Resolution No. 23-04

A RESOLUTION OF THE 23RD MICRONESIAN ISLANDS FORUM

**Concerning Building Regional and Jurisdiction Level Capacity
for and Expansion of Telehealth and Telemedicine in the US Affiliated Pacific Islands as a Matter of Priority to Enhance
Departments/Ministries of Health Capabilities and Capacities to Deliver Effective Clinical and Public Health Services**

WHEREAS, the United States-Affiliated Pacific Islands (USAPis) include American Samoa, the Territory of Guam, the Commonwealth of the Northern Mariana Islands, the Republic of the Marshall Islands, the Republic of Palau, and the Federated States of Micronesia (Pohnpei, Chuuk, Yap, and Kosrae); and

WHEREAS, the Micronesian Islands Forum (MIF) Regional Health Committee (RHC) is comprised of the Ministers, Secretaries and Directors of Health of the six USAPis, who are also the governing body of the Pacific Islands Health Officers Association (PIHOA), which serves as the Secretariat of the MIF RHC; and

WHEREAS, PIHOA's mission is to improve the health and well being of communities in the USAPis by providing, through consensus, a unified credible voice on health issues of regional importance; and

WHEREAS, the USAPis are home to more than 500,000 people, who live on hundreds of islands and atolls spanning millions of square miles of ocean and crossing five Pacific time zones, an area significantly larger than the continental United States; and

WHEREAS, USAPI populations are geographically dispersed and have resource-limited health systems impacting their ability to provide comprehensive and effective health services across an array of specialty clinical, public health and ancillary disciplines . Critical resource limitations nclude, but are not limited to: lack of trained and qualified health staff in specialty clinical, public health, and ancillary service disciplines; insufficient financial and other resources to recruit and retain these qualified health staff; and inadequate /insufficient infrastructure to ensure access to services for highly dispersed, rural populations ; and

WHEREAS, the severity of the NCD epidemic, emergence of infectious and other communicable, outbreak-prone infections, and other factors (e.g. number of military veterans returning from service abroad) are creating high demand for specialty disciplines in the areas of pediatrics, geriatrics, psychiatry, psychology , endocrinology, behavioral health, and radiology; and

WHEREAS, the technology and IT infrastructure of the USAPis, including internet connectivity and access to fiber optic cables and cloud- and mobile-based applications, and local capacities and systems to support such technology and infrastructure, have significantly improved over the last few years; and

WHEREAS, set-up and maintenance costs of such current technologies and IT infrastructure are no longer as cost-prohibitive as they have been in the recent past; and

WHEREAS, numerous telehealth and telemedicine projects and interventions have been, and continue to be, successfully implemented across diverse USAPI locations and settings (e.g. hospitals, public health clinics, and community health centers), across multiple clinical and public health disciplines , and currently supported by a wide array of regional partners and services providers across the Asia-Pacific Rim, Hawai ' i, and the continental US, and providing a critical set of services that would otherwise be unavailable due to health workforce shortages in those relevant disciplines; and
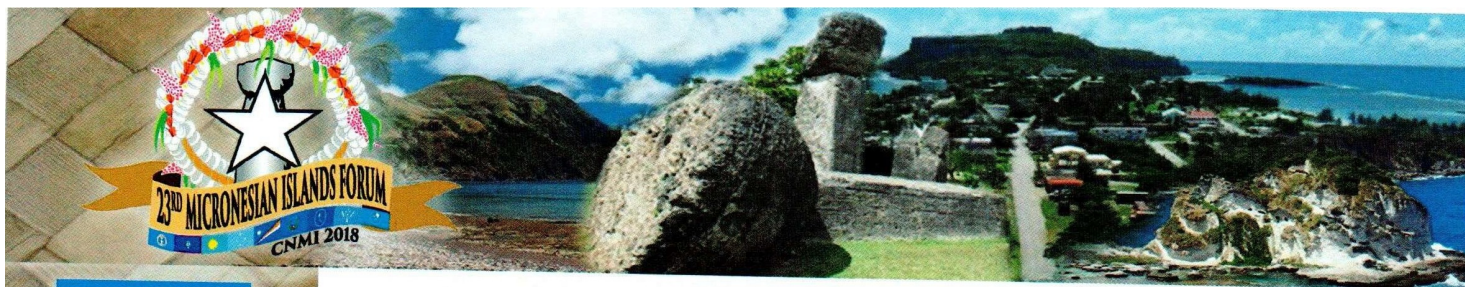
WHEREAS, such projects and interventions have demonst rated, and continue to present successful opportunities for peer-to-peer professional engagement, distance learning, mentorship , coaching, and specialty discipline training and capacity-building for local health staff; and

