
Failed induction	155 (1.62)	100 (1.28)	.0635	1.27 (0.99-1.62)
All others*	735 (7.70)	799 (10.25)	<.0001	0.75 (0.68-0.83)
	9,543	7,793		

*Others includes cord prolapse, multiple gestation, herpes, prior myomectomy, and other indications.

147 VAGINAL BIRTH AFTER CESAREAN: AN HISTORICAL COHORT COST ANALYSIS HEATHER DIMAIO¹, RODNEY EDWARDS¹, R. WILLIAM TRELLOAR², AMELIA CRUZ¹; ¹University of Florida, Obstetrics and Gynecology, Gainesville, FL; ²Shands Hospital at the University of Florida, Clinical Resources, Gainesville, FL

OBJECTIVE: To evaluate the relative cost-effectiveness of attempted vaginal birth after cesarean (VBAC) compared to elective repeat cesarean delivery.

STUDY DESIGN: We performed an historical cohort analysis of all women with a history of a single prior cesarean delivery that delivered at our institution during 1999. Inclusion criteria were ≥36 weeks gestation and a live, singleton fetus with no antenatally diagnosed anomalies. The primary outcome variable was mean cost of hospital care for mother-infant pairs, as obtained from the hospital's Clinical Resources Department. Secondary outcomes included maternal and neonatal mortality, uterine scar separation or rupture, blood transfusion, hysterectomy, ileus, infection, 5 minute Apgar scores <7, umbilical artery pH values <7, and neonatal intensive care unit admission. Data were analyzed using the two-tailed, unpaired Student's t test, chi-square, and Fisher's exact test, as appropriate.

RESULTS: The cohort consisted of 204 mother-infant pairs, 65 in the elective repeat cesarean group and 139 in the attempted VBAC group. The VBAC success rate was 74.8%. Despite 3 cases of uterine scar separation in the attempted VBAC group, mean cost of care was higher for mothers (\$4155 versus \$3675; P < .001), neonates (\$1794 versus \$1187; P = .03), and mother-infant pairs (\$5949 versus \$4863; P = .001) for the elective repeat cesarean group as compared to the attempted VBAC group. Using these data, attempting VBAC is less costly than repeat cesarean delivery as long as the VBAC success rate is at least 18%.

CONCLUSION: In women with a single prior cesarean delivery, a trial of labor is more cost-effective than an elective repeat cesarean delivery.

148 IMPACT OF SOCIO-DEMOGRAPHIC AND CLINICAL FACTORS ON VBAC ATTEMPTS REBECCA DUNSMOOR-SU¹, MARY SAMMEL², ERIKA STEVENS¹, GEORGE MACONES¹; ¹University of Pennsylvania, Obstetrics and Gynecology, Philadelphia, PA; ²University of Pennsylvania, Biostatistics, Philadelphia, PA

OBJECTIVE: To assess the role of clinical and non-clinical factors on the rate of VBAC attempts.

STUDY DESIGN: We conducted a retrospective cohort study comparing all women with previous low transverse cesarean section who attempt a trial of labor to those who elect to have a repeat cesarean section. Data from 16 hospital sites from 1995-1999 were included for a total of 15,172 patients. Trained nurse abstractors obtained data on clinical factors, sociodemographic factors, and type of health insurance coverage from the medical records of all 15,172 subjects. Bivariate, site adjusted and multivariable logistic regression analyses were used to assess the association of these factors with VBAC attempt.

RESULTS: VBAC attempt rates varied markedly by individual hospital. The odds of trial of labor decreased significantly with increasing age, gravidity, and number of previous cesareans. Medicaid patients had higher odds of trial of labor than privately insured patients [OR 1.37 (1.20-1.55)]. Patients with non-recurrent indication for previous cesarean had a higher odds of trial of labor than those with a recurrent indication [OR 1.77 (1.64-1.92)]. African American women were more likely to attempt trial of labor than Caucasian women [OR 2.17 (1.83-2.56)].

CONCLUSION: Clinical factors, health insurance coverage, and ethnicity independently influence VBAC attempt rates. Future research should focus on the risks and benefits of VBAC in these specific subgroups.