CTEC
CALIFORNIA TELEMEDICINE
& eHEALTH CENTER

Telemedicine and American Indians in California

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CONTENTS

ACKNOWLEDGEMENT

The following report synopsizes a number of sources including the initial study called "The California Indian eHealth Study (eHealth Study)" produced by Dennis Rose & Associates (DRA) which was reviewed for comment by an Expert Panel of Reviewers who included Steve Viramontes, PHN, Telemedicine Coordinator for Round Valley Indian Health Center, James Crouch, Executive Director, California Rural Indian Health Board, andGlenn Gamst, Ph.D., Department of Psychology, University of La Verne. The main body of this publication was drafted by Crispin Littlehales of Littlehales & Company. Steve Viramontes provided comment and contributed the Tools and Templates materials that are included at the end of this report.

CTEC would like to thank the participants of a convening held in Santa Rosa, California on August 27, 2004 to discuss the California Indian eHealth Study. The participants included Margo Kerrigan, California Area Director Indian Health Services, David Sprenger, MD Area Medical/Psychiatric Consultant, California Area Indian Health Service, several Telemedicine Coordinators, and Dennis Rose & Associates (DRA). The convening allowed for all participants to discuss the study, progress that has been made thus far and to also look forward to expanding Telemedicine/eHealth in California.

CTEC would like to thank everyone who contributed to this final report which required a great deal of time and resources from all.

CTEC recognizes that various terms are used to describe the Native American/American Indian community. Native American as well as American Indian are terms that have been used in the past. This grant originated in 2001 and at that time surveys from the communities involved indicated that the project should be titled the "American Indian Diabetic Teleophthalmology Grant Program (AIDTGP)". For purposes of continuity, this report will use American Indian which is commonly used by federal agencies.

CTEC is funded by a grant from The California Endowment.

This report is dedicated to the memory of Stephen J. Mader, MD, Chief Medical Officer, California Areas Indian Health Service.

EXECUTIVE SUMMARY

The following report outlines the path of an innovative project with a mission of saving the sight of American Indians and improving access to health services. The California Endowment provided $1.8 million to the California Telemedicine & eHealth Center (CTEC) to develop and implement a store and forward Telemedicine program focused on increasing screening for diabetic retinopathy. Through the use of technology and culturally appropriate clinic protocols, as many as 18 Indian Health Clinics participated in American Indian Diabetes Teleophthalmology Grant Program (AIDTGP).

The primary goal of the American Indian Diabetes Teleophthalmology Grant Program (AIDTGP), was to address the problem of lack of access to retinopathy screening for Native American diabetics in California and the resulting loss of vision. Through the development of the Teleophthalmology Grant Program, CTEC was able to introduce the concept of Telemedicine into this community to improve access to critically needed healthcare services for diabetics and with a long term goal to assess over time other opportunities where Telemedicine may also be useful in other diseases. By 2001, several of the Indian Health Clinics had not only succeeded in implementing the Teleophthalmology programs but they were beginning to expand into offering other Telemedicine services including Telepsychiatry.

As part of the program's evaluation efforts, lessons learned were gathered and CTEC funded a study to determine the level of activity and interest in Telemedicine/eHealth for Americans Indians in California. The results of this study titled *California Indian eHealth Study,* by Dennis Rose & Associates set forth a foundation for developing a comprehensive and culturally sensitive, rational plan for using eHealth technologies to improve access to health care throughout all California's Indian communities.

The study found that while slightly less than half (47%) of the Indian Health programs in California have experience in Telemedicine, the California Indian eHealth Study found that several programs are continuing to aggressively develop and strengthen their Telemedicine efforts, adding new applications as they become feasible. These programs are working cooperatively to evolve their offerings and share best practices. Indeed, participation in emerging regional Telemedicine networks appears to be a key factor in expansion of services. CTEC is currently funding and supporting several regional eHealth networks throughout California of which Indian Health Clinics would be able to integrate with to access critically needed specialty services.

From those lessons learned, best practices and challenges were shared. The sticking points are all about infrastructure (bandwidth, space, etc) , staffing, and equipment—problems that only adequate funding can ameliorate. Now that a handful of early adopters has done the pioneering, the path ahead will be made much easier for other clinics to follow suit.

The study also identified six high priority need areas: 1) Mental Health – Adult; 2) Mental Health – Youth; 3) Behavioural health; 4) Endocrinology; 5) Dermatology; and 6) Substance Abuse. These priority needs are opportunity areas for future investment. There is great interest and recognized need for development of a culturally appropriate case management approach to dealing with substance abuse and mental health issues.

The mission of the Indian Health Service is to raise the physical, mental, social, and spiritual health of American Indians to the highest level. The agency's goal is to assure that comprehensive, culturally acceptable personal and public health services are available and accessible to American Indian people. The many applications of Telemedicine will help to make these promises into achievements and there is not a moment to waste.

CTEC remains committed to promoting the use of eHealth to improve access to quality healthcare services for American Indians in California where geographical barriers frequently prevent access to health services. The scope of potential interest is overwhelming, and the diversity of Indian Health Programs and the communities they serve adds richness to the many stories that have emerged.

New and renewed partnerships must continue to provide more resources to support and expand Telemedicine if we are to reap the full benefits, which are enormous. Lives can be saved and extended with the quality of life greatly improved. Diabetes, bipolar disorders, and other chronic and debilitating disorders and diseases cannot continue to wreck the lives of so many American Indians. It is imperative that we intervene with this technology which is now proven and increasingly well accepted. Telemedicine is a needed investment in the health of the American Indian communities in California and the time to invest is now.

I. INTRODUCTION

The California Telemedicine & eHealth Center (CTEC) is focused on using a variety of health technology solutions to decrease the disparities in access to health care for underserved communities in California. The obstacles faced by health care providers and patients in rural areas are vastly different than those in urban areas. Health care in rural areas is delivered in an uncoordinated manner by small rural hospitals, community-based clinics, sole practitioners, and allied health professionals who provide service to approximately 2.6 million residents. The increased use of technology among rural healthcare providers allows for the expansion of Telemedicine and eHealth services for underserved communities in California.

Telemedicine and eHealth are broadly defined as the application of electronic communication technologies to the provision of healthcare, health education and health services. A major goal of the delivery of Telemedicine and eHealth services is to eliminate barriers of time and distance to allow health service and or education to reach individuals in their own communities instead of the movement of people to centers of healthcare expertise.

To that end, there are over 100 federally recognized tribes in California (Bureau of Indian Affairs, 2000). Over 60,174 Indians reside on or near a reservation in California (Bureau of Indian Affairs, 1997). Twenty-seven percent of Indians that reside on or near a reservation in California were employed but fall below the poverty level. In several communities, poverty was as high as sixty percent (Bureau of Indian Affairs, 1997). The vast majority of federal reservations are located in rural areas that are characterized by a shortage of local services, a lack of coordination, and access to specialist services.

Telemedicine and eHealth approaches have been proven as a successful method of providing needed specialty services to American Indian communities. However, the implementation and development of Telemedicine infrastructure is not without cost and does demand an infusion of investment funding to establish and sustain a successful program.

II. INVESTING IN AMERICAN INDIAN HEALTH

In February 2000, The California Endowment (The Endowment) provided $1,856,600 to CTEC to develop and implement a program using store and forward Telemedicine to allow as many as 18 Indian Health Programs to screen for diabetic retinopathy. The need was real, at that time, only 39% of the identified American Indian diabetics served by Indian Health Programs were receiving their recommended annual diabetic eye exam, with significant barriers to access identified as distance, lack of transportation, lack of cultural comfort, and persistent staff shortages at Indian Health Clinics.

A 1990 study determined that Diabetic Retinopathy Screening (DRS) alone, cost the United States $10.5 million and resulted in savings to the American people of over 82,000 vision years and $1.1 billion. (Aiello LP, Javitt JC, Canner JK: 1990)[1]

The investment of grant funding into the American Indian community directly resulted in an increase in screenings that prevented the incidence of diabetes related blindness and vision impairment, as well as health related cost savings.

GOALS AND OBJECTIVES

CTEC, with funding from The Endowment developed and implemented the American Indian Diabetes Teleophthalmology Grant Program (AIDTGP). The primary goal of the AIDTGP was to increase access to retinopathy screening for American Indian diabetics in California and to increase prevention of the resulting loss of vision. Key objectives include:

- Increase the number of screenings for American Indian diabetics in California
- Develop information that will improve our understanding of the impact of teleophthalmology screening in existing clinical settings
- Improve the effectiveness and sustainability of teleophthalmology operations
- Evaluate the acceptability and effectiveness of Telemedicine programs among American Indians in California
- Identify opportunities for expanding Telemedicine opportunities in Indian Health programs across California

Through the development of the Teleophthalmology Grant Program, CTEC was able to introduce the concept of Telemedicine into this community to improve access to critically needed healthcare services for diabetics and with a long term goal to assess over time other opportunities where Telemedicine may also be useful in other diseases. By 2001, several of the Indian Health Clinics had not only succeeded in implementing the Teleophthalmology programs but they were beginning to expand into offering other Telemedicine services including Telepsychiatry.