WHEREAS, the Pacific Island Telehealth Working Group, comprised of various USAPI and other stakeholders was established in September 2016, supported by the University of Hawai'i's Pacific Basin Telehealth Resource Center (PBTRC), to discuss and identify ways forward and solutions to supporting, enhancing and expanding telehealth/telemedicine services and associated platforms/ applications in the USAPis, and addressing issues concerning policy and legislation, partner coordination/networking , technology and service providers; and

WHEREAS, the University of Hawai ' i's PBTRC, in collaboration with the University of Hawai'i's John A. Bums School of Medicine, Pacific Island Telehealth Working Group, and PIHOA Secretariat, presented at the 63rd PIHOA Executive Board Meeting in American Samoa in March 2018 a concept paper on supporting and expanding telehealth/telemedicine services throughout the USAPis *(see Exhibit A - Telehealth Concept Paper to PIHOA);* and

WHEREAS, PIHOA Resolution 2018-63-01 to support and expand telehealth/telemedicine services in the USAPis was reviewed and endorsed at the 63rd PIHOA Executive Board Meeting in American Samoa on March 29, 2018;

Governor
RALPH DLG. TORRES
Commonwealth of the Northern Mariana Islands
CHAIRMAN, 23rd MIF

Governor
EDDIE BAZA CALVO
Territory of Guam

President
TOMMY E. REMENGESAU, JR.
Republic of Palau

President
PETER M. CHRISTIAN
Federated States of Micronesia

President
HILDA CATHY HEINE
Republic of the Marshall Islands

Governor
MARCELO K. PETERSON
State of Pohnpei

Governor
JOHNSON ELIMO
State of Chuuk

Governor
LYNDON H. JACKSON
State of Kosrae

Governor
TONY GANNGIYAN
State of Yap

"Navigating the World as One Micronesia"

NOW THEREFORE BE IT RESOLVED, the Leaders of the MIF endorse in principle and as a matter of priority of regional health significance, the need to further explore opportunities to enhance and expand telehealth/telemedicine delivery in the USAPis, where feasible and appropriate to the needs and context of each USAPI location; and, to regularly assess and evaluate such efforts in terms of cost, funding sources, technical

partners/providers and other improvements with the goal of improving health outcomes and strengthening USAPI health systems; and

BE IT FURTHER RESOLVED, the Leaders will support executive and legislative efforts to ensure a supportive and enabling environment that enhances and expands USAPI health agency telehealth/telemedicine initiatives; and

BE IT FURTHER RESOLVED, the Leaders of the MIF further task its Secretariat to disseminate this resolution to the USAPI health departments/ministries; regional technical partners such as the US Department of Health and Human Services, World Health Organization Western Pacific Regional Office, PIHOA Secretariat, Pacific Community; and potential funders such as the World Bank and Asian Development Bank, and other relevant stakeholders to promote, plan, and coordinate telehealth/telemedicine efforts in accordance with the needs and priorities identified by the USAPI ministers and directors of health.

RALPH DLG. TORRES
Governor
Commonwealth of the
Northern Mariana Islands

EDDIE BAZA CALVO
Governor
Territory of Guam

TOMMY E. REMENGESAU, JR.
President
Republic of Palau

PETER M. CHRISTIAN
President
Federated States of Micronesia

HILDA HEINE, Ed. D.
President
Republic of the Marshall Islands

JOHNSON ELIMO
Governor
Chuuk State, FSM

MARCELO K. PETERSON
Governor
Pohnpei State, FSM

LYNDON H. JACKSON
Governor
Kosrae State, FSM

JAMES YANGETMAI
Lt. Governor
For Governor Tony Ganngiyan
Yap State, FSM

Governor
RALPH DLG. TORRES
Commonwealth of the
Northern Mariana Islands
CHAIRMAN, 23rd MIF

Governor
EDDIE BAZA CALVO
Territory of Guam

President
TOMMY E. REMENGESAU, JR.
Republic of Palau

President
PETER M. CHRISTIAN
Federated States of Micronesia

President
HILDA CATHY HEINE
Republic of the Marshall Islands

Governor
MARCELO K. PETERSON
State of Pohnpei

Governor
JOHNSON ELIMO
State of Chuuk

Governor
LYNDON H. JACKSON
State of Kosrae

Governor
TONY GANNGIYAN
State of Yap

Telehealth Concept Paper
for Pacific Island Health Officers Association (PIHOA)

Background: This concept paper was prepared for the Pacific Island Health Officers Association (PIHOA) as an introduction to telehealth and the potential for its advancement in the region. This concept paper provides definitions of telehealth, related concepts, and general infrastructure needed for telehealth services. The paper also describes selected Pacific Island telehealth initiatives to offer clear examples of the potential in the region.   A summary of the key findings from the US Affiliated Pacific Island (USAPI) Telehealth Champion Building and Planning Workshop that was held in Honolulu, Hawaii on September 13 through 15, 2016 is included in the appendix, and as part of these findings are recommendations for consideration. Also appended to this paper is a list of current University of Hawaii John A. Burns School of Medicine USAPI telehealth initiatives.

