How to Train OB Units for Disaster

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Dr. Daniels is a clinical professor of obstetrics and gynecology at Stanford University School of medicine. She also serves as co-director of the OB simulation program at Lucile Packard Children's Hospital at Stanford Medical Center and co-director of the OB disaster planning committee. She is the past chair of the American college of Obstetrics and Gynecology national simulation consortium and past chair of the OB safety committee at Lucile Packard Hospital.

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Naola S. Austin, MD received her medical degree at Weill Cornell Medical College in New York, NY. After completing residency training in Anesthesiology at the University of Washington, she went on to fellowship in Obstetric Anesthesia followed by a dual appointment as a Postdoctoral Scholar in Medical Simulation and Clinical Instructor of Anesthesiology at Stanford University Medical Center. Ms. Austin has published basic science articles on synapse biology, clinical reviews on cervical spine injury in trauma and burns, and has received multiple honors including U.S.-E.U. Exchange Scholar Rogers’ Colloquium Speaker, Resident of the Year, and Foundation for Anesthesia Education and Research Scholar. She continues to be an active member of the OB SIM team at Stanford, including their efforts to improve disaster planning for hospitals.
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Clinical Assistant Professor, Department of Anesthesia
Stanford University School of Medicine

Dr. Hilton is a clinical assistant professor in the department of anesthesia for Stanford University School of Medicine where she teaches residents and medical students in labor and delivery as well as in the main operating room. She also serves as faculty on the newly developed obstetric basic life support course at Lucile Packard Children’s Hospital. Dr. Hilton serves on the Obstetric Disaster Planning Committee for Stanford University Medical Center. Gillian received her medical degree from University of Glasgow (UK), School of Medicine. She completed her Anesthesia Residency at the North Trent School of Anesthesia in the UK. She is a member of the Royal College of Surgeons of Edinburgh, UK; the Fellowship of The Royal College of Anaesthetists, UK; and the Fellowship of The College of Anaesthetists, Royal College of Surgeons in Ireland.

Objectives

1) **Unique needs** of obstetric units during a disaster

2) **How to initiate** disaster training on obstetric units

3) Learning disaster readiness **specific to your unit**

4) **Future vision** on a regional, statewide and national level
Do you have an OB Unit?

The American College of Obstetricians and Gynecologists note:

“Providers of obstetric care and facilities that provide maternity services, offer services to a population that has many unique features warranting additional consideration”
OB is Unique

One size ≠ all in a disaster setting for OB

Within the same footprint of any OB unit there exists a large variety of patient acuity and needs

- Laboring women
- Intra-operative and post-operative patients
- Healthy postpartum patients with their newborns

In the days after Hurricane Katrina struck Louisiana, about 125 critically ill newborn babies and 154 pregnant women were evacuated to Woman's Hospital in Baton Rouge

It was at least 10 days before some of the infants and mothers were reunited

Washington Post 2006
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Our Experience:
How to Train Your Unit

Multi-disciplinary participants

- Obstetrician
- Anesthesiologist
- Nursing
- Office of Emergency Management
- Clerks/techs
Structure:
L&D Disaster Training Session

2 hours total
• Introductions
• 30 minute lecture
• 1 hour walk through
• 20 minute debrief/discussion

L&D Disaster Training: Content

• Disaster concepts
• Organization chart
• Disaster equipment
• Disaster roles and job action sheets
• Department damage map
• Fire extinguishers
• O₂/N₂O gas valves
• TRAIN triage
• Grab and go bag
• Patient form and lanyard
• Med sled demo
Disaster Organization Chart

Stanford & LPCH Hospital Command Center

L&D Unit Leader
L&D Assistant Unit Leader
Anesthesiologist
OB & Anesthesia Techs
L&D Bedside RNs
L&D Clerk

F1 Unit Leader
F1 Assistant Unit Leader
F1 Bedside RNs
F1 Clerk

L&D Disaster Plan: Disaster Equipment (1)
L&D Disaster Plan: Disaster Equipment (2)

L&D Disaster Plan: Disaster Roles

<table>
<thead>
<tr>
<th>L&amp;D Disaster Roles</th>
<th>OBG Unit Leaders</th>
<th>Location</th>
<th>Job</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SWC attending:</td>
<td>Front Desk</td>
<td>Meet and assign roles</td>
</tr>
<tr>
<td></td>
<td>RN:</td>
<td>Roaming</td>
<td>Collect information</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Communicate with Command</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Direct efforts</td>
</tr>
<tr>
<td>Anesthesiologist:</td>
<td></td>
<td></td>
<td>Contact MOIR to assess hospital needs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Roaming</td>
<td>Allocate L&amp;D anesthesia staff</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Assist with TRAIN triage</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Gather emergency supplies</td>
</tr>
<tr>
<td>Assistant unit leaders:</td>
<td></td>
<td></td>
<td>Collect department status report</td>
</tr>
<tr>
<td></td>
<td>OBG resident:</td>
<td>Roaming</td>
<td>Collect TRAIN forms</td>
</tr>
<tr>
<td></td>
<td>TL:</td>
<td></td>
<td>Complete census form</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hand out orders/transfer notes</td>
</tr>
<tr>
<td>Techs:</td>
<td></td>
<td></td>
<td>Facilities check, complete dept. Damage Map</td>
</tr>
</tbody>
</table>
L&D Disaster Plan: Job Action Sheets