[1] "Diabetic Retinopathy Screening", Aiello LP, Javitt JC, Canner JK: 1990

The Teleophthalmology grant program Final Report which includes a thorough evaluation of outcomes and costs related to this program is available on the CTEC website www.cteconline.org

These Indian Health programs have a long tradition of providing treatment, outreach and prevention services but are dependent on the surrounding communities for specialty care. Often, only the most motivated and self sufficient patient can have a problem identified at the local clinic and then have the wear-with-all socially and economically to make a treatment plan and get specialty care in the surrounding community hours away from home. This behavior is seen only in immediate life threatening disease processes like cancer or cardiac arrest.

As part of the program's evaluation efforts, lessons learned were gathered and CTEC funded a study to determine the level of activity and interest in Telemedicine/eHealth for American Indians in California. The results of this study titled *California Indian eHealth Study,* by Dennis Rose & Associates set forth a foundation for developing a comprehensive and culturally sensitive, rational plan for using eHealth technologies to improve access to health care throughout all California's Indian communities.

The *California Indian eHealth Study* which provides an in-depth data rich report can be found at www.cteconline.org. The study was reviewed by a panel of experts who included Steve Viramontes, Round Valley Indian Health Services, Jim Crouch, California Rural Indian Health Board, and Glenn Gamst, Tri-City Mental Health Services. CTEC has incorporated comments from the expert panel and also used information developed by the *California Indian eHealth Study* as the foundation for this publication which is meant to reach an audience of stakeholders who may be interested in both learning about the subject, but more so to help those who can use the information in strategic planning to expand Telemedicine & eHealth for American Indians in California.

AMERICAN INDIANS IN CALIFORNIA

There are over 100 federally recognized tribes in California. Over 60,174 Indians reside on or near a reservation in California. The vast majority of the Federally recognized Indian Tribes in California are located in rural locations with limited resources and no easy way to get specialty health care.

The needs of these people are too often left unmet, not through lack of good intentions, but because it is so difficult to link the patient up with the expert care and specialized treatment so necessary to managing the chronic diseases that devastate the lives of so many American Indian people.

Today, only those individuals who are highly motivated and self-sufficient are likely to follow through on a problem that is identified at the local clinic because diagnosis and treatment may be located hundreds of miles away. While cancer or cardiac arrest might prompt swift action, diabetes, which strikes more than 107,000 American Indians receiving care from Indian Health Services (IHS), often goes without adequate attention. Indeed, there is a grim history of organ failure, amputations, and other severe diabetes-related problems among American Indians that can be traced to lack of access.

Then, too are the ravages of substance abuse, identified today as the number one health problem facing the American Indian population in California, and mental illness. Through the eHealth Study convenings, these two areas were identified as having immediate interest in addressing: 1) mental health; 2) substance abuse.

Rates of substance abuse and related deaths and diseases are disproportionately high in comparison to the general population in the U.S. Indeed, rates of alcoholism are 430% higher with American Indians six times more likely to die of alcohol-related causes than the general population. What is more, the proportion of substance abuse-related hospitalizations among American Indians was double the national rate for the U.S. There is great interest among Indian Health programs in developing a case management approach to dealing with this growing health problem among American Indian people.

Suicide rates among American Indians tell a similar story. The prevalence rate of suicide for American Indians is 1.5 times the national rate. Males ages 15-24 account for two-thirds of all American Indian suicides. American Indian women ages 25-44 have the highest suicide rate. Violent deaths—unintentional injuries, homicide, and suicide—account for 75% of all mortality in the second decade of life for American Indians. Clearly, mental health services and support for substance abuse recovery are desperately needed.

Telemedicine, with its ability to connect specialists to remote and rural settings provides the ideal solution for the American Indians. It is a convenient and discrete way to provide specialty services to those who need it most.

Videoconferencing technology makes it possible to connect patients with virtually anyone they need to see, be it an endocrinologist from University of California at Davis or traditional healers practicing out of Arizona. The point is, the expertise can be delivered to the patient, suiting the needs of so many American Indians.

Although the adoption rate for Telemedicine has been slower than some anticipated, there is ample evidence that Telemedicine is an excellent treatment modality for American Indians in remote locations. Indian Health programs participating in these Telemedicine and eHealth programs have made great strides in development and implementation of new programs, however, they have also directly improved the health outcomes of their patients they serve. Further funding is required to continue to expand these effective Telemedicine programs.

III. THE STATE OF TELEMEDICINE IN CALIFORNIA INDIAN COUNTRY IN 2005

The ***California Indian eHealth Study*** fundamentally was an assessment of the development and growth of Telemedicine among California's American Indian people, and it carried with it the study team's working hypothesis that there would be substantial differences between programs. While it was well known that Telemedicine was being adopted in various locations, it was suspected that some activity was being undertaken without widespread publicity. In order to assess this, eHealth surveys were sent to administrators at Indian Health Programs asking for information on existing, planned, and moribund Telemedicine programs.

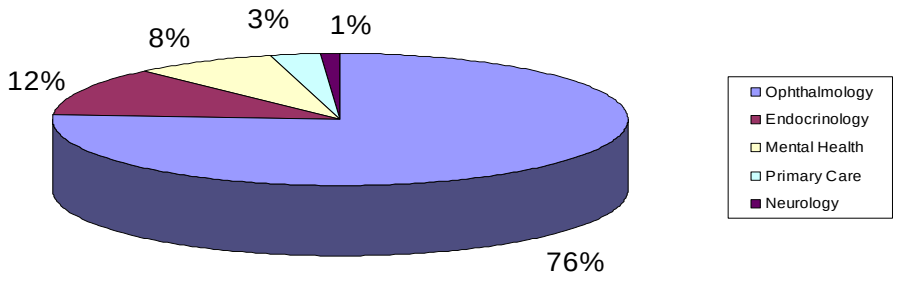
Formal survey responses were received from 25 separate programs from all parts of the state and all clinic size levels. The majority of respondents—including medical directors, clinic managers, and practitioners—identified six areas of high priority needs.

HIGH PRIORITY HEALTH SERVICE NEEDS

- Mental Health – Adult
- Mental Health – Youth
- Behavioural Health
- Endocrinology
- Dermatology
- Substance Abuse

EXISTING TELEMEDICINE SERVICE APPLICATIONS

The distribution of service among existing Telemedicine applications can be seen in the following chart. The eHealth survey found, that while telepsychiatry needs ranked highest, only 8% of all Telemedicine services rendered were aimed at that area.



The most dominant application, accounting for 76% of the total consultations to date, remains Teleophthalmology which was the first generation of Telemedicine projects funded in Indian Health programs in the beginning in 2001.

While slightly less than half (47%) of the Indian Health programs in California have experience in Telemedicine, the California Indian eHealth Study found that several programs are continuing to aggressively develop and strengthen their Telemedicine efforts, adding new applications as they become feasible. These programs are working cooperatively to evolve their offerings and share best practices. Indeed, participation in emerging regional Telemedicine networks appears to be a key factor in expansion of services.

eHEALTH NETWORKS IN CALIFORNIA

Two types of networks and partners have emerged through this study, formal and informal. Several *formal* Telemedicine networks exist, primarily in Northern California. Typically, these networks share resources and coordinate access to services. Most networks have emerged on a regional basis as the result of individual organizations recognizing the potential benefits of collaboration, but the IHS has initiated the development of a Telemedicine network linking a group of Indian Health Programs to specialists providing mental health services.

On a less formal basis, there are a few individual Indian Health Programs successfully operating Telemedicine applications that have occasionally shared their experiences with other programs just beginning their involvement with Telemedicine. While much of this development has occurred independently as the result of individual actions, this sharing has also been fostered through the IHS telemental health network, CTEC's convening of teleophthalmology projects, the CTEC Mentor program and the California Indian Teleophthalmology Study.

The study also found that most clinics currently without Telemedicine are very interested in getting started. A few have already invested in upgrading infrastructure in preparation for developing their initial Telemedicine applications (16%). Several others have reported interest, but need both the funding and the information on how to develop Telemedicine programs at their clinic site. There are also those programs that have reported little or no interest in Telemedicine (6%), primarily due to their existing proximity to and relationship with specialty care providers.

PAVING THE PATH — TELEOPHTHALMOLOGY

Teleophthalmology was the first generation of Telemedicine projects adopted in California's Indian Country, beginning with the first cycle of AIDTGP funded by CTEC in 2001. Ten projects began in the first cycle of AIDTGP, with another three projects in the second cycle in 2002. The California Consumer Protection Foundation funded teleophthalmology screening in a mobile unit in 2003, and CTEC funded two more installations in 2003 as part of the California Indian Teleophthalmology Study.

As deployed, these installations are designed to screen for diabetic retinopathy, and over a hundred cases of retinopathy have been indicated through the programs, although many of these cases had already been identified through diabetic eye exams. Other pathologies have been indicated as well, including glaucoma, cataracts, and papillaedema, although the equipment was not designed for this purpose. For at least two clients, this program has been the first indication of advanced retinopathy that has led to vision-saving treatment.

Each program uses a non-mydriatic fundus camera (Topcon TRW6S or TRC NW100) to capture retinal images (one to three per eye) for email transmission to an eye specialist (ophthalmologist or optometrist) for judgment. Image capture is accomplished by local program staff ranging from technicians to Medical Directors. Two days of training was provided to the original personnel assigned to this function.

