Table S1: Frequencies of Environmental Events

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Event** | ∫**Frequency** | **Overall** | **Not Post-Call** | **Post-Call** |
|  |  | Mean Observations Per Case | | |
| *Miscellaneous* |  |  |  |  |
| Team members talking and are interrupted by another team member | 12 | 0.03 | 0.03 | 0.03 |
| Sterile break (e.g., touching non-sterile equipment) | 31 | 0.09 | 0.08 | 0.10 |
| Equipment alerts | 16 | 0.04 | 0.06 | 0.03 |
| **Miscellaneous Cluster Total** | 59 | 0.16 | 0.10 | 0.07 |
|  |  |  |  |  |
| *E-Task Cluster* |  |  |  |  |
| Complex or high-risk patient (noted at onset) | 21 | 0.06 | 0.04 | 0.09 |
| Incorrect patient information (noted verbally) | 1 | 0.003 | 0 | 0.02 |
| Anesthesia delays or interrupts surgery | 19 | 0.05 | 0.02 | 0.10 |
| **E-Task Cluster Total**‡ | 41 | 0.11 | 0.04 | 0.08 |
|  |  |  |  |  |
| *Organization Cluster* |  |  |  |  |
| Team members discuss management of next case | 50 | 0.14 | 0.13 | 0.17 |
| Teaching | 266 | 0.74 | 0.79 | 0.74 |
| Notice of time pressure | 7 | 0.02 | 0.03 | 0.01 |
| **Organization Cluster Total** | 323 | 0.89 | 0.53 | 0.36 |
|  |  |  |  |  |
| *Equipment Cluster* |  |  |  |  |
| Equipment missing | 70 | 0.19 | 0.2 | 0.2 |
| Equipment broken | 22 | 0.06 | 0.09 | 0.03 |
| Unfamiliar equipment | 14 | 0.04 | 0.05 | 0.03 |
| Unclean equipment at start | 1 | 0.003 | 0.005 | 0 |
| Equipment dropped—needs to be cleaned | 39 | 0.11 | 0.14 | 0.07 |
| Unable to find necessary information in chart | 6 | 0.02 | 0.03 | 0 |
| Equipment malfunction | 24 | 0.07 | 0.06 | 0.07 |
| **Equipment Cluster Total\*** | 192 | 0.53 | 0.36 | 0.17 |
|  |  |  |  |  |
| *Distractor Cluster* |  |  |  |  |
| Miscellaneous noise | 18 | 0.05 | 0.08 | 0.01 |
| Music playing | 109 | 0.30 | 0.24 | 0.42 |
| Team member paged | 150 | 0..42 | 0.39 | 0.50 |
| Team member pages someone | 47 | 0.13 | 0.09 | 0.19 |
| Team member cell phone rings\* | 37 | 0.10 | 0.08 | 0.15 |
| Team member answers cell phone | 51 | 0.14 | 0.14 | 0.16 |
| Team member calls someone on cell phone | 240 | 0.66 | 0.62 | 0.79 |
| Telephone rings in OR | 230 | 0.64 | 0.84 | 0.42 |
| Overhead speaker announcement† | 62 | 0.17 | 0.28 | 0.04 |
| **Distractor Cluster Total** | 944 | 2.61 | 1.54 | 1.07 |

\*p<0.05

†p<0.001

‡p=0.001

Table S2: Frequencies and Proportions of Clinical and Human Factors Errors

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Post-Call Status** | | | |
|  | *No* | | *Yes* | |
|  | # | % | # | % |
| Clinical Errors | 2 | 1.01 | 5 | 3.55 |
| Human Factor Errors | 2 | 1.10 | 4 | 2.84 |
| All Errors\* | 4 | 2.02 | 9 | 6.38 |
| Cases | 198 | | 141 | |

\*p=0.165 Post-Call “Yes” vs. Post-Call “No”

Figure S1

**Attending Surgeon/Obstetrician Study-Post-OR Questionnaire**

Today’s Date: \_\_\_\_\_/\_\_\_\_\_\_/\_\_\_\_\_ (mm/dd/yy*)*

Time: hr min am / pm

1. What was your role in this procedure?
   1. Study Subject - attending surgeon / obstetrician / gynecologist
   2. Other attending surgeon / obstetrician / gynecologist
   3. Resident surgeon / obstetrician / gynecologist
   4. Attending anesthesiologist
   5. Resident anesthesiologist
   6. Scrub Nurse
   7. Circulating Nurse
   8. Other (please describe) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. In total, how many hours of sleep did you obtain last night (subtracting out the amount of time you were awake if you were awoken)? \_\_\_\_\_ hr \_\_\_\_\_ min
3. How many times were you awoken for work duties (e.g. paged)? \_\_\_\_\_ times
4. Please rate the quality of your sleep last night

awful excellent

5. How do you feel right now?

sleepy alert

1. On average, how much have you slept per 24 hours over the past 7 days? \_\_\_\_\_ hr \_\_\_\_ min
2. How would you rate the quality of teamwork during this procedure?

\_\_\_ poor \_\_\_ fair \_\_\_ good \_\_\_ very good \_\_\_ excellent

1. How would you rate the quality of communication during this procedure? \_\_\_ poor \_\_\_ fair \_\_\_ good \_\_\_ very good \_\_\_ excellent
2. Did any medical errors, near misses, adverse events, or complications occur during this surgery (whether preventable or not)?

\_\_\_ Yes \_\_\_ No

* 1. If so, how many? \_\_\_\_\_ events

**Please briefly describe each incident on the attached pages**

# Figure S2

**Attending Surgeon/Obstetrician Study-Staff Reporting Form**

# Case number \_\_\_-\_\_\_ \_\_\_ \_\_\_ \_\_\_ (completed by research team)

# **Patient Safety Study: Incident Reporting Form for Staff**

# **Adverse events, near misses, and medical errors.**

(Actual adverse events should be reported by the usual hospital incident reporting system as well)

May be completed by *any* member of the staff (nursing, respiratory therapy, physicians, secretary, etc).

Includes corrected orders (verbal or written) or “catches” that may have prevented possible patient injury, unnecessary testing or patient discomfort.

**This is a confidential form** that will not be part of any patient or hospital records. It will be used only for purposes of quality improvement and research. Only study researchers at your institution will have access to these reports. Clinical staff and other hospital personnel will be provided with no knowledge of specific reports, events or reporters (de-identified summaries may be provided to programs for education, quality improvement, and research purposes).

1. Patient name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Patient ID # \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Location \_\_\_\_\_\_\_

4. Date incident occurred \_\_\_ \_\_\_ /\_\_\_ \_\_\_ / \_\_\_ \_\_\_

5. Time incident occurred \_\_\_ \_\_\_:\_\_\_ \_\_\_ \_\_\_\_AM or \_\_\_\_ PM

6. Please briefly describe the incident (for medications, include name of drug) and, when applicable, what you and the team did to prevent or minimize harm

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. Was a problem in communication involved in this incident? \_\_\_ Yes \_\_\_ No

If yes, please describe briefly (who was involved or should have been involved in communication; nature of communication problem)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8. Did a problem with vigilance, alertness, or sleepiness contribute to the incident? \_\_\_ Yes \_\_\_ No

**Thank you!**