Abstract #: 118

**Distribution of Anesthesia Workload in Two Labor and Delivery (L&D) Suites at An Academic Medical Center**

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**Abstract Body:** There is interest in describing and potentially controlling anesthesiology workload, focusing on operating room efficiency [1-3]. Little data exists describing work patterns in L&D units; a recent letter described cesarean (CS) and total delivery patterns by day of the week at one institution [4]. We examined the pattern of anesthesia/analgesia intervention for cesarean section (CS) and labor analgesia (LAB) in order to describe the daily workload pattern in two different L&D suites. Here we present the hourly distribution of anesthetic interventions (labor analgesia (LAB) and anesthesia for cesarean section).

**Methods:** Data was gathered in two L&D suites covered by the Departments of Ob/Gyn and Anesthesiology of our university medical center. One is an “academic” high-risk tertiary referral site with ~4500 deliveries annually (designated ACAD), and the other is a low-risk “community” obstetric service with ~2400 deliveries (COMM). The time of every anesthetic intervention (LAB and CS) in both locations for the year 2008 were entered into an electronic database. Anesthetic interventions were assigned to 1 of 4 “time bins.” Bin 1: 0000-0559; bin 2: 0600-1159; bin 3: 1200-1759; bin 4: 1800-2359. Mean number of anesthetic interventions was compared within sites by one-way ANOVA. After normalization of number of interventions by site, interventions of each type by bin were compared between L&Ds by unpaired t-tests.

**Results:** At ACAD, there were differences in CS, with more in bins 2 and 3 than in 1 and 4 (Figure). For LAB, there was a similar although less marked pattern, with the lowest intervention rate during bin 1 (0000-0559). Bin 2: 0600-1159; bin 3: 1200-1759; bin 4: 1800-2359. Mean number of anesthetic interventions was compared within sites by one-way ANOVA. After normalization of number of interventions by site, interventions of each type by bin were compared between L&Ds by unpaired t-tests.

**Conclusions:** The time pattern of anesthetic interventions may differ due to obstetric and nursing practice, patient populations, and/or staffing issues. There may be common patterns to services that share similar clinical characteristics. Further statistical analysis of the timing of interventions by weekday, weekend, holiday etc. may reveal even more predictable patterns than this initial analysis.


**Additional File:**

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**Graphs:**

**COMM**

- **CS**
- **EPID**

**ACAD**

- **CS**
- **EPID**

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**Figure:** Graphs showing the distribution of anesthesia interventions in two L&D suites. The x-axis represents the time bins (1-4) and the y-axis represents the number of interventions. The graphs show a different distribution pattern for CS and LAB interventions between ACAD and COMM.