Chemical dilation was not part of the original program deployment, but has been adopted by at least three programs to be able to capture high-quality images for all diabetics. This is store and forward Telemedicine, but it does not follow the usual hub and spoke model with multiple capture sites and a central read center. Instead, there are a series of dyadic relationships between each Indian Health Program and an ophthalmologist that they identified. No special training was provided to the consulting ophthalmologists beyond downloading images.

The exception to this model is Riverside – San Bernardino County Indian Health. This organization uses its own ophthalmologist to read images captured by its mobile diabetes unit. Teleophthalmology Activities to date include:

TELEOPHTHALMOLOGY PROGRAMS

(SERVING 1,053 PATIENTS)

ACTIVE

Chapa De Indian Health Program, Inc.
Feather River Tribal Health
Shingle Springs Tribal Health Program
K'ima:w Medical Center
Greenville Rancheria Tribal Health Program—Red Bluff
Northern Valley Indian Health, Inc—Chico
Northern Valley Indian Health, Inc—Willows
Riverside-San Bernardino County Indian Health, Inc—Diabetes Mobile
Riverside-San Bernardino County Indian Health, Inc—San Manual
Round Valley Indian Health Center
United Indian Health Services—Smith River

PLANNED

United Indian Health Services—Weitchpec
United Indian Health Services—Klamath

CRITICAL SUCCESS FACTORS AND RESULTS

Several factors have contributed to the overall success of this program. First, there is a "champion" for the program at each of the sites. Secondly, the equipment is relatively straightforward and requires only a couple of days of training to operate. In addition, patients have been responsive to the eye examinations, taking particular interest in seeing the state of their own vision in the photographs. In at least three cases, clinics have opted to include chemical dilation as part of the examination which enables higher quality image capture for diabetic patients. Annual retinal screen rates at seven clinics with cameras increased dramatically, averaging 42% in 2001 to 70% in 2004.

CHALLENGES AND BARRIERS

There have, however, been challenges. Some of the most often cited problems in the eHealth Study are:

1. High staff turnover can leave a site without someone who is formally trained to capture the image.
2. Integrating Telemedicine applications into the clinic can be difficult especially when it comes to getting patients in for examinations, managing their records and conducting follow up.
3. Initial technical shortcomings can dampen the enthusiasm for the project.
4. Limited resources, including space, talent and funding have made it impossible for some clinics to adopt teleophthalmology.

Most programs have worked through these challenges, with programs having later start dates learning from the experience of others. However, those programs that did not, and are moribund, typically have succumbed to these very problems.

TELEENDOCRINOLOGY

Ranking second in terms of adoption in the eHealth Study is endocrinology. As the first real-time Telemedicine application funded by CTEC in Indian Country (pilot project grant to Round Valley), the endocrinology service connects patients and their doctors/nurses with an endocrinologist at UC Davis. Each 45-minute consultation is prepared for in advance with current vital signs and lab results captured and sent to the specialist beforehand. In addition, the specialist provides expertise regarding patient care to the provider at the clinic.

Today, the teleendocrinology scorecard for American Indians in California is as follows:

TELEENDOCRINOLOGY PROGRAMS

(SERVING 158 PATIENTS)

ACTIVE
K'ima:w Medical Center
Round Valley Indian Health Center
Pit River Health Services

PLANNED
Feather River Tribal Health
Karuk Tribe of California
United Indian Health Services

RESULTS

At Round Valley, endocrinology care was evaluated using clinical parameters of Hemoglobin AIC's (HbAlc)>8. In one clinic HbAlc's>8 decreased from 61% to 34% since 2001. Of 49 patients with HbAlc tests done pre and post tele-endocrinology visit, 65% had an average decrease in their HbAlc of 2.5 points. A 2.5 % improvement in glycemic values may result in an 87% reduction in the risk for diabetes-related complications and a 45% lowered risk of heart attacks, according to the UK Prospective Diabetes Study (UKPDS) results.

CHALLENGES AND BARRIERS

Challenges to implementing an endocrinology program were relatively minor although more staff time than expected was required to handle the exchange of information around the consultation. The initial development of the teleendocrinology services at the K'ima:w Medical Center and Pit River Health Services were facilitated by guidance from the Round Valley Telemedicine coordinator whose model was adopted by the two centers.

There are also clinics in the planning stage. The Karuk Tribe of California intends to operate their program at the Yreka clinic through the Northern Sierra Rural Health Network. The United Indian Health Services anticipates being part of the North Coast Telemedicine Network that is under development.

TELEPSYCHIATRY AND eMENTAL HEALTH

Mental health care for adults and youth, including behavioural health and substance abuse counselling, topped nearly everyone's list of needs. According to the eHealth Study, the need for these services was expressed both broadly and intensely and generally emerged as a dominant theme of initial conversations with Executive Directors. Two major themes emerged from these interviews:

- the shortage of mental health specialists in rural areas; and
- the breadth and depth of the mental health problem at hand.

The current Telemedicine model for care includes a high-resolution, interactive live-video connection between the patient and the specialist at the remote site with the local care provider present. Some of the survey respondents indicated a strong need for another model—one that can link individuals with traditional healers. The specialist's may also benefit by observing the approach and effect of traditional practices. More importantly, using Telemedicine to unite American Indian patients with culturally appropriate traditional healers does much to elevate the consciousness of everyone concerned and is conducive to building trust.

Round Valley Indian Health Services pioneered telepsychiatry in 2001 through a CTEC Project Grant. The protocol at Round Valley matches the highest needs identified though the CTEC study. Each consultation lasts 45 minutes to one hour and is conducted via interactive live video, which provides a viable means for an uninhibited discussion. Typically an hour or more is spent in preparation for the video session and the local provider participates in the beginning and end of the session to add continuity to the patient's treatment and follow up.

TELEPSYCHIATRY PROGRAMS

(SERVING 103 PATIENTS)

ACTIVE

Karuk Tribe of California
K'ima:w Medical Center
Pit River Health Services
Round Valley Indian Health Center
United Indian Health Services

PLANNED

Feather River Tribal Health
Santa Ynez Tribal Health Program
Shingle Springs Tribal Health Program
Warner Mountain Indian Health Program

Round Valley's Telemedicine coordinator has been the lead person working with other Indian Health Programs to implement this service as part of a network. These efforts have been successful in transferring the Round Valley model to both the K'ima:w Medical Center and the Pit River Health Services. Efforts to build membership in the network have involved discussions and training at other programs, including Feather River Tribal Health, Santa Ynez Tribal Health, Shingle Springs Tribal Health, and United Indian Health Services. No firm schedule for implementation has been developed at any of these sites however. Two sites (Feather River and Shingle Springs) have their own mental health providers, and thus have less incentive to bring in services. Santa Ynez experienced staff turnover that has forced them to start over in the development process.

CHALLENGES AND BARRIERS

While the telepsychiatric services implemented through the IHS network provide both adult and child psychiatric services, additional services and specialists in areas such as pain management, medications management, and substance abuse counselling are still needed. Specialists in these areas are either in short supply or the funds to pay for the services are not available.

In addition to the limited availability of specialists, two other constraints on the short-run expansion of the network have been identified. The first is general coordination of information, including scheduling of services across clinics, development of protocols and procedures, recruitment and training of new sites, and other administrative functions. Allocation of local staff resources to coordination functions has been resisted. Chronic staff shortages and a history of making do with insufficient resources provide an environment in which clinics underestimate the amount of time needed to support Telemedicine.

One recent positive development has been an on-line scheduling calendar to coordinate services.

In addition, chronic staff shortages and a history of "making do" on insufficient resources makes it all the more difficult to correctly estimate the amount of time and effort needed to launch and support Telemedicine activities. The Appendix of this report contains a variety of tools and templates that can be utilized to establish, fund, and operate an efficient Telemedicine site including technical network infrastructure maps.

PRIMARY CARE

For the American Indian community in Burney, California, 65 miles east of Redding, the development of Telemedicine applications could not have come at a more opportune time. Faced with the unexpected loss of their Medical Director in May 2004, Pit River Health Services used Telemedicine as a means to connect their clients to their former Medical Director who had relocated in Oregon. This program already had videoconferencing capacity as part of the planning effort for the IHS telepsychiatry health network, and had been conducting Telemedicine consults in both endocrinology and psychiatry for approximately a full year.

Service at Pit River is provided two or three days each week under the same contract used by the doctor for in-person visits. An RN serves as the presenter during these sessions and visits are greatly simplified by the familiarity between provider and patients, lasting approximately ten minutes longer than the previous modality permitted. Since the implementation of the Telemedicine program, incipient appendicitis and angina have been successfully resolved using this means.

At first patients expressed scepticism and voiced concerns that Telemedicine was an inferior approach. By scheduling extra time to explain the technology to each patient and by providing individual demonstrations to Board members, the clinic was able to allay many patients' fears. Today patients at Pit River are enthusiastic and spreading the word.

PRIMARY CARE PROGRAM

(40 PATIENTS SERVED)

ACTIVE

Pit River Health Services, Inc.

