Low Tech Simulation and Simulation in “Austere Environment”

Jon Jui MD, MPH
Innovative “Low Tech” Simulation of Challenging Clinical Presentation

Jon Jui MD, MPH
Management of Airway during Massive GI bleed or Profuse Vomiting
Simulation of Vomiting Aspiration Patient

McGrath

DuCanto Catheter

**Standard Yankauer**
- Designed in 1907 for removing blood and saliva during tonsillectomy
- Small distal openings to permit fluid removal
- Often has a thumb port so that suction can be applied and interrupted

**SSCOR DuCanto Catheter**
- Designed in 2016 to remove material from the upper airway during resuscitation
- Large lumen (.26") for removal of emesis, clots, tissue during resuscitation
- No thumb port so that suction is "always on" and removing material from the airway even when the caregiver’s hands are occupied with other aspects of the resuscitation
- Anatomical shape allows the distal tip of the SSCOR DuCanto Catheter to rest near the top of the esophagus to continually drain the hypopharynx during intubation
Low Tech Vomiting Mannikin Simulator

Captain Jay Cross
Gresham Fire and Emergency Services
Mannikin with Vomiting Simulator
Mannikin with Vomiting Simulator
Drill Pump
Food Coloring
Xanthan Gum
Inside the Vomiting Mannikin Simulator
Video Vomiting Mannikin
High Fidelity Simulation in Disaster Environment
The event is a joint multi-agency, multi-state disaster preparedness exercise based on response to a possible Cascadia Subduction Zone event.

Officials believe the Northwest is overdue for a magnitude 7.0 or greater earthquake.
Operation Pathfinder-Minuteman
Rescue and Casualty Evacuation
Military Command and Control
## Echelon I

<table>
<thead>
<tr>
<th>Echelons of Care</th>
<th>Military Hierarchy</th>
<th>Personnel/Facility</th>
<th>Type of Care</th>
<th>Navy/Marine Corps Hierarchy</th>
<th>Army Hierarchy</th>
<th>Rough Civilian Equivalents</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Unit</td>
<td>Self/Buddy Aid</td>
<td>First aid</td>
<td>Self/Buddy Aid</td>
<td>Self/Buddy Aid</td>
<td>Community first aid</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Combat Lifesaver</td>
<td>First aid, beginning of emergency treatment</td>
<td>Combat Lifesaver (CLS)</td>
<td>Combat Lifesaver</td>
<td>First responders (police, fire)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Combat medic</td>
<td>Emergency medical treatment</td>
<td>Hospital Corpsman (HM)</td>
<td>Combat Medic (68W)</td>
<td>EMT-basic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Battalion aid station</td>
<td>Advanced trauma and medical management</td>
<td>Battalion Aid Station (BAS); Ship's complement medical staff</td>
<td>Treatment squad, BAS, SOF medic (18D)</td>
<td>Paramedic</td>
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<tr>
<td>II</td>
<td>Division</td>
<td>Medical company (clearing station)</td>
<td>Initial resuscitation</td>
<td>Medical Battalion; Casualty Receiving &amp; Treatment Ships (CRS); Shock Trauma Platoon (STP); Ship's complement medical staff</td>
<td>Medical battalions/companies, Casualty Evacuation (CASEVAC/Dustoff)</td>
<td>Level IV trauma center</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Field surgical support group</td>
<td>Initial resuscitation</td>
<td>Forward Resuscitative Surgery System (FRSS)</td>
<td>Forward Surgical Team (FST), Special Operations Resuscitation Team (SORT), Joint Medical Augmentation Unit (JMAU); future - Forward Resuscitation and Surgical Team (FRST)</td>
<td>Level III trauma center</td>
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## Echelon III

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<tr>
<td>III</td>
<td>Corps</td>
<td>Combat support hospital, fleet hospitals</td>
<td>Resuscitative surgery and medical care</td>
<td>Fleet hospital; Hospital ships</td>
<td>Field hospital levels - Combat Support Hospital (CSH); Historical - Evacuation Hospital (EVAC) and Mobile Army Surgical Hospital (MASH)</td>
<td>Level II trauma center</td>
</tr>
</tbody>
</table>
Echelon I and II Care
DoD CCAT Teams
Critical Care Transport Teams
CCAT Transport
CCAT
Operation Minuteman 2015
Kaiser SIM Team
Operation Minuteman 2015
Kaiser SIM Team
SIM Man in “Unusual Settings”
The End