Telehealth may provide significant opportunities for improved access to healthcare services, education, and training. Globally, there is an increased acceptance and awareness of the benefits of telehealth. There are several reasons why it is a good time to re-visit the possibility of telehealth in the Pacific Islands region. Some of the basic infrastructure needed for successful telehealth services is now in place, including recent telecommunication infrastructure improvements, as well as the lower cost and increased reliability of telecommunication services. With these technical improvements, there are more health care providers that are offering or would like to offer telehealth services. At the consumer level, mobile phone apps and video teleconferencing (e.g., skype, facetime), are transforming consumer behavior and industries including health care, which increases the acceptance level for patients and families.

What is Telehealth?:

"Telehealth" is the overall term for delivery of health care (clinical services, AND education, public health, etc.) via technology. "Telemedicine" is usually specific to clinical services.

Other related terms and general definitions:

- "HIT" – Health Information Technology is the equipment used in health care such as the video teleconferencing camera, health peripherals such as digital stethoscopes, and may also include electronic health records (EHRs).
- "HIE" – Health Information Exchange is used as both a noun and a verb. The HIE (noun) is the technical network that allows for the exchange of information vs. HIE (verb), is the actual exchange of health information.
- "HIS" – Health Information Systems generally include information databases such as surveillance systems, registries, etc.
- "mHealth" – stands for mobile health and is one form or mode of transmitting telehealth, this is via mobile phones, tablets, etc.

> **TELEHEALTH:**
> **clinical services**
> **AND education,**
> **public health, etc.**
> **via technology**

> **TELEMEDICINE:**
> **specific to**
> **clinical services.**

Different Ways of Delivering Telehealth: Telehealth is a service that can be delivered in many different ways. It is not just a doctor talking to a patient by interactive video teleconference. It includes at least four different modalities:

- **Store and Forward** - Is the asynchronous transmission of images, test results, and other data. Generally, not in real time; the images are read at a later date/time. This may include for example cardiology, dermatology, ophthalmology, pathology, radiology readings or interpretation services. The Pacific Island Health Care Project (PIHCP) of Tripler Army Medical Center (TAMC) is the best-known example of store and forward telehealth services in the USAPI.

- **Remote Monitoring** - Is the real-time transmission of patient physiological or biometric data. Home monitoring for chronic disease management or intensive care monitoring of patients are examples of remote patient monitoring. Guam Naval Hospital has had patients who were not well enough to travel to TAMC in Honolulu monitored in the ICU via remote patient monitoring.

- **Live Consultation** - Is the most commonly thought of telehealth modality. This includes the synchronous services provided by live, real time, interactive video conferencing. However, the services may be between patients and primary care providers (PCPs), or patients and medical specialists; or between PCPs and specialists. Shriners Hospital for Children conducts routine live teleconsultations by video teleconference in most USAPI.

- **Mobile Health or mHealth** - Is communication and data or image transfer via mobile devices. It may include the use of a mobile phone app, or video teleconferencing program, etc. The VA Pacific Island Health Care System (VAPIHCS) uses tablets to provide telemedicine services to veterans in their homes in the US Pacific Island Territories; this is an example of mHealth.

Different Type of Telehealth Services: Since the definition of telehealth is very broad to include health education, clinical services, and public health, there are many types of telehealth services and programs. From the clinical perspective, some of the more popular and well adopted telehealth services include tele-psychiatry, tele-pathology, and tele-dermatology. For public health, telehealth sessions may include chronic disease management including diabetes, TB, cardiovascular disease, etc. Health education also spans a wide range of topics and includes patient education, continuing medical education, etc.

> **PROJECT ECHO®:**
> A distance learning model that uses subject matter expert hubs and case-based learning for rapid sharing of information.

A popular model for distance education is called **Project ECHO®** . ECHO stands for "extension for community health care outcome." It is very successful and particularly useful for those in rural and underserved communities. There is a 'hub' made up of subject matter experts. As an example, the Diabetes ECHO program may include an endocrinologist, dietitian, and pharmacist at the hub. Participants are invited to bring their most difficult cases to the group and receive expert consultation from the hub. Everyone learns from other cases presented and expert advice. Project ECHO® originated at the University of New Mexico. It is being replicated in many topical areas and around the world.

ECHO Hawaii is a partnership between the UH School of Medicine, AHEC, PBTRC, and the Rural Health Care Association. Pacific island providers participate in the ECHO Hawaii programs in behavioral mental health, diabetes, and gerontology.