PLANNED

Feather River Tribal Health
Karuk Tribe of California
Warner Mountain Indian Health Program

CONTINUING MEDICAL EDUCATION

Continuing medical education (CME) though unquestionably necessary is often difficult for professionals in remote clinics to obtain. Travel and class time take precious staff members from their clinic duties leaving a skeleton crew to bridge the gap. CME delivered via video conference might be able to change this although the predominant effort in that arena is a short online course with an equally short multiple-choice assessment. Access to live-video CME is now being pioneered by Round Valley. Access to Kaiser's CME classes at no charge is available to some Indian Health Programs through the Northern California Telemedicine Network. Scheduling has proven to be the biggest challenge thus far. Also under investigation is the use of the archive of video CME maintained by University of California at Davis Medical Center, which contains more than 10,000 classes that can be delivered via streaming video at convenient times.

CONTINUING MEDICAL EDUCATION PROGRAMS

ACTIVE

Karuk Tribe of California
Riverside – San Bernardino County
Round Valley Indian Health Center

PLANNED

Feather River Tribal Health
United Indian Health Service, Inc.

NEUROLOGY

A relatively new application, teleneurology was first implemented at Round Valley in the fall of 2003. The consultations involve a University of California at Davis Medical Center (UCDMC) neurology specialist who directs the local provider in conducting a series of tests on the patient. Although this requires provider participation throughout the visit, those participating report that they are learning quite a lot through the process. The appointment lasts approximately one hour with another hour invested in preparation prior to the consultation. Time is also spent in transmitting patient records, including old CT scans, CAT scans, and EEG results. An hour long *meet-and-greet* was the first action taken on this application allowing specialists and local providers to establish a working relationship prior to the delivery of service. One unique aspect of this application is that the UCDMC specialist providing the service is willing to accept Medi-Cal reimbursements in lieu of charging the Indian Health Program for service.

TELENEUROLOGY PROGRAMS

(11 PATIENTS SERVED)

Round Valley Indian HealthCenter

DERMATOLOGY

Teledermatology provided via store and forward technology, is generally regarded as a relatively simple application, especially since it has the potential to 'piggy back' on the existing Teleophthalmology equipment widely distributed through Indian health through AIDTGP. In this case, nearly all of the teleophthalmology system would be used, with the fundus camera being replaced by a dermatology camera and images sent to a different consulting specialist.

Although no active programs in teledermatology have been launched to date, three clinics are reportedly on the cusp of implementation. United Indian Health Services split the cost of their dermatology camera with CTEC prior to their involvement in teleophthalmology and now has plans for internal Telemedicine using that camera for diabetic foot exams.

PLANNED PROGRAMS

Feather River Tribal Health
Karuk Tribe of California
K'ima:w Medical Center
Round Valley Indian Health Center
United Indian Health Service, Inc.

PAIN MANAGEMENT

A pain management program is being developed as part of the broader IHS telepsychiatry network. It will follow protocols similar to those used for telepsychiatry using live-video consultations lasting 45 minutes to one hour. Initial efforts involve monthly discussions between providers at Round Valley and K'ma:w and a pain specialist at Feather River. These virtual meetings provide a forum for discussion best practices and aid in the development of joint strategies for dealing with the myriad issues surrounding the use of pain medication.

One tangible result of these early efforts has been the development of standardized pain contracts that detail both patient and provider responsibilities and expectations. Pain management via Telemedicine offers a benefit of particular importance to California Indian communities — distancing from the influence of Tribal Council and, when in place, Tribal Health Board members — who can exert significant influence over clinic practices. The addition of an external authority into the process is expected to provide an objective check on unwarranted interference and improve overall pain management.

PLANNED PROGRAMS

Feather River Tribal Health
K'ima:w Medical Center
Round Valley Indian Health Center

FIT KIDS

Childhood obesity has grown to epidemic proportions among California Indians, giving rise to earlier onset of diabetes and other chronic illnesses. A partnership of the UC Davis Medical Center, the Indian Health Services (IHS) California Area Office, the Rumsey Foundation, and three tribal health programs is initiating an intervention using a combination of on-site and Telemedicine based approaches to encourage groups of young people to improve exercise and nutrition.

UCDMC is expected to provide the services of a pediatric endocrinologist, exercise physiologist, and a nutritionist via videoconferencing, while the tribes are expected to provide on site supervision of the program and supervision of participating children. The structure and responsibilities of the partnership between the tribes and UCDMC is being forged and final funding decisions are expected soon.

PLANNED PROGRAMS

Feather River Tribal Health
K'ima:w Medical Center
Round Valley Indian Health

ROUND VALLEY INDIAN HEALTH CENTER

1,109 Active Indian Clients (2003) in Mendocino County

SERVICES PROVIDED:

Teleophalmology
(serving 109 patients)

Teleendrocrinology
(serving 94 patients)

Telepsychiatry
(serving 33 patients)

Teleneurology
(serving 11 patients)

Located about 5 hours by car from the specialty care services provided by UC Davis. The Round Valley Indian Health Center (RVIHC) was a prime candidate for Telemedicine. Providing primary health care to more than 1,400 Native Americans located in Covelo and the adjacent Round Valley Indian Reservation.

The RVIHC started its Telemedicine program in the fall of 2001. Initially offering teleendocrinology visits and retinopathy screening (Teleophthalmology) for diabetic patients, RVIHC's program has expanded to include psychiatric videoconferencing aimed at troubled youth and substance abusers. RVIHC has taken a lead role in promoting Telemedicine both within its own ranks and to other tribal health centers.

Untreated, diabetes can lead to amputations, blindness, organ shutdown and death. With the disease unusually prevalent among Native Americans, the program focused first on patients who had a hemoglobin A1C of greater than 8 which indicates uncontrolled diabetes. Those with diabetes also had a 25x higher rate of blindness than any other population, so both teleendocrinology and teleophthalmology services, provided via Telemedicine, were offered in tandem.

Having pulled together the grant funding for the Telemedicine effort, RVIHC's second challenge was the installation of a T1 line to handle the bandwidth requirements. Not until Round Valley enlisted the backing of Indian Health Services, CTEC, and Senator Mike Thompson did the TelCo provider agree to install the line, some 18 months after RVIHC filed its first request.

> ***"Once we had the camera installed, we were able to teach the patients something very relevant. We showed them the back of the retina, the macula, and all the blood vessels and they could see the potential and/or extent of damage first hand."***
>
> —Steve Viramontes, Telemedicine Coordinator at Round Valley

Once up and running, the Telemedicine services fostered immediate and dramatic improvement in the health of the patient population served. It is standard care for a diabetic to have an annual ophthalmology evaluation. Prior to the launch of the Telemedicine program, Round Valley was sending about 30% of its diabetic patients to Ukiah for these yearly visits. Once teleophthalmology was in place, the numbers skyrocketed to more than 90%. Today, 72% of the Native American patient population in Round Valley take advantage of teleophthalmology services.

Telepsychiatry was initiated at Round Valley in August of 2003. For the most part, consultations focus on medication management by a psychiatrist although the two psychologists who are available through the program can and do handle other kinds of issues. One success story involves a young man who had been diagnosed as bipolar and who was acting strangely enough to cause his employers some worry. After several months of telepsychiatry, medication levels were adjusted and the young man's behaviour markedly improved.

Round Valley's Telemedicine program has been so well received that the clinic is eager to expand services. Right now, RVIHC and two other sites, Hoopa and Feather River, have been selected to participate in the Fit Kids program. Their hope is to expand RVIHC's outreach to troubled youth and to people with substance abuse problems.

A back up system will be created at the clinic so that patients who come in for teleendocrinology, teleophthalmology, or telepsychiatry won't be disappointed. Another goal is to help other sites ramp up and get their Telemedicine programs off the ground.

NORTHERN VALLEY INDIAN HEALTH, INC.

1,627 Active Indian Clients (2003) in Glenn and Butte Counties

SERVICES PROVIDED:

Teleophthalmology (serving 73 patients)

Northern Valley Indian Health initiated its retinopathy screening program in 2003 as part of the American Indian Teleophthalmology study (funded by CTEC). Patients at the clinic have been very receptive to the service, which includes several features that most other facilities do not offer. For example, the clinic is equipped to dilate patient's pupils if necessary, which has resulted in an excellent capture rate. Screening for glaucoma is also offered.

> ***"The service provides a contact point to engage people to come in and to care for their diabetes. It is a tangible service and people can relate to their vision as important to preserve."***
>
> — Noel Phares, Diabetes Educator

One very important aspect of the retinopathy screening program was its ability to attract patients to the clinic. Mailers were sent out to everyone in the community announcing the program and many people responded. The program conducted about 60 screens during the early part of 2004 and picked up some severe problems—retinal haemorrhages and the like—which, when shown to the patients, prompted them to get further treatment. Northern Valley plans to rescreen its patients according to the recommendation of the ophthalmologist.

"When you are explaining to a patient what the macula is and showing him evidence of edema in his own eyeball, there's an element of realism. Virtually everyone who screened positive for any kind of problem followed up with a visit to the eye doctor," stated Noel Phares, Diabetic Educator. The ophthalmology screening also serves as a vehicle to get patients up to date on other healthcare needs such as cholesterol tests and pneumonia shots.

