

the lateral position to  $7.54 \pm 0.35$  bpm in the supine position ( $p < 0.002$ ). There were significantly more non-reactive traces in the supine position compared to the left lateral position ( $p < 0.007$ ) with a likelihood ratio of 8 for a non-reactive trace in the supine position ( $p < 0.005$ ).

**CONCLUSION:** Supine recumbency in late pregnancy leading to aortic and vena-caval compression, a decrease in cardiac output and in systemic blood pressure, is associated with reduced aortic and umbilical venous flow in the fetus. Non-reassuring FHR patterns are significantly more prevalent in the supine position as reflected by a decrease in the number of accelerations, an increase in the frequency of non-reactive traces and in a suppression of all measures of fetal heart rate variation.

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### 33 A statewide initiative to reduce scheduled births without appropriate indication

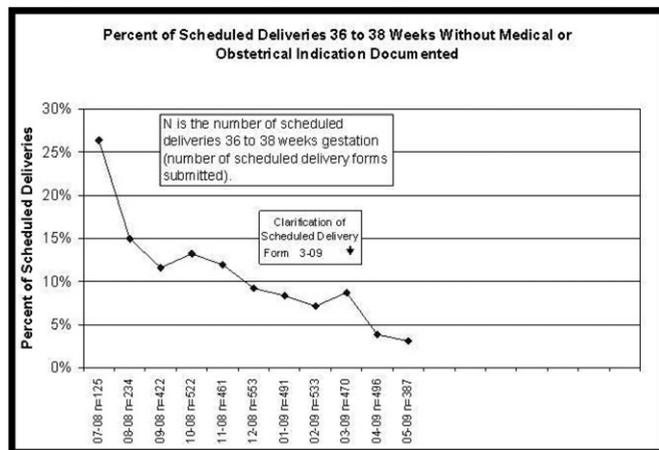
The Ohio Perinatal Quality Collaborative<sup>1</sup>, Jay Iams<sup>2</sup>

<sup>1</sup>(OPQC), Ohio Dept Health, Cincinnati, Ohio, <sup>2</sup>Ohio State University, Obstetrics & Gynecology, Columbus, Ohio

**OBJECTIVE:** To reduce the rate of scheduled births between 36.1 to 38.6 weeks that lack appropriate medical or obstetric indication.

**STUDY DESIGN:** Level 2 & 3 Ohio maternity hospitals joined a quality improvement collaborative using modified IHI Breakthrough Series™ methods. 20 hospitals representing 47% of Ohio births collected baseline data for 60 days, then adopted locally appropriate interventions, executed iterative tests of change, and reviewed charts to document the incidence, rationale & outcome of scheduled births. De-identified birth data were sent to a central repository. Rates of scheduled births without a documented medical indication, birth certificate data, and implementation issues were shared in calls and learning sessions.

**RESULTS:** The rate of scheduled births between 36.1 and 38.6 weeks without a documented medical indication declined from 25% to below 5% ( $p < .05$ ) (Fig 1). Birth certificates from member sites recorded fewer inductions without a listed indication, declining from a 12 month mean of 13% to 8% ( $p < .0027$ ). Fewer infants born at 36-38 weeks went to a NICU. 99% of charts documented dating criteria and 81% met optimal dating criteria.



**CONCLUSION:** A quality collaborative was associated with a significant decline in the rate of scheduled births lacking a documented medical or obstetrical indication.

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### 34 Acupuncture for depression during pregnancy

Rachel Manber<sup>1</sup>, Rosa Schnyer<sup>2</sup>, Andrea Chambers<sup>3</sup>, Deirdre Lyell<sup>1</sup>, Aaron Caughey<sup>4</sup>, Erin Carlyle<sup>3</sup>, Maurice Druzin<sup>1</sup>, Jenna Gress<sup>5</sup>, Mary Huang<sup>1</sup>, Tasha Kalista<sup>3</sup>, Robin Okada<sup>3</sup>, John Allen<sup>6</sup>

<sup>1</sup>Stanford University, Stanford, California, <sup>2</sup>University of Texas, Austin, Texas, <sup>3</sup>Stanford University, California, <sup>4</sup>University of California, San Francisco, San Francisco, California, <sup>5</sup>Stanford University, Palo Alto, California, <sup>6</sup>University of Arizona, Tucson, Arizona

**OBJECTIVE:** To assess the efficacy of acupuncture for depression during pregnancy in an evaluator-blinded randomized trial.

