

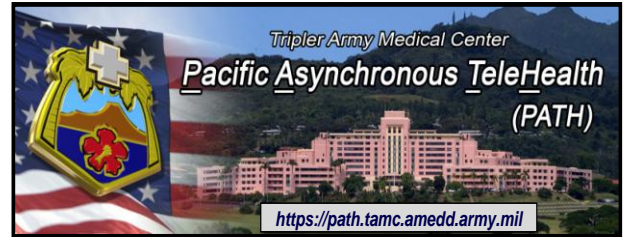
PATH

Pacific Asynchronous TeleHealth

<https://path.tamc.amedd.army.mil>

GECHO: Global Electronic Children's Hospital

ATPAC: Adult Telemedicine of the PACific



Background:

Tripler Army Medical Center (TAMC) serves as the military's tertiary medical care facility for the entire Pacific region. Remote military treatment facilities in Japan, South Korea, and Guam are primarily staffed with primary care physicians with limited or no access to specialty consultation services. In addition, distances between these remote sites and TAMC are extreme. TAMC is closer to Atlanta (4490 mi) and Chicago (4230) than Seoul (4550) or Okinawa (4650). This enormous area of responsibility spans 5 time zones and the International Date Line, making synchronous, "real-time" teleconsultation difficult (versus "store-&-forward"). This unique medical and geographic situation created a need for asynchronous teleconsultation capabilities between Western Pacific Military Treatment Facilities (MTFs) and TAMC.

Objective:

PATH is an internet-based, asynchronous (store-&-forward), HIPAA-compliant, provider-to-provider teleconsultation system. The PATH website is hosted at TAMC. Remote providers only require a computer with an internet connection and browser software, making it readily available regardless of time and location. Remote providers enter patient demographics, history/physical exam data, and supplementary multimedia (pictures, video, or sound) as dictated by the clinical need. Cases are screened by physician consult managers at TAMC and forwarded to the appropriate specialists. Providers are notified of new comments via e-mail. Physician workload is captured via a disposition module similar to AHLTA.

Military Relevance:

The PacRim Teleconsultation Effectiveness Trial (Arch Ped Adol Med 2005) demonstrated improved access to care (average consult response time <2 days), and improved quality of care (improved diagnoses and change in management plan). Air evacuations to TAMC were decreased by 12%. In addition, visits to local network subspecialists are avoided which decreases purchased care costs for Western Pacific MTFs. We recently reviewed 1,000 consecutive pediatric teleconsultations and showed similar improvements in quality, access, and cost (see box on right). Additional benefits include HIPAA compliance, proper documentation, reduced testing duplications (labs, radiology, etc), improved MEDEVAC coordination/control, improved case management, and continuing education of remote healthcare providers.

Usage:

PATH is currently processing over 850 teleconsultations / year from over 20 hospitals and clinics throughout the Pacific region. Over 40 different medical and surgical specialties are involved in both pediatric and adult teleconsultations. A full time software engineer is responsible for system maintenance, troubleshooting, and ongoing upgrades. PATH is also beginning expansion into patient-to-provider consultation services for specific disease states.

Contact:

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Recent Review of 1,000

Pediatric Teleconsultations

(Telemedicine and e-Health, in press)

- 276 consults in 2006, 289 in 2007, 385 in 2008
- Japan (77%), Korea (16%), Guam (7%)
- 74% from rural areas without local subspecialist or sufficient local resources
- 26% from urban areas with subspecialty resources and local referral possible
- 11% of cases submitted primarily for air evacuation planning and case management
- Median patient age 2.9 yrs, range 0-18 yrs
- Median response time 14.5 hrs: 92% response within 3 days, 97% within 1 week
- Subspecialties receiving most consults: Cardiology (20%), Gastroenterology (17%), Neurology (15%), Endocrinology (15%)
- Diagnostic consults 72%, Treatment related 21%
- Diagnosis or treatment plan modified in 74% of all teleconsultations.
- PATH prevented air-evacuation or referral to local subspecialist in 12-43%/yr
- >\$200,000 per year *avoided* via air evacuation and subspecialist referrals no longer necessary after PATH consultation
- 1.7 RVUs generated /case resulting in approximately \$40,000 per year

CONCLUSIONS FROM RECENT PEDIATRIC REVIEW:

- 1) PATH **improves access to care** in remote locales with 97% of consults answered within 1 week.
- 2) PATH **provides quality subspecialty care** to patients in remote locations where local expertise is unavailable.
- 3) PATH **reduces costs** by at least \$200,000 per year by preventing unnecessary air evacuations and face-to-face consultations.
- 4) PATH **captures workload** at a rate of approximately \$40,000 in RVUs captured per year with substantial potential for future growth at other military medical centers.