"So much of the benefit is hard to measure," Phares explains. "You are reaching out to the community and doing some screenings and meeting some people and they are getting to feel a little better about you…after a history of distrust towards the medical clinic. How do you measure that? I know of people on the local reservations who don't come into the clinic for years because of some misunderstanding. Now they are back for an eye exam and the trust is building again. While they are in the clinic, we can do more for them. How do you measure the effects of that?"

RIVERSIDE – SAN BERNARDINO COUNTY INDIAN HEALTH, INC.

10,798 Active Indian Clients (2003) in Riverside and San Bernardino Counties

SERVICES PROVIDED:

Teleophthalmology (serving 170 patients)

Although the San Manuel clinic first used teleophthalmology in 2001, the project was interrupted for 18 months and ultimately resumed at a different facility in 2003. But it is the Diabetes Mobile Unit, funded by California Consumer Protection Foundation in 2003 that has exploited Telemedicine more effectively. The unit provides retinopathy screening at various locations throughout the eastern parts of the two counties served.

Dr. Darlene Matejka who directs the effort, is able to tell by looking at the images captured whether a patient needs a better dilation or whether there is an issue going on with their eyes. She can then refer the patient to a specialist. "It's so much easier than trying to get these patients in to get their dilation at the end of the year. You can show the picture to the patient and they can see the situation for themselves. In this last year (2004), we've seen an increased usage of 5%" notes Matejka,

KARUK TRIBE OF CALIFORNIA

1,837 Active Indian Clients (2002) in Siskiyou and Humboldt Counties

SERVICES PROVIDED:

Teleophthalmology (serving 12 patients)

Telepsychiatry health (serving 30+ patients)

The Yreka clinic adopted Telemedicine about two years ago and plans to expand their Telemedicine services to Happy Camp and Orleans. The system is being used in Yreka 3-4 times a month for telepsychiatry, which patients are finding both convenient and helpful.

Both the Yreka site and the Happy Camp site are funded by grants and the Karuk Tribe is funding the Orleans project with money from the Special Diabetes Program. David Eisenberg who is running the program comments, "It does take time and effort on the part of the staff to make Telemedicine an effective tool. Someone has to copy patient information and send it before the appointment, set up a room and so forth. I think it helps if the staff is already comfortable with computers, but the system is simple enough to work that is doesn't take that much skill. What is more important is having a commitment to trying something new and having patience to work through the inevitable bugs, glitches and rough spots. But I would definitely recommend the Telemedicine system."

UC DAVIS MEDICAL CENTER

Sacramento, CA
Hub Site Providing Psychiatric Specialty Care

The UC Davis Department of Psychiatry has been providing telepsychiatry consultations to Round Valley for the last two years. Although there are drawbacks to not being able to see a patient in person, the physicians at UC Davis have been able to bridge the gap effectively.

While patients do not feel that Telemedicine is as personal, they seem to be satisfied with the trade off of not having to travel. Also, some patients definitely prefer the anonymity of not seeing someone local. "Having a consultation service in the Indian sites raises the quality of care, not because I'm doing anything magical, just because it gives access to a psychiatrist. It also gives patients and providers more options and it's always nice to have more options. Finally, it reduces rural providers' sense of isolation and gives them more self confidence," Don Hilty, M.D. Director of Psychiatry, UC Davis.

V. OVERCOMING CHALLENGES

One of the purposes of the eHealth Study was to identify barriers to developing Telemedicine services. Twenty-five separate programs from all parts of California and all clinic size levels responded to eHealth Survey regarding Telemedicine barriers. Combined responses from the administrative, medical and information technology respondents showed that the most often cited barriers were: "Availability of implementation funding" (56%); "Availability of staff time for Telemedicine operations" (53%); "Reimbursement concerns" (35%); and "Time available to implement or research" (15%).

In addition to lack of resources — bandwidth, staff skills, physical space, knowledge of eHealth, and funding — another factor mentioned as a hindrance to Telemedicine's growth was the cultural barrier. The most substantial barriers expressed by respondents are summarized below:

- **Availability of implementation funding**. Not surprisingly, the availability of funding emerged as the most severe barrier to Telemedicine development, not just on average, but among all subgroups in the study. The bottom line: budgets are tight, and Federal funding for Indian health is not keeping up with health care inflation. Another point to note is that a number of interviewees did not have an accurate sense of how much it would cost to invest in the initial equipment and so forth.
- **Availability of staff time for Telemedicine operation and time available to implement or research**. These time-related barriers reflect a general shortage of personnel compared to the demands of the job. The personnel burden of Telemedicine—including coordination, records management and equipment maintenance—was found to be larger than anticipated. The study also found that the greatest development of Telemedicine has occurred in those programs with the most senior and long-tenured Executive Directors.
- **Reimbursement concerns.** The fact that financial issues would be identified among the top barriers comes as no surprise and challenges surrounding reimbursement are a widely felt barrier to the advancement of Telemedicine.
- **Physical space**. For many programs, the lack of space was a big barrier to entry and in one case was cited as being the single most compelling reason for preventing involvement in Telemedicine until new facilities are built. But programs operating Telemedicine applications reported a variety of strategies to deal with the problem of space. One program had wired every exam room for Telemedicine and wheeled an equipment cart into the appropriate room 15 minutes before the consult. Still other programs reported that space constraints reduced Telemedicine utilization.
- **Cultural barriers**. Over half of the respondents indicated that cultural barriers represented no hindrance whatsoever to the development of Telemedicine and several expressed surprise that it might be seen as such. But culture is not homogeneous and it should be recognized that California is home to 108 recognized tribes, each with a separate and unique culture.

Overcoming Challenges

Follow-up interviews indicated that there is a need, especially for elders and more traditional tribal members, to understand the technology before accepting treatment. In addition, many Indian communities are small and closely knit. A respondent who has no Telemedicine experience expressed some concern about whether health problems that individuals would want to keep private could be addressed by strangers at a distance. Still others reported that having the provider be remote enhanced patient anonymity.

While the existing level of telecommunications bandwidth was not identified in the eHealth survey as a big barrier to Telemedicine, 64% of all respondents did identify bandwidth as posing some kind of impediment to progress. Those surveyed noted that bandwidth is used for much more than Telemedicine, including billing and records transmission as well as internet-based research and education. Indeed 77% of those surveyed indicated that competing uses for bandwidth is a barrier to Telemedicine development and one program said it was restricting alternative uses during periods of Telemedicine use.

Overall, 41% of the clinics were reported by their IT staff to have insufficient bandwidth for Telemedicine and existing use, with competing demands representing a barrier to Telemedicine development. However, 25% of these clinics report no plans for increasing bandwidth. From the perspective of IT personnel many reasons were given for not expanding bandwidth. A list of potential barriers to the expansion of bandwidth was presented to IT respondents, with the opportunity to check more than one barrier.

The results are tabulated below:

- Economics, i.e., the cost of increased bandwidth in budget 47%
- Administrative support, i.e., making this a priority 18%
- Distance from existing communications lines 18%
- TelCo providers not providing capacity 37%
- No barriers 37%

The eHealth Survey also found that, for many, the available bandwidth generally connects programs with the California Area Office of the IHS only; and this is seen as limiting their ability to connect into existing Telemedicine networks or to other providers. There have been solutions to these connectivity problems, including routing signals to the Albuquerque Area Office for translation to a different communication protocol, and then back to California. Many programs are working on outside lines to circumvent the associated problems.

Additional equipment is necessary for video conferencing which is currently in place at a total of 16 clinics, and is actively used for Telemedicine at 4 clinics. Telemedicine is being planned for another seven of these clinics, and the equipment is being used for managerial purposes—if it is used at all—at the remaining clinics.

One plus is that a standard set of technical resources has been in place for clinics for years and Telemedicine demands on those resources are not viewed as high. With isolated exceptions, general technical resources are seen as adequate for Telemedicine. In addition, several respondents noted that recent or anticipated clinic construction included infrastructure for Telemedicine.

Another interesting finding is that only two programs (Round Valley Indian Health and the K'ima:w Medical Center) have created the position of Telemedicine Coordinator. All programs reported having staff with assigned responsibility for IT, although 25% of the reporting programs said there was less than a full FTE position. 57% of all programs reported that other IT job demands posed a barrier to Telemedicine operation and most found that Telemedicine added to the IT person's job demands. 35% of the programs reported shortages of IT personnel and in some cases the IT "staff" were outside contractors and therefore not necessarily always available.

The programs with Telemedicine applications mentioned that the skills needing additional development were coordination of Telemedicine consults and scheduling. In addition, IT staff was provided with a short checklist of potential areas for additional training.

Responses are summarized below:

MORE TELEMEDICINE TRAINING NEEDED

Skill Development Needed	Telemedicine Programs Indicating Need	Non-Telemedicine Programs Indicating Need
Video conferencing systems	75%	75%
Data security	58%	25%
Scheduling software	50%	25%
Remote monitoring	50%	75%
Tele-home care	67%	100%
Peripheral devices	50%	100%

Key challenges identified in the study – reimbursement concerns and staff turnover ongoing technical support and training – are consistent to what other Telemedicine networks throughout California are facing. CTEC serves as a statewide resource center for Telemedicine and in that role educates and encourages policymakers to pursue legislation and programs that increase reimbursement for underserved communities. CTEC is also committed to providing training and support through programs such as the Telemedicine Learning Center, online and at CTEC convenings, as well as ongoing technical support.

