



# Otolaryngology Residency Training During Military Humanitarian Operations



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## Abstract

**OBJECTIVES:** The objectives of this study are to (1) identify how resident participation in military humanitarian missions aboard a hospital ship can serve to provide exposure to the core facets of otolaryngology, and (2) describe how ACGME goals can be attained during a medical mission rotation.

**STUDY DESIGN:** Retrospective review of resident training and preparation prior to embarking on a humanitarian mission, operative and scholarly involvement during the mission, and final review of value and adherence to ACGME goals and objectives upon completion of the humanitarian experience.

**METHODS:** Residents planning to participate in the humanitarian mission were selected based upon previous performance, academic standing and overall maturity. Each was required to complete training pertaining to humanitarian operations prior to participating in the mission. Goals and objectives for the rotation were provided in written format, and a faculty mentor was assigned to provide direct guidance and evaluation. Residents evaluated the rotation and value to otolaryngology training.

**RESULTS:** ACGME goals were met for otolaryngology training. Residents participated in direct patient care; including patient assessment, operative cases, postoperative care and cooperation with host nation physicians. Residents participated in continuing medical education activities by giving specialty lectures as well as developing scholarly activity relevant to otolaryngology training.

**CONCLUSIONS:** Invaluable training exists in the participation by residents in humanitarian missions. All rules, policies, and regulations of resident training still apply during military medical mission rotations. Otolaryngology residency goals and objectives can be met in accordance with ACGME regulations while providing a unique learning environment.

## Introduction

The USNS Mercy hospital ship has deployed on a regular basis for humanitarian missions to the Southeast Pacific since 2006. The hospital ship has a 1000-patient bed capability with 80 of these being in the intensive care unit, 20 post anesthesia unit, 400 in intermediate care, 500 in minimal care, and 11 operating rooms (Fig 1). During a fully operational mission, the entire ship's medical and support personnel range from 950 to 1100 individuals [1].

Since 2008 the Otolaryngology Department at Naval Medical Center San Diego has selected residents above postgraduate year 3 for 4- to 6-week elective humanitarian rotations. Pre-deployment preparations included mission briefs, simulations of medical logistics for mass casualty situations as well as training on basic humanitarian preventative medicine and sanitation protocols.

## Methods and Materials

Operative case logs for the USNS Mercy hospital ship deployment Pacific Partnership 2015 by 2 otolaryngology residents were reviewed. Previously reported data from each surgical service including general surgery, pediatric surgery, gynecology, urology, otolaryngology, orthopedic surgery, plastic surgery, oral surgery and ophthalmology for missions between 2006 to 2012 were reviewed [2].

Table 1. Operative experience: ACGME defined category cases 2006-2012..

	Number	Percentage (%)
Abdominal	456	31
Skin, soft tissue & breast	313	21
Head & neck	304	20.5
Plastics	232	15.5
Pediatrics	178	12
<b>Total:</b>	<b>1483</b>	<b>100</b>

## Results

A total of 93 cases were performed between the 2 residents during Pacific Partnership 2015. Of these cases, 60 (65%) were key indicator cases for otolaryngology residency training (Chart 1; fig 2,3). Review from 2006 through 2012 cases revealed 304 head and neck cases, making up 20.5% of all cases performed on these missions (Table 1) [2]. Host nations visited during the 2015 mission included Fiji, Papua New Guinea, Philippines, and Vietnam.

Goals were met both in training for the Pacific Partnership 2015 mission and while completing the mission. Direct patient care was performed in a clinical, surgical and inpatient setting. Daily didactic lecture series allowed for continuing medical education to be obtained. After each mission, a morbidity and mortality meeting allowed for reflection of both positive and negative aspects of patient care, facilitating a practice-based learning environment. Residents were involved in the medical mission planning and were integral in coordinating patient care as well as identifying system errors and implementing potential solutions through systems-based practice. Professionalism skills as well as interpersonal and communication skills were constantly practiced both in day-to-day activities to carry out the medical mission as well as during collaborative missions with the host nations.

