Identifying Educational Needs:
Training Gap Analysis of USAF Aeromedical Evacuation Technicians and Nurses

March 2017

Tiffany Losekamp, MSN, CNE, CHSE
En Route Care, Training, and Simulation Researcher
Disclaimer

The views expressed are those of the author and do not necessarily reflect the official policy or position of the Air Force, the Department of Defense, or the U.S. Government.
Learning Objectives

- Discuss the process of completing a focused training gap analysis for educational initiatives
- Discuss the impact of training gap analysis in decisions regarding fund and time allocation
- Identify the learning needs of AE nurses and technicians
- Discuss the impact of the reported learning needs on sustainment training in AE
Introduction

Declining need for combat casualty care has decreased opportunities for acute care and trauma clinical experiences for medics, impacting sustainment of readiness skills for future operations.
Unique Environment

Picture taken by FH Team member
Background

Increased need for training due to:

- Downsizing of inpatient facilities
- High acuity of wounded warriors
- Decreased deployments
- Need for continued skills sustainment

Personal Photo Taken by: Maj. D. Bevington
Identification of Training Research Need

An Integrated Review of Simulation Use in Aeromedical Evacuation Training (O’Connell et al., 2013)

- Effectiveness of simulation training
- Attributes of simulation
- Environmental aspects of simulation
- Use of simulation training in AE/CCAT operations


Personal Photo Taken by: Maj. D. Bevington
Methods

Study Aims:

– Describe the clinical experience of active duty (AD) flight nurses (FN) and aeromedical technicians (AET)

– Identify the clinical education needs of the AD FN and AET
Results

Demographics:
- 102 participants
- Representative of 25 to 33% of each of the AD aeromedical units
- 50% were AET
- 49% were FN
- Various educational levels were represented
- A majority of respondents had 3 to 5 years of clinical practice experience
Results

Summary of Research Methods:
- Subject matter experts (SMEs) were queried to identify how important certain tasks were for the FN and AET to perform. The SME data were compared against the AD survey data to identify skills gap.
- Travel to the four major AD AE units; administered a single survey; each AD unit was represented by 25-33% of total FN and AET at that unit.
- Descriptive statistics were utilized for analysis.

<table>
<thead>
<tr>
<th>Skill</th>
<th>SME Mean</th>
<th>AD FN/AET Mean</th>
<th>Skills Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ventilator Patient</td>
<td>3.42 (N=12, SD=1.08)</td>
<td>2.87 (N=102, SD=1.17)</td>
<td>0.54</td>
</tr>
<tr>
<td>Neurology Patient</td>
<td>4.50 (12,0.52)</td>
<td>3.97 (100,0.87)</td>
<td>0.53</td>
</tr>
<tr>
<td>Mental Health Patient</td>
<td>4.83 (12, 0.39)</td>
<td>4.38 (101, 0.73)</td>
<td>0.46</td>
</tr>
<tr>
<td>Burn Patient</td>
<td>4.25 (12, 0.87)</td>
<td>3.80 (102, 0.86)</td>
<td>0.45</td>
</tr>
</tbody>
</table>
Discussion

- Data from the study revealed the typical clinical experience of FNs and AETs.
- Allows effective decision making on training and competency tasks before clinicians take to the air with their AE squadrons.
- Study provides an evidence base for decisions regarding training and fund allocation.
- Project informs total service (active duty, Guard, and Reserve) training and potentially impacts policy.
- Provides a foundation for future simulation research efforts in education and training.
Lessons Learned

- Establish stakeholder buy-in early in development process
- Determine current education/training practices
- Build partnerships with end users throughout research process
- Have a transition plan for the results
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Questions
Contact Information

Tiffany Losekamp – tiffany.losekamp.ctr@us.af.mil