Different Places of Service: A designated telehealth room in a hospital or clinic is the most common place where a patient will go for interactive consultative telehealth services. This room however does not need to be strictly dedicated for telehealth appointments. It could be rotated into the routine scheduling of patients – booked for in person patients, or telehealth patients. If the telehealth patient doesn't show up, then the room can be rescheduled for an in person or telehealth appointment.

There is a trend in Hawaii and the U.S. for developing places of service other than health care facilities. This could include school-based clinics, community association centers, and even at home services. Some of these models are more popular now in Hawaii because the new telehealth law, Act 226 enacted in 2017, made eligible non-clinical places of services for telehealth reimbursement. This helped pave the way for different types of services (e.g., chronic care management) and modalities (e.g., mobile health) that are better suited to take place outside of a hospital or clinic.

Technologies and Platforms: This concept paper will not go into details on the various technologies and platforms that can be used, however it is important to note that reliable telecommunication connectivity is fundamental for telehealth services. Recent software developments for video teleconferencing such as the software program called "Zoom" video communications, perform well with narrow bandwidth and connections that might be inconsistent. Zoom or zoom like platforms are adopted widely by many telehealth providers globally including clinicians, public health workers, and educators. It is very flexible and runs on PC, Macs, mobile phones, tablets, iPad, etc., at a reasonable rate in the range of about $200/year per user license. The equipment needed for a small conference room is a relatively low cost of about $5,000. This is less expensive than the $10-20K video equipment legacy systems that were not as bandwidth efficient. The recurring cost of the license and the telecommunication connectivity link needs to be planned in organization's operational budgets.

> **ZOOM:**
> A type of video teleconferencing software, low cost, easy set-up, runs on computers, mobile phones, conference rooms

What are basic infrastructure requirements for successful telehealth service?

In general, the major infrastructure needs include: telecommunication capacity, enabling policies, administrative support, and workforce.

Technical (Telecommunication and Technology): As already mentioned in this paper, it is essential to have reliable telecommunication connectivity. There are several emerging fiber optic initiatives bringing much larger bandwidth capacity to the islands. Working with telecommunication carriers and government regulators in understanding how these new telecommunication services will be made available and at what cost is important. Are there

Universal Services Obligations where the telecommunication carriers are required to provide some services to health or educational institutions at a discounted rate? Telecommunication services is an ongoing operational cost and thus not typically funded by grants. Whereas start up projects will often fund the end user equipment (computer, cameras, monitors, etc.) Remember to provision budget funding for installation and training too.

Policy (Reimbursement, Malpractice Coverage and Liability, Licensure, Hospital/Clinic Privileges and Credentials): PBTRC found through telehealth stakeholder discussions that these were some of the most prohibiting factors for advancing telehealth in Hawaii. The Hawaii Telehealth Act 226 lifts many of these restrictions and requires that it is clear for what and how much a provider can be paid for services delivered through telehealth.   All malpractice insurance companies must also cover telehealth services if they cover the same service delivered in person. It will also be important to communicate what requirements your Pacific Island jurisdictions have for licensure and if necessary hospital/clinic privilege and credentialing for health care providers who want to deliver services via telehealth in your islands.

Administrative (Workflow, Protocols, Business Relationships, Agreements):   Individual organizations must modify workflows and develop telehealth protocols, business relationships and agreements for implementing telehealth services. Some of these workflows and protocols can be shared for adaptation to respective healthcare providers.

Workforce Development: Telehealth and related service training at all levels is needed. PBTRC for example is working with the Hawaii Department of Health (HDOH) Family Services Division, in conducting 1-day training sessions for the Division's various programs and eventually to other HDOH programs. The training includes an online component as a pre-requisite to in-person training and covers everything from policy and technology, to specific protocols. Workforce development may offer an opportunity for working together as a region. As a region, there may be opportunities to leverage some of the telehealth training opportunities perhaps in a train-the-trainer type of model.

Select Highlighted Pacific Island Initiatives
(This is not a comprehensive list. It includes only some examples of current telehealth initiatives.)

Pacific Island Telehealth Working Group: To keep the momentum of the USAPI Telehealth Champion Building and Planning Workshop in Honolulu, a Pacific Island Telehealth Working Group was established. The group meets to share information and updates on telehealth initiatives and is made up of providers that are now or planning to deliver services via telehealth. This group articulated the ideas and plans presented in Appendix I that include some ideas for advancing telehealth, and helped shape the recommendations in the next section. The Working Group is open to anyone interested.