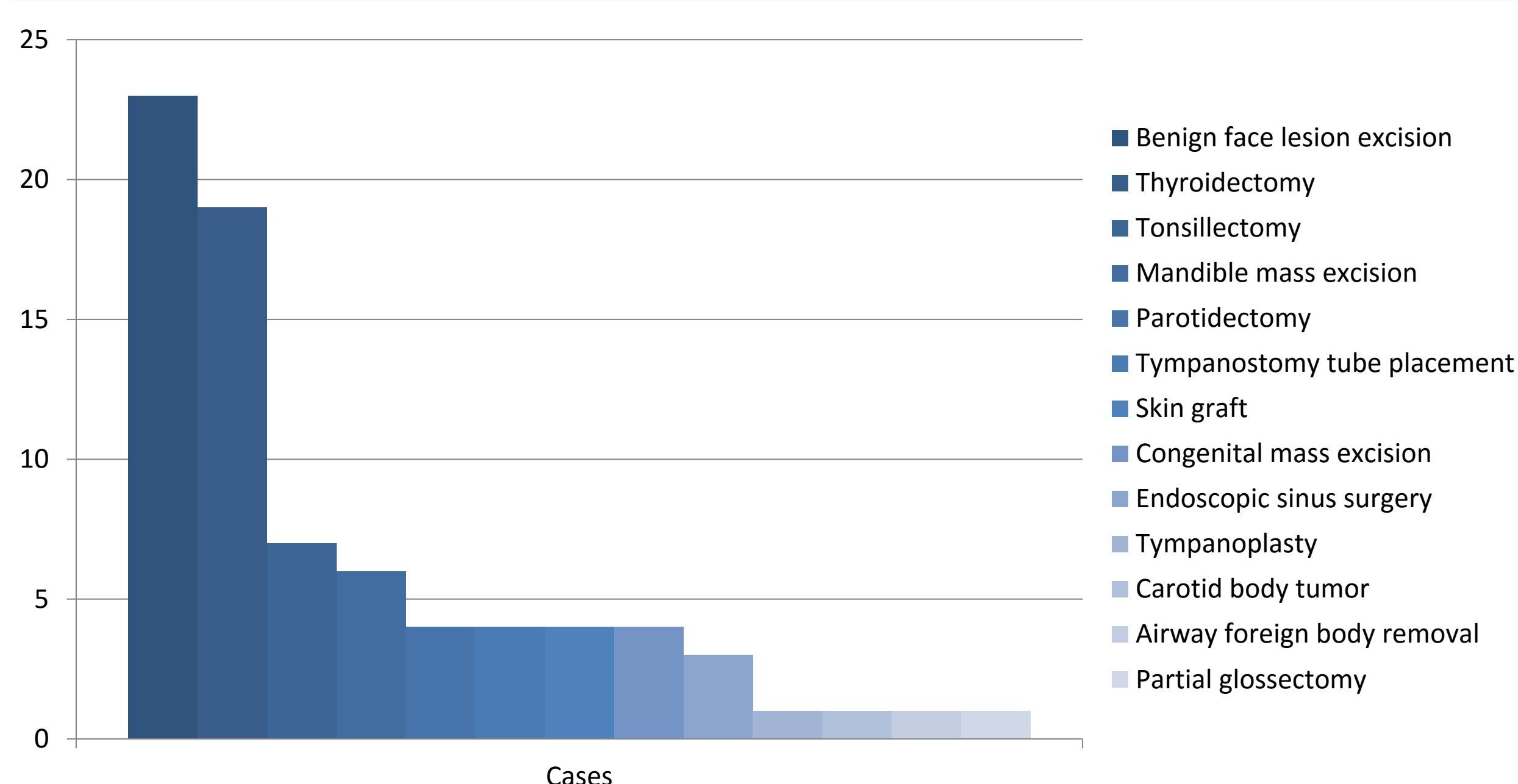


Chart 1. Otolaryngology operative cases during the 2015 mission.

## Discussion

The Accreditation Council for Graduate Medical Education (ACGME) competencies include medical knowledge, patient care and procedural skills, professionalism, interpersonal and communication skills, practice-base learning and improvement, and systems-based practice [3]. Invaluable training exists in the participation by residents in humanitarian missions. Many challenges are faced in the humanitarian setting. Operating in a time- and resource-limited environment requires foresight, logistical planning, and a firm understanding of the natural history of surgical disease and the ethical principles unique to the humanitarian missions [4].



Fig 1. USNS Mercy arriving in Fiji.

Fig 2. Performing thyroid surgery aboard the ship.

Fig 3. Parotid defect after benign mass excision.

## Conclusions

All ACGME competencies were met as residents participated in these humanitarian missions while providing a unique learning environment. Resident participation should be strongly encouraged in future missions given its invaluable nature in training future generations of otolaryngologists.

Disclaimer: The views expressed herein are those of the authors' and do not necessarily reflect the official policy or position of the Department of the Navy, Department of Defense, or the U.S. Government.

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