Although these challenges may seem great, they are surmountable with the appropriate investment of funding and experienced resources. Resulting from this project, a few clinics in the Indian Health Service have skilled staff serving as excellent resources in developing and implementing Telemedicine programs. With the Indian Health Clinics internal resources fortified with additional technical support and assistance from CTEC, the American Indian communities in California are well suited to expand Telemedicine programs and provide access to critically needed specialty services.

VI. GETTING A HEAD START

If Telemedicine is to evolve into a system that broadly expands access to a wide range of health care services, Telemedicine *networks* will be the underpinning of that future. In a network, some sort of central coordinating function serves to connect providers of services with organizations that present those services to clients. Indian Health Programs may participate in those networks as consumers of specialty services not available locally, or even as providers of specialty services. Some programs, looking ahead, have indicated interest in being able to establish Telemedicine networks that would allow them to make more efficient use of a specialist at one clinic in a system, perhaps tipping the economics toward the ability to hire more specialists in the Indian health system.

While some efforts to establish networks are underway, progress has been slow. There are currently three networks in California. The IHS telepsychiatric network, established in 2002 and headquartered in Sacramento serves Indian Health Programs. The network provides direct service on a fixed schedule with no charge to the participating project or the patient.

The Northern California Telemedicine Network emanates from Santa Rosa and serves just the Round Valley Indian Health and the K'ima:w Medical Centers. The Northern Sierra Rural Health Network, which is located in Redding and Nevada City, serves just the Karuk Tribe of California, which notes that access, at least to mental health services, is limited by the availability of specialists. What is more, network members pay a fee of $150 per year.

Round Valley, one of the earliest sites to embrace Telemedicine, has done the necessary legwork and can share all of its best practices with other Indian health centers. At the end of this report is an appendix of tools and templates that will be helpful to expanding Telemedicine programs.

Buy-in from the tribes, the healthcare providers and the patients themselves is essential to the success of any Telemedicine program. Notes Steve Viramontes, who pioneered Telemedicine at Round Valley, "What we did in the very beginning was to include everybody, every staff member—including every community member—to be in the room with us at every decision-making juncture. We conducted *meet and greet* sessions with the UC Davis coordinators and everyone had an opportunity to ask questions. "

SPOKE SITES

ACTIVE	PLANNED
Round Valley Indian Health	Feather River Tribal Health Program
K'ima:w Medical Center	United Indian Health Service
Pit River Health Services	Shingle Springs Tribal Health Program

VII. RECOMMENDATIONS AND OPPORTUNITIES

Implementation of Telemedicine requires substantial organizational preparation. By comparison, the installation of equipment is relatively simple. It can take 1-2 years to develop and implement a Telemedicine program. However, the knowledge and experience gained from the AIDTGP has enabled the Tribal Health programs to develop planning approaches and procedures that can accelerate the establishment of new Telemedicine programs.

Commitment from leadership when developing a Telemedicine program is a critical success factor. Telemedicine changes traditional information flows and scheduling by involving a specialist outside of the host organization and, in the case of store-and-forward Telemedicine, by introducing a time lag between initial client contact and specialist judgment. Departments that are not used to working together must cooperate in a more complicated structure Only two of the programs have created a position of Telemedicine Coordinator, however, in both cases, these programs have proven to be the leaders in Telemedicine program development.

When Telemedicine is in place, it works very well in delivering a standard of care that has been difficult, if not impossible, to attain by any other means. With the state's telecommunication infrastructure expanding to include more and more rural areas, nearly every American Indian in California will be able to have access to specialized care.

More resources to support and expand Telemedicine are needed if we are to reap the full benefits, which are enormous. Lives can be saved and extended with the quality of life greatly improved. Diabetes, bipolar disorders, and other chronic and debilitating disorders and diseases cannot continue to wreck the lives of so many Native Americans. It is imperative that we intervene with this technology which is now proven and increasingly well accepted.

The challenges are all about infrastructure, staff, and equipment—problems that adequate funding can ameliorate. A handful of early pioneers have paved the path which makes it much easier for other clinics to follow suit.

The mission of the Indian Health Service is to raise the physical, mental, social, and spiritual health of American Indians to the highest level. The agency's goal is to assure that comprehensive, culturally acceptable personal and public health services are available and accessible to American Indian people. We have the opportunity through the many applications of Telemedicine to make these promises into achievements and the time is now.

APPENDIX A

TOOLS AND TEMPLATES FOR TELEMEDICINE PROGRAMS

A Telepsychiatry Pre-visit Review Form

B Authorization and Consent

C Telemedicine Center Fact Sheet—Telepsychiatry

D Telemedicine Client Survey — Endocrinology

E Clinic Policy and Procedure Manual

F Outreach Protocol — Tele-Endocrinology

G Patient Satisfaction Survey

H Teleophthalmology Protocol

I Clinic Job Description

J Annual Screening Letter

K Client Survey — Diabetic Retinopathy Program

L Client Survey — Endocrinology Services

M IHS Standards of Care — Type 2 Diabetes

N Patient Referral

O Telemedicine Consultation Log

These tools are available on our website at **www.cteconline.org**

Telepsychiatry Pre-Visit Review Form

(Records to be faxed three days before telemedicine visit)
Patients to arrive at the clinic ½ hour before scheduled appointment

PATIENT NAME: _____ HR# _____

APPT #	DATE	EQUIPMENT TESTED	REMIND PATIENT	MED NOTES FAXED	BHS NOTES FAXED	LABS OR MED LIST FAXED	PCC DONE	PROV FOLLOW UP DONE	CONSENT FORM SIGNED	NEW APPT MADE	VISIT NOTES RECEIVED
1											
2											
3											
4											
5											
6											
7											
8											
9											

As you complete an item initial it. If it is not applicable use N/A. This form stays in the patients chart under the behavioral health tab.

Tribal Health --- Consent/Refusal

NAME: _____ HR# _____

Authorization and Consent to Participate in Telemedicine Consultation

1. **PURPOSE.** The purpose of this form is to obtain your consent to participate in a telemedicine consultation in connection with the following procedure(s):

2. **NATURE OF TELEMEDICINE CONSULTATION.** During the telemedicine consultation:
   a. Details of your medical and or mental health history, examinations. X-rays, and tests will be discussed with other health professionals through the use of interactive video, audio and telecommunications technology.
   b. Physical examination of you may take place.
   c. Nonmedical technical personnel may be requested to enter the telemedicine studio to aid in video transmission.
   d. Video, audio, and/or photo recordings may be taken of the procedure(s).

3. **MEDICAL INFORMATION AND RECORDS.** All existing laws regarding your access to medical information and copies of your medical records apply to this telemedicine consultation. Additionally, dissemination of any patient-identifiable images or information from this telemedicine interaction to researchers or other entities shall not occur without your consent.

4. **CONFIDENTIAITY.** Reasonable and appropriate efforts have been made to eliminate any confidentiality risks associated with the telemedicine consultation, and all existing confidentiality protections under federal and California law apply to information disclosed during this telemedicine consultation.

5. **RIGHTS.** You may withhold or withdrawal consent to the telemedicine consultation at any time without affecting the right to future care or treatment, or risk the loss of withdrawal of any program benefits to which you would otherwise be entitled.

6. **DISPUTES.** I agree that any dispute arriving from the telemedicine consult will be resolved in California. And that California law shall apply to all disputes.

7. **RISKS, CONSEQUENCES AND BENEFITS.** I have been advised of all the potential risks, consequences and benefits of telemedicine. My health care practitioner has discussed with me he information provided above. I have had the opportunity to ask questions about this information and all of my questions have been answered. I understand the written information provided above.

Signature: _____
Patient (or patient's legal representative)

I refuse to participate in a teleconference consultation for the procedure(s) described above.

Signature:_____

Date: _____ Time: _____

If signed by other than patient, please indicate relationship: _____

Witness: _____

Tribal Health Center (RVIHC) Telemedicine Fact Sheet
Psychiatry

What is telemedicine?
Telemedicine allows you to visit with specialist physicians that may be hundreds of miles away. Using "video conferencing technology" a "real time" time visit with a physician anywhere in the world is possible. The specialist is supplied with your personal health information i.e., current labs, vital signs, medical history and can then visit with you about your care. The specialist will make recommendations that include new ways to improve your care.

What is video conferencing?
Video conferencing consists of a camera mounted on a TV screen both in your doctor's office and in the specialist's office hundreds of miles away. Video and audio is transmitted so that you can see and speak with your specialist about your health problems in "real time" as if the physician is in the room.

Why am I receiving care via telemedicine?
There are great benefits to receiving care via telemedicine. A visit with a Psychiatrist would normally require a ten (10) hour trip to Sacramento or San Francisco. Telemedicine saves time and money for you and the clinic. You will be getting care from highly qualified specialists who work at major medical centers.

What kind of care does a psychiatrist offer?
A psychiatrist can offer help with medication suggestions, evaluation of your symptoms and provide or recommend appropriate counseling.