Pohnpei Hospital Telehealth Projects: Under the direction of Dr. Payne Perman, a telehealth room in Pohnpei Hospital was launched in December 2016. Local donors were identified to support the telecommunication costs and equipment. The room is equipped with a 10 Mbps up and down link for $400 a month; a significant discount was negotiated with FSM Telecommunication Corporation. This link would normally cost ~$5000 a month. This connectivity and leadership has resulted in many benefits. In January 2018, FSM started practicing tele-pathology with the Hokkaido Cancer Center in Sapporo, Japan. Pohnpei transmits digitized images to Japanese pathologists who assist local doctors in identifying abnormal pathology readings for quicker cancer diagnoses and potentially life-saving interventions. Normally sending the test off-island would take from 2 weeks up to 3 months to get a result, now they can provide on the spot diagnosis within minutes of the consultation. Further, the lab technician in Pohnpei State was able to process the backlog of 235 pap smear tests from Chuuk State.

> **So much can be done with good telecommunication connectivity and telehealth champions to make it happen.**

Kosrae Community Health Center: Following Pohnpei State's model, Kosrae Community Health Center is also implementing a telehealth room. They are in the process of procuring the necessary equipment.

Guam Community Health Center: Ms. Linda DeNorcey directs the Guam Northern and Southern Community Health Center. They have a RUS USDA grant with the Good Samaritan Hospital in Los Angeles, California and they conduct telehealth for dermatology, rheumatology, neurology, and other services.

American Samoa: LBJ Hospital has a dedicated telehealth room and conducts monthly telemedicine consults with Shriners Hospital for Children. Clinical staff also participate in the Hawaii ECHO programs for behavioral mental health and diabetes. **The American Samoa Public Health** HRSA funded Zika program is also planning the initiation of a telehealth services for consultation on-island, as well as for any needed specialist services required from off island. As part of this project, the American Samoa Public Health is also exploring the initial process of applying for **Universal Service Funding for discounted telecommunication** service costs.

Commonwealth of the Northern Mariana Islands (CNMI): The VA Pacific Island Health Care System (VAPIHCS) is working with the Kagman, Rota, and Tinian Health Centers to possibly establish a place where VA telehealth services can be delivered to veterans. The VA is currently looking to develop non-VA facilities to increase health care access via telehealth to veterans.

CNMI CHCC is also implementing tele-pharmacy between Rota Health Center, Tinian Health Center and Saipan CHC for pharmacist medication verification before distribution.

Shriners Hospital for Children in Honolulu has regularly scheduled consultations with **DPHSS Guam, Pohnpei State Hospital** and have conducted consultation with most all other jurisdictions. In addition to others mentioned **Palau Hospital** and **Jeiroj Ebeye Medical Hospital** also participates

in regular ECHO Hawaii distance learning sessions and will now be able to earn Continuing Medical Education credits from some of these programs.

Other Telehealth Applications: Pacific Island **TB** Nurses' Network, a CDC/Australian Respiratory Council, uses Zoom video teleconferencing on a regular basis for TB case consultation for USAPI Nurses. The video teleconference has significantly improved the consultations that were previously conducted via telephone conference calls.

Pohnpei and American Samoa are involved in **Rheumatic Heart Disease (RHD)** screening. Pohnpei Hospital is currently receiving training and conducting screening using portable handheld equipment. Both would like to follow-up with potential telehealth for medicine management services and other consultations that require off island specialists. Capt. Cathy Wasem, Region IX has also facilitated discussions with the National Children's Hospital to further these RHD telehealth opportunities in the islands.

Upcoming Opportunities

Data Collection: Cancer Council of the Pacific Islands (CCPI), together with the Pacific Basin Telehealth Resource Center (PBTRC), is conducting an assessment survey to help better understand and define the current state, readiness and opportunities for telehealth in the USAPI. The survey is quite comprehensive and completing it may require collecting information from multiple sources and organizations (e.g., health care facilities, referral programs, telecom carriers, medical boards, etc.). The idea is to gather as much information as possible to get an environmental scan of the readiness for telehealth services, and to identify logical next steps with any opportunities for leveraging resources (e.g., training, technology sharing, etc.) CCPI is aiming to have the survey results available for review at their upcoming May 2018 meeting.

Veterans Administration: The reason Veterans' health care is brought up frequently in telehealth discussions is because telehealth is a possible solution to bring health care to Veterans living in the Freely Associated Pacific Islands that are not eligible for direct services from the VA. The reason they are not eligible is because the FAS is considered foreign countries to the US, thus the Veterans there must get services through the VA Foreign Medical Program.

"The Foreign Medical Program assumes payment responsibility for U.S. Veterans only for a VA-rated service-connected disability, or any disability associated with and held to be aggravating a VA-rated, service-connected disability" (38 CFR 17.35).