**STUDY DESIGN:** 150 participants who met DSM-IV criteria for Major Depressive Disorder were randomized to receive either acupuncture specific for depression (SPEC, n=52) or one of two active controls: control acupuncture (CTRL, n=49) or massage (MSSG, n=49). Treatments lasted eight weeks (12 sessions). Junior acupuncturists masked to treatment assignment needed participants at points prescribed by senior acupuncturists. Massage therapists and patients were not blinded. The primary outcome was the Hamilton Rating Scale for Depression, administered by blinded raters at baseline and after four and eight weeks of treatment. Data were analyzed using mixed effects models and by intent-to-treat.

**RESULTS:** Women who received SPEC experienced a significantly greater decrease in depression severity ( $p < 0.05$ ) compared to the combined controls (d=0.39, 95% CI [-1.31, 1.65]) or CTRL acupuncture alone ( $p < 0.05$ ; Cohen's-d = 0.46, 95% CI [-1.24, 2.31]). They also had a higher response rate (63.0%) than the combined controls (44.3%;  $p < .05$ ; NNT=5.3, 95% CI [2.8, 75.0]) or CTRL acupuncture alone (37.5%;  $p < 0.05$ ; NNT=3.9, 95% CI [2.2, 19.8]). Symptom reduction and response rates did not differ significantly between controls (CTRL 37.5% and MSSG 50.0%). Mild and transient side effects were reported by 43/150 participants (4 in MSSG; 19 in CTRL, 20 in SPEC). Significantly fewer participants reported side-effects in MSSG than the two acupuncture groups ( $p < 0.01$ ).

**CONCLUSION:** The benefits observed with eight weeks of SPEC acupuncture are clinically meaningful. The results suggest that the acupuncture protocol we tested could be a viable treatment option for depression during pregnancy.

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### 35 Monoamniotic twin pregnancy: continuous inpatient electronic fetal monitoring (CIEFM)- an impossible goal?

Kristen Quinn<sup>1</sup>, Carol Tran Cao<sup>1</sup>, Emily Lukacz<sup>1</sup>, Yvette Lacoursiere<sup>2</sup>, Andrew Hull<sup>2</sup>, David Schrimmer<sup>1</sup>

<sup>1</sup>University of California, San Diego, Reproductive Medicine, San Diego, California, <sup>2</sup>University of California, San Diego, San Diego, California

**OBJECTIVE:** To determine the feasibility and utility of CIEFM in monoamniotic twin pregnancies.

**STUDY DESIGN:** A retrospective cohort study of monoamniotic twins delivered at a single institution from 2000 to 2009 was performed. All subjects were hospitalized, received CIEFM, and planned to deliver electively via cesarean section at 34 weeks gestational age (GA). The entire electronic fetal heart tracing was reviewed for each patient and the percentage of time that 0, 1, and 2 fetuses were successfully monitored was recorded. Each subject's hospitalization was stratified by gestational age (<27 weeks, 27-30 weeks, and >30 weeks) and the percentage of time of successful monitoring was compared across gestational age.

**RESULTS:** 17 twin pairs were studied. Admission for CIEFM was at 27 +/- 3 weeks GA (mean +/- SD). A total of 10,402 hours of CIEFM recordings were analyzed. Average length of stay was 31.7 +/- 15.6 days (mean +/- SD). Successful monitoring of both fetuses occurred 50.4% +/- 14.5% of the time of total hospitalization. Increasing GA was associated with a significant increase in the percentage of time that both fetuses were monitored (38.2% at <27 weeks; 50.2% at 27-30 weeks; 55.8% at >30 weeks;  $p < 0.01$ ). 7/17 (40%) subjects were delivered emergently <34 weeks GA for non-reassuring CIEFM. GA at delivery in this group was 31.5 +/- 2 weeks GA. 5/17 (30%) went into