What will the visit be like?
Your first day may take about forty-five (45) minutes; the specialist will want to get to now you. He may ask you questions about your health habits, your family and other aspects that may affect your condition. He may ask questions you have been asked in the past because he hasn't met you before.
At the end of each visit your primary care physician will consult with the specialist and then meet with you to discuss any changes in your care i.e., medication changes, labs.

Will I be able to ask questions?
Yes, we invite you to ask questions. Please write down any questions you have about your condition, medication or other treatments and the specialist will take the time to answer them.

Lastly: be sure to make a follow-up appointment with your primary care physician before you leave the clinic!

Your appointment date: / / Day: _____ Time: _____
Important: PLEASE CALL US AT LEAST 48 HOURS IN ADVANCE TO CANCEL YOUR APPOINTMENT SO THAT MAY SCHEDULE ANOTHER PATIENT FOR THIS VALUABLE VISIT.

Client Survey
Tribal Health Center
Telemedicine Endocrinology Service

This technology is a new opportunity for the Tribal health Center to bring specialty health care services to your community. Please take a few minutes to tell us about the telemedicine services you received.

Age: _____ ☐ Male ☐ Female

Education: ☐ Elementary School ☐ Some High School ☐ High School Graduate
☐ GED ☐ Some College ☐ College Graduate ☐ Degree? _____

1. How did you first hear about the telemedicine endocrinology services at the clinic? ***(Please check one box)***
   ☐ From a friend or family member ☐ Community Health Message Board
   ☐ From a health care provider ☐ Other _____

2. Have you received endocrinology care before?
   ☐ Yes ☐ No

   - **If you answered "Yes" to question #2,** where did you go for the endocrinology care? ***(Please check all that apply)***

     ☐ I never had to go ☐ Willits
     ☐ Williams ☐ Lakeport
     ☐ Santa Rosa ☐ Sacramento
     ☐ Ukiah ☐ San Francisco
     ☐ Clinic ☐ Other _____

   - How did you get there? ***(Please check one)***

     ☐ I never had to go ☐ Friend/family member's car
     ☐ My own car ☐ CHR (Community Health Representative)
     ☐ Other _____

3. How comfortable were you with the telemedicine services you received through this program? ***(Please circle the number that best represents your opinion)***

Not very		Moderately		Completely
1	2	3	4	5

4. Did you feel that you could ask the Clinic staff questions today?

   ☐ Yes ☐ No If No, Why not? _____

   _____

5. Did you feel that you could ask the doctor questions today?

☐ Yes ☐ No If No, Why not? _____

_____

6. Do you feel the "Clinic" staff was well prepared to use this technology? ***(Please circle the number that best represents your opinion)***

Not very		Moderately		Completely
1	2	3	4	5

7. Did you learn anything today that will help you keep control of your health? ***(Please circle the number that best represents your opinion)***

Nothing		A little		Very Much
1	2	3	4	5

Thoughts on your response:

_____

_____

_____

_____

Please circle the number that best describes your view of the telemedicine specialty health services you received today:

	STRONGLY DISAGREE				STRONGLY AGREE
8. Dr. ??? understood my needs	1	2	3	4	5
9. Dr. ??? was able to provide the information I needed to take control of my health.	1	2	3	4	5
10. I trust Dr. ??? recommendations	1	2	3	4	5
11. I feel my health problems are going to be resolved.	1	2	3	4	5
12. The presence of the "Clinic" staff during the service was helpful.	1	2	3	4	5
13. I will recommend these services to others.	1	2	3	4	5
14. I was able to speak freely with Dr. ???	1	2	3	4	5
15. I am worried about the confidentiality of my medical information being transmitted.	1	2	3	4	5
16. This method of 'seeing' a specialty provider is convenient.	1	2	3	4	5
17. This method of 'seeing' a specialty provider is an improvement.	1	2	3	4	5
18. The "Clinic" staff cares about my well being.	1	2	3	4	5
19. Dr. ??? cares about my well being.	1	2	3	4	5
20. I would like my next endocrinology visit to be done this way.	1	2	3	4	5

21. Overall, how satisfied are you with the telemedicine services you received? ***(Please circle the number that best represents your opinion)***

Very Dissatisfied		Somewhat		Very Satisfied
1	2	3	4	5

Thoughts on your response:

_____

_____

_____

THANK YOU FOR YOUR TIME

Clinic and Policy Manual

POLICY: Tele-Medicine	**PROCEDURE:** Tele-Psychiatry Protocol
SECTION: Medical	**RESPONSIBILITY:** Medical Doctor
EFFECTIVE DATE:	**REVIEW DATE:**
	BOARD APPROVAL DATE:

PURPOSE:

To provide specialty care for clients using telemedicine services.

PRE-VISIT PREP

Patient Identification:

Responsible Party: Site Manager, BHS Director, Medical Director, Providers

- Query the RPMS computer system for patients with diagnosis' pertaining to mental health issues. Do chart reviews in these patients to ascertain whether they would benefit from Telepsychiatry.
- Generate referrals from medical and behavioral health providers.

Referrals:

Responsible Party: Providers

- All Telepsychiatry visits require a written referral from a medical or behavioral health provider.
- Orders for telemedicine referrals should be made on a referral form.

Scheduling Appointments:

Responsible Party: Referral Clerk, CHR, Receptionist

- Patient should be contacted by phone, at the time of referral, or by home visit. Appointments should be booked in the rpms scheduling package in the clinic Telepsychiatry.
- Appointment slots will be filled allowing one hour for each patient.
- A copy of the completed referral with appointment time information will be sent to the Outreach Department.
- Charts will be pulled and prepared for a client visit as they usually are.

Clinic and Policy Manual

TRANSFER OF PATIENTS MEDICAL RECORDS:

- The "Authorization and Consent to Participate in Telemedicine Consultation Form" Appendix 2 will be completed and faxed to the Telepsychiatry provider for every visit.
- All information listed on the "Telemedicine Pre-Visit Review Form" Appendix 1, as well as any other pertinent information* will be collected, copied, and faxed three (3) days prior to the telemedicine clinic.

PAYMENT:

Currently we are unable to charge third party insurance or any other insurance for these visits, therefore no billing paperwork will need to be generated electronically or manually.

Clinic and Policy Manual

DAY OF VISIT

Patient Outreach:
Responsible Party: CHR

- Patients will be call in the morning to remind them of their appointment and to assess whether they plan to keep it. Further education as to why this is such an important visit may be required.
- *Remember! Remind patients to arrive at clinic <u>one half hour</u> before the actual telemedicine visit.*

Technology Prep:
Responsible Party: Telemedicine Coordinator

- The PolyCom unit should be turned on and a test call completed at least one hour before visits begin.

Rooming Client:
Responsible Party: Clinic Nurse; Medical Assistant

- Telemedicine patient will be roomed as any other patient, i.e., vitals taken and recorded on PCC as well as a note with the reason for the visit.
- To ensure recording in the electronic record by data entry personnel a PCC form should be completed accurately.
- "TH-TM clinic" at upper left corner of form.
- Under the "purpose of visit" section a note including the words "Telepsychiatry Visit" along with the code "V79.9".
- Primary provider initials (upper right corner) should be those of Telepsychiatry provider, then above that the Clinic provider and above that all other personnel associated with that visit.

Telemedicine Coordination
Responsible Party: Telemedicine Coordinator, Nursing Staff, Outreach

- The responsible party will speak with the telemedicine provider or their support staff via the video conference unit to assure they have the information they need for the client being seen.
- The responsible party will then bring the client into the telemedicine suite and introduce patient to the provider and leave the room.

Clinic and Policy Manual

POST VISIT:

Follow-up at Clinic
Responsible Party: Provider; CHR; Telemedicine Coordinator

- After the telemedicine consult is completed a provider will follow-up with the patient.
- One of the responsible parties will accompany patient to the front desk to set up a follow-up appointment if necessary.
- After all telemedicine visits are completed the provider who initiated the referral will review the chart notes sent by the telemedicine provider for any changes in care and to sign off the visit.

Follow-up in the community
Responsible Party: CHR; Telemedicine Coordinator

The CHR will follow-up with patient within two weeks to:

- Facilitate any changes in care
- Check for any orders needing completed
- To insure patient attends next scheduled visit

Appendix 1-f Tribal Health Center
Outreach Protocol Tele-Endocrinology

Purpose:

To provide specialty care (Endocrinology medical care) for diabetic clients using telemedicine services.

Pre-Visit Prep

Patient Identification:

Responsible Party: DM Coordinator; CHR DM Case Manager

Note: The responsible party must be familiar with the Diabetes Management Program (DMS) in the Resource Patient Management System (RPMS).

- ✓ Using the RPMS Diabetes Management System (DMS) software identify all active DM patients Appendix 1- "Query for Active DM Patients"
- ✓ To further prioritize patients identify active DM patients with a HgbA1c of greater than 8, a query of the RPMS system can be done. This can be done in several ways. One way to get this information is attached Appendix 2 – "Query for Hemoglobin A1C".

Referrals:

Responsible Party: Providers; DM Coordinator; CHR DM Case Manager

- ✓ All Tele-Endocrinology visits require a written referral from an MD or FNP.
- ✓ Referrals should be completed on an Outreach form, Appendix 3 – "Endocrinology Visit Referral", and delivered to the Outreach department.
- ✓ A referral can be initiated by any "Responsible Party" named above.