This is more like an insurance program rather than a health services program. Historically Veterans in the FAS were not able to take advantage of the program because it requires an initial assessment for eligibility requiring the Veteran to find funding to travel off island to get this assessment from a VA facility. However, there is new information that this assessment can be conducted via telehealth. Once a determination of eligibility is made, the Veteran can get health care services (in person or via telehealth) and either the health care provider or the Veteran can get reimbursed by the VA Foreign Medical Program.

In addition, we are seeking clarification if the assessment must be done by a VA provider or any provider that can confirm the service related disability. There may be some intersect with the UH JABSOM School of Psychiatry project working with the Kosrae Community Health Center for integration of primary care and behavioral mental health. A new faculty member Dr. Sara Haack is working on this project. She has experience with conducting the VA eligibly assessments and expressed interest and willingness to explore this option further.

Funding for Telecommunication Bandwidth Services: The importance of the telecommunication services cannot be overemphasized. There are existing opportunities to get discounts on telecommunication services that are currently under-utilized.

For the **U.S. Pacific Island Territories**, the Universal Service Fund and specifically the Health Care Connect Program can potentially fund up to 65% of telecommunication service fees. Although all Pacific Island Territories could benefit from this program, currently none are. The American Samoa Public Health, through their HRSA Zika project, will be getting some guidance from PBTRC on the application process. There is an opportunity for the PBTRC to organize workshops for eligible health care providers in the territories to learn more about the program and identify how to apply for these funds. Website resources - https://www.usac.org/rhc/healthcare-connect/default.aspx

For the Federated States of Micronesia (FSM) the **FSM Telecommunication Corporation** is currently providing Pohnpei Hospital with a significant discount on telecommunication services; and might be open to proposals from Chuuk, Kosrae, and Yap State in support of a discount for telehealth services that can save lives and improve access to care. Such opportunities for the **Republic of the Marshall Islands** and **Republic of Palau** need to be investigated.

An action item identified by the Pacific Island Telehealth Working Group is to **establish local telehealth interest groups,** which include a representative from the telecommunication provider (company) and other local stakeholders to increase awareness of the importance of affordable bandwidth to the Nation's overall health care and economic well-being.

Recommendation

It is respectfully recommended that the PIHOA Board of Directors consider drafting a resolution in support of expanding and resourcing telehealth and telemedicine as a viable approach for health services delivery in the region.

Appendix 1: USAPI Telehealth Champion Building and Planning Workshop Synopsis of Key Discussion Points and Priorities for a Way Forward, Honolulu, Hawaii - September 13-15, 2016

State of Telehealth in the Pacific Islands Region: At the USAPI Telehealth Champion Building and Planning Workshop Each Pacific Island representative provided an overview of the health care and telecommunication environment in his or her jurisdiction. In spite of unique cultures, languages, and demographics, participants identified several common themes that characterize the challenges and opportunities associated with the use of telehealth to enhance their health care capacity.

This is a summary of findings and discussion:

- **Small populations.** Many of the islands and nations are comprised of several islands and atolls scattered across large distances of ocean. This increases challenges related to accessibility, available telecommunication infrastructure, and limited economies.

- **On-island specialty care.** Available medical professionals do not have opportunities for specialized training needed to provide timely and high-quality care for patients with more acute care needs.

- **High off-island medical referrals and associated costs**. The jurisdictions all reported a high number of off-island referrals, cutting into limited available health care resources. Costs associated with air transport, medical costs, and patient stipends can consume more than 10% of the total health budget in some cases.

- **High telecommunication costs and reliability issues.** Telecommunication costs in the Pacific Islands remain among the highest worldwide. The recent fiber infrastructure developments hopefully will increase the access to affordable bandwidth for reliable telehealth connectivity.

- **Veteran Population:** The Pacific Islands are home to a disproportionate number of veterans. Their lack of access to the services available from the Veterans Health Administration was discussed at the 2016 and 2017 Pacific Health Officers Association (PIHOA) board meeting.

- **Data Collection:** The workshop participants expressed a need for better access to information on telecommunication tariffs, bandwidth capacity and throughput, off-islands referrals and costs of care by diagnosis, procedure and or service type, and the number of veterans residing in each jurisdiction.

The Way Forward: The final day of the workshop reviewed infrastructure and services already in place and activities that could be undertaken to advance telehealth. Participants collectively identified top priorities for telehealth in the following areas:

Infrastructure: Infrastructure was defined as the support and services needed to enhance telecommunication connectivity (bandwidth), health information technology (EHRs and other health IT), Health Information Exchange (HIE), and policy infrastructure including licensure,

reimbursement, and credentialing. Funding was identified as a cross cutting issue across all of these areas. The following areas should be priority areas of focus to improve infrastructure in the Pacific Islands.

(1) **Bandwidth:** In many jurisdictions the telecommunication costs are very high and may be given a lower priority given other health care costs. Health directors require evidence to demonstrate the return on additional investments to support infrastructure.