OB Anesthesia Job Action Sheet:
- L&D: OB Attending +/- Anesthesia Fellows & Residents
- Mission: Ensure that safe patient care continues in the event of the disaster

<table>
<thead>
<tr>
<th>Date:</th>
<th>Start:</th>
<th>End:</th>
<th>Position Assigned to:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Position Reports to: OB Unit Leader (UL) & Assistant Unit Leader (AUL), Hospital Command Center (HCC) 93210 Tel: (715-3210)

**Equipment needed: ID Badge, Stethoscope, Pen, Flashlight.**

<table>
<thead>
<tr>
<th>Immediate (Operational Period 0-2 Hours)</th>
<th>Done?</th>
<th>Init:</th>
</tr>
</thead>
</table>

Getting Started:
1. Contact MAIN OR (may be only Anesthesia Attending in house at night, etc.). If anesthesiology attending pulled to Main OR, designate OB Anesthesia role on L&D to a fellow or appropriate resident.
2. Identify which patients have necessary epidurals or procedures running to triage Anesthesia care.
3. Meet with all available on-site MDs, Nursing staff at nursing station.
4. Provide the OR with your best form of communication (phone, texting, pager).
5. Allocate anesthesia staff (fellows/residents/tech) to check machines & equipment.

Department Damage Map

- Front Desk:
  - Major Damage: __________  Ok to Enter?: Y/N
  - Staff: __________

- OR A:
  - Major Damage: __________
  - OR A:
    - Major Damage: __________
    - OR B:
      - Major Damage: __________

- Labor Room 1:
  - Major Damage: __________
  - Staff: __________

- Labor Room 2:
  - Major Damage: __________
  - Staff: __________

- Labor Room 3:
  - Major Damage: __________
  - Staff: __________

- Labor Room 4:
  - Major Damage: __________
  - Staff: __________

- Labor Room 5:
  - Major Damage: __________
  - Staff: __________

- Labor Room 6:
  - Major Damage: __________
  - Staff: __________

- Labor Room 7:
  - Major Damage: __________
  - Staff: __________

- Labor Room 8:
  - Major Damage: __________
  - Staff: __________

- Labor Room 9:
  - Major Damage: __________
  - Staff: __________

- Labor Room 10:
  - Major Damage: __________
  - Staff: __________

- Labor Room 11:
  - Major Damage: __________
  - Staff: __________

- Labor Room 12:
  - Major Damage: __________
  - Staff: __________

- Labor Room 13:
  - Major Damage: __________
  - Staff: __________

- Labor Room 14:
  - Major Damage: __________
  - Staff: __________

- Labor Room 15:
  - Major Damage: __________
  - Staff: __________

- Labor Room 16:
  - Major Damage: __________
  - Staff: __________

- Labor Room 17:
  - Major Damage: __________
  - Staff: __________

- Labor Room 18:
  - Major Damage: __________
  - Staff: __________

- Labor Room 19:
  - Major Damage: __________
  - Staff: __________

- Labor Room 20:
  - Major Damage: __________
  - Staff: __________
Disaster Planning for OB

National adoption of a common triage and evacuation language including an effective patient tracking system to avoid maternal-neonatal separation

**OB TRAIN** =  
**Triage** by **Resource Allocation** for **IN** patient

*Based on the triage system created by Dr. Ron Cohen for the NICU at Lucile Packard Children’s Hospital and adapted for OB

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**OB TRAIN for AP + L&D**

<table>
<thead>
<tr>
<th>Transport</th>
<th>CAR (Discharge)</th>
<th>BLS</th>
<th>ALS</th>
<th>SPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor Status</td>
<td>None</td>
<td>Early</td>
<td>Active</td>
<td>At risk for En route delivery</td>
</tr>
<tr>
<td>Mobility</td>
<td>Ambulatory*</td>
<td>Ambulatory or Non-ambulatory</td>
<td>Non-ambulatory</td>
<td>Non-ambulatory</td>
</tr>
<tr>
<td>Epidural Status</td>
<td>None</td>
<td>Placement &gt; 1 hour**</td>
<td>Placement &lt; 1 hour**</td>
<td>N/A</td>
</tr>
<tr>
<td>Maternal or Pecal Risk</td>
<td>Low</td>
<td>Low/Moderate</td>
<td>Moderate/High</td>
<td>High</td>
</tr>
</tbody>
</table>

(S) Specialized = must be accompanied by MD or Transport RN

* MBS 6 = Patient is able to perform a partial knee bend from standing

** Epidural catheter capped off

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21 22
OB TRAIN Triage Example

26yrs @ 40 weeks
- Early labor: 4cm
- Can ambulate
- No epidural
- Cat 1 FHR (Fetal Heart Rate)
- No significant maternal or fetal risk factors

L&D Disaster Plan: Evacuation
L&D Disaster Plan: Evacuation (cont.)

