Telehealth in the USAPI
Coordinating telehealth in the USAPI to improve health care delivery

Hawaii Telehealth Summit

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Flag Territories and Common-wealth

Guam
American Samoa
Commonwealth of the Northern Mariana Islands (CNMI)

Freely Associated States (FAS)
Federated States of Micronesia (FSM):
    Chuuk, Kosrae, Pohnpei, Yap
Republic of the Marshall Islands (RMI)
Republic of Palau
Pacific Cancer Control Programs & Partners

Cancer Council of the Pacific Islands (Advisory Board)

- U.S. CCC National Partnership
- Pacific Islands Health Officers Association (PIHOA) Overarching advisory
- International Partners with PIHOA (SPC, WHO, BAG)
- University of Hawaii Dept. of Family Medicine (administrative, technical assistance)
- University of Hawaii Cancer Center (technical assistance)
  - U54 Partnership with University of Guam
  - Hawaii Tumor Registry
  - Pacific Cancer Research Group
- University of Hawaii RTRN Dept Geriatrics
- Atlantic Health Dept OB-Gyn CTAHR / CHL

Pacific Cancer Coalition

- U.S. Affiliated Pacific Island (USAPI) jurisdictions

- American Samoa
- FSM
- Palau
- Guam
- RMI
- CNMI

- Kosrae
- Chuuk
- Pohnpei
- Yap

Overarching advisory
Micronesian Community Network & Micronesian Health Advisory Council (Hawaii)

Regional Comp Cancer
Regional Cancer Registry
Pacific Center of Excellence in the Elimination of Disparities (Pacific CEED)
Community Health Intervention Project (REACH)
<table>
<thead>
<tr>
<th>Cancer Type</th>
<th>USAPI Rate</th>
<th>US Rate</th>
<th>US Male Rate</th>
<th>US Female Rate</th>
<th>RMI Rate</th>
<th>RMI Male Rate</th>
<th>Pohnpei Rate</th>
<th>Pohnpei Male Rate</th>
<th>Guam &amp; AS Rate</th>
<th>Guam Rate</th>
<th>Kosrae Rate</th>
<th>Guam &amp; AS Male Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIVER CANCER</td>
<td>2x more</td>
<td>1.8x</td>
<td>3x</td>
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<td>3x</td>
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<tr>
<td>CERVICAL CANCER</td>
<td>2.6x</td>
<td>7x</td>
<td>10x</td>
<td>4x</td>
<td>2x</td>
<td>2x</td>
<td>2x</td>
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<td>1.6x</td>
<td>1.6x</td>
<td>1.2x</td>
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<td>Higher than US:</td>
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<tr>
<td>Guam and Kosrae: leukemia</td>
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<tr>
<td>Palau, Yap, RMI, Guam: liver</td>
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<tr>
<td>RMI, Pohnpei, Yap and Palau: cervix</td>
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<tr>
<td>Tobacco related oral cavity and pharynx: 10.9 vs. 6.2 (Yap 3.5 x US)</td>
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US Affiliated Pacific Islands and Countries Telehealth Champion Building and Planning Workshop

13-15 September 2016
University of Hawaii at Manoa
Honolulu, HI
## Telecommunication Cost Barriers

### Bandwidth Report

*Updated: 8/5/2016*

<table>
<thead>
<tr>
<th>Site Name</th>
<th>Connection Type</th>
<th>Provided Connection Speed</th>
<th>SpeedTest Results</th>
<th>Connection Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>WSO Chuuk</td>
<td>T1 Internet</td>
<td>1.544 Mbps</td>
<td>0.66 Mbps download 0.44 Mbps upload</td>
<td>$ 319 per month</td>
</tr>
<tr>
<td>WSO Chuuk</td>
<td>Standard ADSL Internet</td>
<td>1 Mbps download 256 Kbps upload</td>
<td></td>
<td>$ 399 plus $ 20 per static IP addresses per month</td>
</tr>
<tr>
<td>WSO Pohnpei</td>
<td>Internet Leased Line</td>
<td>7.66 Mbps download 1.00 Mbps upload</td>
<td>8.06Mbps download 1.05Mbps upload</td>
<td>$ 718 per month</td>
</tr>
<tr>
<td>WSO Majuro</td>
<td>Palau Telecom: Wireless on island, Off island via satellite (O3B)</td>
<td>3 Mbps download 1.5 Mbps upload</td>
<td>Need to test</td>
<td>~$7,000 per month</td>
</tr>
<tr>
<td>Palau MOH</td>
<td>PNCC: Wireless on island, Off island via satellite (O3B)</td>
<td>4 Mbps download 1 Mbps upload</td>
<td>Need to test</td>
<td>~$5,000 per month</td>
</tr>
<tr>
<td>CNMI</td>
<td>ADSL Internet</td>
<td>9 Mbps download 1 Mbps</td>
<td>Need to test</td>
<td>$ 325 per month</td>
</tr>
<tr>
<td>Guam</td>
<td>ADSL (Personal) Internet</td>
<td>50 Mbps download</td>
<td>Need to test</td>
<td>$ 95 per month</td>
</tr>
<tr>
<td>Hawaii</td>
<td>ADSL (Personal) Internet</td>
<td>100 Mbps download</td>
<td>Need to test</td>
<td>$ 50 per month</td>
</tr>
</tbody>
</table>