Opportunities:
- Establish local telehealth interest groups which include a representative from the telecommunication provider (company) to increase awareness of the importance of affordable bandwidth to the Nation's overall health care and economic well-being. *(All USAPI)*
- Cultivate and leverage existing connections and relationships with other government agencies and NGOs for shared use of network infrastructure (e.g., health, education, weather service) *(All USAPI – local level)*
- Develop a strategy to establish a multi-purpose, regional telehealth/ public service network *(All USAPI – regional level)*
- Apply for the services available under the Universal Services Fund and Program which provides a discount on telecommunication services. PBTRC can provide technical assistance in completing the application and planning process. *(Only U.S. Territories eligible)*

(2) **Health IT and HIE:** In spite of higher levels of health IT adoption in the Territories as compared to the Freely Associated States (FAS), there is a need for more widespread and optimized use of EHRs. Participants emphasized the need for guidance to support the secure exchange of health information to improve care coordination, referrals, and transitions of care. Resources are needed to acquire and maintain IT hardware including computers, EHRs, and video conferencing equipment.

Opportunities related to EHRs and HIE:
- Facilitate access to the Direct Secure Messaging (DSM) system managed by the PBTRC and PIER through train-the-trainer webinars targeting EMSC Coordinators in each jurisdiction to then provide DSM technical support for their local health care providers. *(USAPI only)*
- Identify funding resources to support Continuity of Care Document Architecture (CCDA) interfaces and public heath interfaces to support interoperability. One option may be to leverage the 90 /10 CMS State Medicaid match program to support investments in health IT. *(Only U.S. territories eligible)*
- Establish education and training programs to enhance professional skills in health informatics, data collection and extraction, and data analysis. A regional program could be delivered via distance learning methods to increase capacity and build regional collaboration in these areas. *(All USAPI)*

Opportunities related to hardware and equipment:

- Leverage the U.S. Department of Agriculture Rural Utility Services (RUS) Distance Learning Technology (DLT) grants which cover the costs of hardware and equipment. All USAPI are eligible for these grants but PBTRC will help to address the current USDA criteria for "economic need" that is inadvertently a disadvantage for FAS applicants. *(All USAPI)*
- Explore non-profit and foundation opportunities such as AFYA Inc. ([www.afyainc.com)](www.afyainc.com) that may provide support for equipment and other resource needs. *(All USAPI)*

(3) **Policies and Procedures:** Participants highlighted the 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. These procedures must be aligned with existing health policies and available resources and considered in light of the existing workflow and the need for clearly delineated roles and responsibilities.

Opportunities:
- Raise awareness of value of telehealth with local leadership and stakeholders, focusing on opportunities, technology and staff requirements, and actionable steps. *(All USAPI)*
- Introduce the concept and potential of telehealth to regional organizations and at professional and membership meetings such as the Pacific Island Health Officers Association (PIHOA), Pacific Basin Medical Association (PBMA), American Pacific Nursing Leaders Council (APNLC), etc.) *(All USAPI)*
- Develop local telehealth interest groups that can work together to identify and address problems and discuss new ideas and opportunities. *(All USAPI)*

Telehealth Services: The working definition of telehealth used in the workshop included clinical and public health services, continuing medical education, and the utilization of health IT and HIE for care delivery. Participants were asked to identify priority telehealth services.

(1) **Distance Learning:** Participants acknowledged the potential to increase on-island capacity via distance learning. They specifically highlighted the need for education and training for health care providers as well as telehealth-enabled education and virtual support groups for patients and families/friends.

Opportunities:
- Re-establish discussions with University of Hawaii School of Medicine and other institutions to identify opportunities to connect Pacific Islands to existing continuing medical education programs and grand rounds via interactive video teleconferencing *(All USAPI)*

- Participate in current Hawaii Project ECHO sessions on topics related to behavioral health, endocrinology, and gerontology. *(All USAPI)*
- Identify and establish opportunities for tele-health enabled patient and family education to support improved disease self-management. *(All USAPI)*

(2) **Care Management:** Improved care management, facilitated through pre- and post-referral consultation and coordination across providers within and outside of the patient's community will lead to improved quality. Referrals to off-island providers could be reduced through tele-consults.
Opportunities:
- Establish infrastructure to support tele-consultation including provider-to-provider and provider-to-patient interactions. *(All USAPI)*
- Develop a framework for referral management to enable pre- and post-treatment consultations. *(All USAPI)*
- Coordinate with existing emergency medical service programs. *(All USAPI)*

Workforce Development: Participants were in agreement that workforce development, facilitated through telehealth and distance learning, could address a number of the challenges facing the islands by helping to build institutional and individual capacity building.

