# Pacific Island Health Care (PIHCP) Project

## Background and Statement of the Problem

For many years, Tripler Army Medical Center (TAMC) has provided secondary and tertiary care to many of the medically under served peoples of the US Associated Pacific Islands (USAPI). These include, of the Federated States of Micronesia (FSM) Yap, Kosrae, Chuuk and Pohnpei, the Republic of Palau (ROP), and the Republic of the Marshall Islands (RMI). Additional non-DoD patients are seen from American Samoa and the Commonwealth of Northern Marianas Islands (CNMI) and Guam, because of their unique teaching value. These patients are accepted for treatment either under the Pacific Island Healthcare Project- where they are seen as GME cases at no cost to the patient or the government, or they are seen on a reimbursable basis. Consultation has previously been based on personal friendships and networking, with great difficulty obtaining initial patient demographics and history as well as post treatment follow up. With the development of a web based electronic consult and referral system, TAMC can present a standardized format for consultations and referrals. This enables TAMC clinicians to review a complete request, forward it to the appropriate specialist, and make a treatment or referral determination in a store and forward format, that allows for accurate data basing, archiving and fiscal management.

## Research Questions and hypothesis

Quantitative Research Questions:

- Cost of air transports for patients will be less when using telemedicine consultations than when providing care and consultation by standard methods.
- Hospital length of stay will be shorter when using telemedicine consultations than when providing care and consultation by standard methods.
- Incidence of patient misdiagnosis will be no greater when using telemedicine consultations than when providing care and consultation by standard methods.
- Incidence of medical complications will be no greater when using telemedicine consultations than when providing care and consultation by standard methods.
- Patients receiving initial care by telemedicine consultation are less likely to require transfer to a major medical facility than are patients receiving care and consultation by standard methods.
- Workflow cost savings have resulted from the integration of technology and process re-engineering.

Qualitative Research Questions:

- What is the patient level of comfort and confidence in care received through telemedicine consultation?
- What is the family level of comfort and confidence in care received through telemedicine consultation?
- What factors influence the patients' and families' level of comfort and confidence in care received through telemedicine?
- What are the most common perceptions and understandings of telemedicine consultations as described by Pacific Islanders when receiving care through this media?
- What is the qualitative impact from workflow process re-engineering?

## Project Description (proposed solution)

To create a standardized consultation and referral network which allows TAMC clinicians to quickly triage consults and referrals remotely, allows PAD to track and database all accepted referrals, and provides remotely located clinicians greater access to TAMC tertiary care specialists. To execute a formal research proposal to determine the cost effectiveness and quality of care of using a web based consultation network.

Objectives:

- Create accurate, specific and simple to use on line forms for consultation and referral.

- Create informative and detailed web page to provide clear direction and understanding of the consultation and referral process.
- Create a network of TAMC clinicians willing to receive and respond to electronic consults.
- Enable remotely located healthcare professionals to access specialists with electronic consult.

Goals:

- Develop a network of specialists within Micronesia, Polynesia and TAMC who will act as electronic consultants for remotely located clinicians.
- Enable all remotely located clinicians to access specialists electronically in a timely manner.
- Create a database of consults and referrals for research and patient management.

## Proposed Project Timeline

- American Telemedicine Association Meeting- Salt Lake City- Poster Presentation, April 1999
- Data gathering- Current through December 1999.
- Develop a Research Methodology and obtain IRB Approval, May 1999
- Incorporate PAD metrics into system which will be used to do a cost benefit analysis between patients seen through Web based consultation and current standards of care-May 1999
- Implement Pacific Island Health Care Project software Version 3.0-May 1999
- Install systems at Yap, Kosrae, CNMI, Ebeye, Guam and American Samoa – May/June 1999
- 5th Annual Meeting of the Pacific Basin Medical Association - presentation, training and interviews with users - Kosrae- July 1999
- Data analysis – January 2000-March 2000.
- Documentation of research results – April 2000-June 2000.
- Publication of research results in peer review journal – July 2000.

## Performance Objectives/Deliverables

- IRB approved research methodology.
- Data analysis and documented research results.
- Paper accepted for publication in peer review journal.
- Systems implemented in Yap, Kosrae, CNMI, Ebeye, Guam and American Samoa.
- Implementation of PIHCP Version 3.0 webpage to include research metrics.
- Demonstrated cost effectiveness and clinical outcome by utilizing an electronic triage system.
- Paper accepted for presentation at the 5$^{th}$ Annual Meeting of the Pacific Basin Medical Association.
- Meeting with Pacific Island users at the 5$^{th}$ Annual Meeting of the Pacific Basin Medical Association.