<table>
<thead>
<tr>
<th>Disaster Transfer Summary L&amp;D or AP (DRAFT 6-3-13)</th>
<th>ROOM # _____</th>
</tr>
</thead>
<tbody>
<tr>
<td>Train Score:</td>
<td>Blue</td>
</tr>
<tr>
<td>Hospital level needed:</td>
<td></td>
</tr>
<tr>
<td>Neonatal LEVEL</td>
<td>1</td>
</tr>
<tr>
<td>Maternal LEVEL</td>
<td>1</td>
</tr>
</tbody>
</table>

Patient name: (Last, First)

MRN: (MRN)

DOB: ____________________________

Primary OB provider: (PMD)

Other important outside care provider(s): ____________________________

Date of Admission to LPCH:

Age _____ G _____ P _____ EGA _______ singleton ____ multiples ____ P

ALLERGIES: ☐ NKDA ☐ Other

Labor status at transfer: Circle all that apply

LABOR Y N

IS THIS PT LIKELY TO DELIVER IN LESS THEN 4 HOURS? Y N
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Safety First

- Staff, patients and visitors
- Fire extinguishers?
- Gas valves turn-off switch?
Drills Helps To Identify Problems

Avoid a *minor* problem becoming *major*....

- Disaster equipment boxes too high
- Need flashlights/headlamps
- Need non-rechargeable batteries

Never say "That won't happen to me." Life has a funny way of proving us wrong.

- Denial exists
- Home preparedness is critical
  - [www.ready.gov](http://www.ready.gov)
  - [www.redcross.org/prepare/location/home-family/get-kit](http://www.redcross.org/prepare/location/home-family/get-kit)
- Situational awareness
Policies

Staff responsibilities
- Physical fitness and stamina?
- Family and pet housing?
- Commitment to patients vs. family

Institutional policies
- Mandatory disaster-duty requirement?
- Overtime/disaster pay?
- Disciplinary action?

Policies about trainees
“*In a disaster situation, licensed residents are allowed to perform tasks that are needed for patient safety*”

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What is Next for Us?

Next steps for training at Stanford
• In-situation disaster scenario simulation
• Online refresher video
• Surge training

Embark on creation of a collaborative network of maternity hospitals
• Stratification of maternity hospital levels of care

Disaster Planning (Tool Kit)

It’s coming...the creation of a generic tool kit
Available now: Contact us

Available in the future:

District 9

The American College of Obstetricians and Gynecologists
Women's Health Care Physicians

CMQCC California Maternal Quality Care Collaborative
It may seem overwhelming….

Here’s How To Get Started:
Step 1: Low-Hanging Fruit

Identify your champion
- Someone familiar with the unit and its unique needs

Organize disaster box with vital equipment
- Flashlights/batteries/head lamps can be used in a simple electrical outage

Create a disaster binder
- Required, but make it useful
Step 2

Assign disaster roles
- Use the generally accepted terms: ‘assistant unit leaders’, ‘unit leaders’.
- Each facility will have unique disaster roles assignments
  - Unit leader = the role given to the staff position that is always in-house

Create (job action sheets) for each designated role

Create (grab and go bags)
- Imagine you are delivering in the parking lot

Step 2 (cont.)

Create a (phone tree)
- Based on distance from the hospital
- A list of hospital first responders
  - Responders who will/can come in immediately
Step 3

Begin simulation disaster training for all personnel on the unit
- Include everyone (clerks/housekeeping)
- Do live training, do not rely on passive training like health stream videos

Following training
- Begin regular disaster drills on the unit
- Begin hospital-wide disaster drills

To Accomplish a Comprehensive Obstetric Disaster Plan There Must Be:

1) National adoption of a common triage and evacuation language including an effective patient tracking system to avoid maternal-neonatal separation

2) Stratification of maternity hospital levels of care

3) Collaborative network of obstetrical hospitals, both regionally and nationally
How Can We Create Regional Collaborative Networks?

What Do You Think?

*How can we coordinate regionally and statewide?*

- Who are the main players?
  And how do we reach them?

- How to create a stratification of maternity hospital levels of care

- Other issues?
Thank you for your attention

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