Opportunities:
- Develop a "Community Health Worker (CHW)" training program that establishes a team of community-based aides or health coaches that are culturally competent and trusted by the community. *(All USAPI)*
- Offer specialty care training opportunities via distance learning similar to the pediatric orthopedic training program established by Shriners Children's Hospital. *(All USAPI)*
- Establish train-the trainer programs focused on using telehealth including telepresenting skill building for more effective teleconsults via video teleconferencing. *(All USAPI)*
- Create training programs via distance learning to develop increased capacity in areas such as nursing, allied health, tele-pharmacy, and information technology (IT). *(All USAPI)*

Project ECHO / ECHO Hawaii (education/case management, for CME credit)

ECHO Hawaiʻi is a replicating partner of Project ECHO® (Extension for Community Healthcare Outcomes) - a successful, innovative medical education and mentoring program that builds PCP skills and improves access to and capacity for specialty care. Project ECHO® originated at the University of New Mexico and is a movement to demonopolize knowledge and amplify the capacity to provide best practice care for underserved people all over the world. It uses existing videoconferencing technologies to nurture sustainable learning collaboratives, connecting an interdisciplinary team of experts with primary care providers in rural and underserved communities. HUB faculty participate on each of the videoconferences on a weekly (Diabetes and Behavioral Health) or monthly (Geriatrics/Palliative Care) basis to give some of the presentations, provide recommendations for patient cases that are presented and/or help to answer questions that come up during the 1-hour videoconference. The HUB faculty consists of UH JABSOM physicians, UH pharmacists, social workers, psychologists, advanced practice nurse practitioners and dietitians.

Current ECHO Hawaii offerings:

Last year ECHO Hawaiʻi presented **30 minute presentations on different endocrinology diseases/disorders and this year's topics are specific to diabetes mellitus**. Many are focused on practical management of common challenges faced by diabetics (i.e., diet, medications). During the other 30 minutes of the presentation, attendees and hub faculty are encouraged to present complicated patient cases and get recommendations by those that are in attendance.

The **Geriatric/Palliative Care ECHO** has monthly sessions that focuses on a wide variety of topics including medication safety, dementia, dysphagia and managing chronic conditions in the elderly (such as hypertension and diabetes).

The **Behavioral Health ECHO** meets weekly with a large variety of topics pertinent to both adult and children/adolescents with mental health issues. Recent topics include depression, brief psychotherapy in primary care settings, tobacco, e-cigarettes, pain management and opioid use.

ECHO Hawaiʻi videoconferencing sessions offer continuing education for physicians and other healthcare disciplines free of charge. Attendees have been from all over the Pacific region, from Oahu and the neighbor islands, to the Marshall Islands, Palau, Guam and Saipan.

Planned offerings:

Cancer Control ECHO. The Department of Family Medicine and Community Health, which serves as the Secretariat for the Cancer Council of the Pacific Islands (CCPI) is developing a cancer-control ECHO to specifically address priority health provider education needs and capacity development along the continuum of cancer control. Other JABSOM Departments are also

willing to participate in this project (OB-Gyn, Psychiatry, Geriatrics, Internal Medicine/oncology) as well as faculty at the University of Hawaii Cancer Center. Specific training topics will be prioritized by the CCPI and local CCC Leadership teams. The curricular categories will include prevention of cancer, risk factor reduction, evidence-based screening and early detection, resource-appropriate treatment for the most commonly diagnosed cancers and management of treatment side effects, cancer survivorship, palliative care and end of life issues.

In partnership with the Pacific Basin Telehealth Resource Center and US Federal Partners (HHS, VA) one of the long-term goals is to have widespread telemedicine use for a variety of consultations in cancer, mental health and chronic disease.

Telemental Health (Psychiatry)

The UH JABSOM Department of Psychiatry is a leader in providing needed mental health counseling and case management services to rural areas of Hawaii. Telepsychiatry is also used for after-hours consultations in the emergency department at Queen's Medical Center, using Jabber, an iPad in the emergency Department and the attending's personal device. They also use this to provide inpatient consultations at neighbor island hospitals. Telepsychiatry services on the neighbor islands includes services to children, adolescents and their families, as well as adults.

Kosrae Community Health Center (KCHC) and the DOP are planning to engage in a partnership from March-September 2018 to plan and implement an integrated behavioral health program to augment KCHC's existing primary care services. Currently there are no behavioral health providers on-island. Using an adaptation of the Collaborative Care Model, which offers a population- and team-based approach to care, KCHC and the DOP aim to optimize the on-the-ground and culturally-sensitive support for patients by training local providers in behavioral health issues. Once trained, these local providers will provide direct assessments and support to patients while receiving feedback from the DOP consulting psychiatrist. The primary care provider will also receive support with any medically-focused interventions for the patient's behavioral health issues.