*Telecommunication costs in this region remain among the highest worldwide.*
Telehealth: challenges

INFRASTRUCTURE:

➢ **Bandwidth** (major challenge)
   
   Lower cost than in 2006, but still high in comparison to their health expenditures per capita.

➢ **Health Information Technology (HIT) and Health Information Exchange (HIE)**

   Integrated EHR with capacity/ability to attest for Meaningful Use part 1: NONE
   
   Some do not yet have basic teleconferencing equipment
   
   Most have a computer with webcam in order to use Zoom or similar
   
   All have difficulties keeping up with appropriate technology (new vs. legacy) and most lack sufficient funds and/or personnel for support and on-going maintenance.

➢ **Policies and Procedures Development**

   There is a need to develop policies and procedures for telehealth at the **institutional** level (e.g., hospital, clinic), **inter-organizational** level (e.g., clinical, behavioral and public health institutions), and **regional** level. In each of these levels there is a need for **alignment** with existing health policies, specific delineation of responsibility, resource allocation, and workflow redesign.
Priority Needs for USAPI

TELEHEALTH SERVICES:

➢ Distance Learning (top priority)
Wide spectrum of education and training for health care providers, patients, and support groups such as family and friends.

➢ Care Management
Improved care management in terms of pre- and post-referral consultation, and coordination among health care providers and within a community. Tele-consults could significantly decrease unnecessary and costly referrals and help increase quality of on-island care to the patient.

➢ Specialty Care Consultation

WORKFORCE DEVELOPMENT:

The areas of priority identified include: community health workers, specialty services, nursing, allied health, IT, and telehealth training.
Federal Grants & Programs:  
*With Telecommunication Needs*

- HRSA/MCH – Zika
- HRSA – EMSC, PIER (All)
- HRSA – AHEC
- HRSA - PBTRC
- CDC – TB Case Management
- CDC – Cancer
- CDC - Zika
- USDA – Guam DPHSS/ Good Samaritan
- ECHO
- VA
- Others
Technical Improvements & Resources

Good News...

• Bandwidth Efficient Systems, less expensive
  • Vidyo (PIER Supported) -- Network based
  • Zoom – Cloud based

• Direct Secure Messaging (ONC, PIER, TASI)
  • Lumira
  • Tested with Hawaii HIE, HPH, etc.
American Samoa, Palau, RMI, Pohnpei regularly participate in project ECHO meetings as their schedules allow

- Connecting via Zoom is a viable option for most jurisdictions, however, there are significant difficulties especially in Chuuk and Yap.
- General characteristic: lack of IT resources and bandwidth

American Samoa, CNMI, Pohnpei, Palau, RMI use telehealth for some consultations

- TAMC
- Shriner’s Hospital

VISN 21 / VA Pacific Islands Healthcare System (VA PIHCS)

- VA clinics in Guam and American Samoa
Education

Physicians, nurses, community health workers: screening $\rightarrow$ diagnosis $\rightarrow$ treatment decisions; palliative care; evidence-based guidelines (adapted to resource setting)

Consultations regarding cancer diagnosis/work-up/off-island referrals

Few jurisdictions already doing this

Consultations to off-island referral committees

Appropriateness of referral, questions about late-stage disease
Cancer Council of the Pacific Islands – ECHO relevance

➢ Delivery of poor cancer prognosis ("bad news") with local physician
   Emphasis on local palliative care options

➢ Potential for diagnosis of some cervical abnormalities, skin lesions
   Already being used for orthopedics consultations with Shriners, others
PACIFIC ECHO

Cancer

NCD (Cardiac, renal, diabetes, others)

Infectious disease (TB, Zika, Hansen’s)