Scheduling Appointments:

Responsible Party: DM Coordinator; CHR DM Case Manager

- ✓ Patient should be contacted by phone or home visit. When making an appointment with the patient, review the "Telemedicine Fact Sheet", Appendix 8.
- ✓ Appointments should be booked using he "Telemedicine Pre-Visit Endocrinology Chart Review Form" Appendix 5.
- ✓ Appointment slots will be filled allowing One hour for new patients and One half hour for revisits.
- ✓ For every patient scheduled there will be a back up patient scheduled.
- ✓ Appointments will be shared with the front desk personnel so they can pull the appropriate charts and prepare for a client visit as they usually do.

Transfer of Patients Medical Records:
Responsible Party" DM Coordinator; CHR DM Case Manager

- ✓ All information listed on the "Telemedicine Pre-Visit Endocrinology Chart Review Form" Appendix 5, as well as any other pertinent information* will be collected, copied, and faxed three (3) days prior to the telemedicine clinic.
- ✓ The "UCD Referral Request Form" is to be used as the fax cover sheet Appendix 6 – "USD Referral Request Form". The "USD Authorization and Consent to Participate in Telemedicine Consultation" Appendix 7, will be completed and faxed for every visit.

** other pertinent information could include recent hospitalizations, other disease processes going on with the patient etc..*

Payment:

- ✓ Currently we are unable to charge third party insurance or any other insurance for these visits, therefore no billing paperwork will need to be generated electronically or manually.

Day of Visit:

Patient Outreach:
Responsible Party: DM Coordinator and/or CHR DM Case Manager

- ✓ Patients will be called in the morning to remind them and to assess whether they need a ride. Further education as to why this is such an important visit may be required.
- ✓ ***Remember! Schedule patients to arrive at clinic one half hour before the actual telemedicine visit.***

Technology Prep:
Responsible Party: Information Technology Technician

- ✓ The PolyCom unit should be turned on and a test call completed at least one hour before visits begin.

Rooming Client:
Responsible Party: Clinic Nurse; Medical Assistant

- ✓ Telemedicine patient will be roomed as any other patient, i.e., vitals taken and recorded on PCC as well as a note with the reason for the visit.
- ✓ To ensure recording in the electronic record by data entry personnel a PCC from should be completed accurately. Appendix 9 "PCC Ambulatory Encounter Record".
- ✓ "TH-TM clinic" at upper left corner of form
- ✓ Under the "purpose of visit" section a note including the words "DM-Endocrinology Visit" along with the code "V77.99".
- ✓ Primary provider initials (upper right corner) should be those of USD provider, then above that the RVIHC provider and above that all other personnel associated with that visit.

Responsible Party: Provider; CHR; DM Case Manager

- ✓ The responsible party will speak with the UCD provider or UCD support staff via the video conference unit to ascertain that they have the information they need for the next client to be seen.
- ✓ The responsible party will then bring the client into the telemedicine suite and introduce patient to the provider and leave the room.

Post Visit:

Follow-up at RVIHC Clinic
Responsible Party: Provider; CHR; DM Case Manager; DM Coordinator

- ✓ After the telemedicine patient appointment is completed the RVIHC provider will follow-up with the UCD provider and the patient.
- ✓ The RVIHC provider will accompany patient to the front desk to set up a follow-up appointment.
- ✓ After all telemedicine visits are completed the RVIHC provider, the CHR Case Manager and/or DM Coordinator will discuss any changes in care. For each patient a referral will be made to the Outreach department that outlines a care plan that reflects the endocrinology visit recommended and RVIC provider input.

Follow-up in the community
Responsible Party: CHR; DM Case Manager; DM Coordinator

The CHR will follow-up with patient within two weeks to:

- ✓ Facilitate any changes in care
- ✓ Complete lab work needed
- ✓ To ensure patient attends next scheduled visit

Appendix 1-g Telemedicine Demonstration Project
PATIENT SATISFACTION SURVEY

DATE: _____

METHOD OF TELECONSULTATION: *(PLEASE CHECK ONE)* **Live** _____ **Store & Forward** _____

TYPE OF TELECONSULTATION: *(PLEASE CHECK ONE)* **1ST** _____ **Follow-up** _____

How many times have you used Telemedicine? _____

CHECK OR CIRCLE THE MOST APPROPRIATE RESPONSE

1. In the past, I have had to wait to see a specialty doctor: ___ 1 to 14 days ___ 15 to 30 days ___ 31 to 60 days ___ 61 to 90 days ___ longer than 90 days ___ N/A

	STRONGLY DISAGREE				STRONGLY AGREE
2. Telemedicine made it easier for me to receive specialty services today.	1	2	3	4	5
3. The care I received using telemedicine was as good as seeing the specialty doctor in person.	1	2	3	4	5
4. I would use telemedicine again.	1	2	3	4	5
5. Overall, I like using telemedicine.	1	2	3	4	5
6. My questions about telemedicine were answered By the doctor or nurse in my clinic.	1	2	3	4	5

PLEASE RESPOND TO THE FOLLOWING <u>ONLY IF YOU HAD A LIVE TELECONSULTATION:</u>

1. Everything the specialty doctor needed to help me was ready for my telemedicine appointment *(laboratory tests, medical chart, etc.)*.	1	2	3	4	5
2. I was introduced to all the doctors/nurses in both locations.	1	2	3	4	5
3. The specialty doctor told me what was wrong with me or what to do to improve my condition.	1	2	3	4	5
4. The picture was clear, I could see the doctor.	1	2	3	4	5
5. I could hear the doctor.	1	2	3	4	5

Other comments: *_____

_____

_____

*** May we contact you directly as follow-up on this survey? If yes, please provide your name and phone number:**

_____

Appendix I-h
Components to Consider for a Teleophthalmology Protocol in the Primary Care Setting

1. **Identify patients for annual retinal screening***
   a. Search data base for eye screens needed and create list
2. **Education***
   a. Develop three minute dialogue
   b. Chart event
   c. Insure educational event is recorded electronically
3. **Capture retinal image***
   a. Chart event
   b. Insure event/results are recorded electronically to distinguish this event as telemedicine event
4. **Give patient referral for annual diabetic eye exam***
   a. Chart event
   b. Insure event is recorded electronically
5. **Training***
   a. Develop periodic training schedule, i.e., photographer should perform 20 practice photos and share with ophthalmologist. This should be done on an annual basis and recorded. Items to measure: image quality, consents signed consistently, data recorded.
   b. In the event of turnover, contact the Diabetes Coordinator at HIS CAO for a list of folks in your area that are available to train.
6. **Fact Sheet**
7. **Follow-up less than one year**
   a. In some instances the ophthalmologist may want to have the patient revisit in person in less than one year.
   b. Use Diabetes Management System to enter recall dates and generate monthly reports that identify patients due for follow-up visit to ophthalmologist.
8. **Dilation?**
9. **Perform visual acuity test**
   a. Chart event/results
   b. Insure event/results are recorded electronically
10. **Perform visual field test**
    a. Chart event/results
    b. Insure event/results are recorded electronically
11. **Perform tonometry test**
    a. Chart event/results
    b. Insure event/results are recorded electronically

*Components of a basic community health model

Note: For a copy of the ATA guidelines for Teleophthalmology go to:
http://www.americantelemed.org/ICOT/diabeticreionpathy.FINAL.pdf

Tribal Health Center
Teleophthalmology Protocol

Purpose:
Provide effective, efficient and convenient retinopathy screening for diabetic clients.

Patient Identification & Chart Review

Responsible Party: DM Coordinator; CHR Manager
Note: The responsible party must be familiar with the Diabetes Management Program (DMS) in the Resource Patient Management System (RPMS).

Chart review should be completed on all patients identified as active diabetic clients in the DMS program to determine their last eye exam. To do this:

- ✓ Run individual DM Audit forms. To generate audit forms in RPMS, Appendix 1-"Individual Diabetes Audit Query."
- ✓ You an use the "Assessment of Diabetes Care 2001" form to write down eye exam date, Appendix 1 – page 3. The form already has a date for an eye exam showing Oct. 5th 2001.
- ✓ If there were no eye exam date on the audit form or if the eye exam date fell in the last Audit year (April 4, 2001 to march 31, 2002) then chart review should be completed to find the last eye exam completed. **(Note:** Oct. 5th 2001 falls in the last Audit year)
- ✓ That date should be recorded on the audit sheet so that it can be entered into the electronic record.

Data Entry:
Responsible Party: DM Coordinator; CHR Case Manager

- ✓ Enter eye exam dates through the DMS using the DMU menu item.
- ✓ To do this check with your DM coordinator or site manager locally or at the HIS California Area Office.

Follow-up Report:
Responsible Party: DM Coordinator; CHR Case Manager

- ✓ You are now ready to create a report that will list patients that are in need of an eye exam now or in the next thirty days. To do this, follow the example report, Appendix 2 – "Follow-Up Report Eye Exams".
- ✓ The list generated should be the basis of your Outreach effort to complete retinal eye exams, Appendix 2 – page 4.

Outreach:
Responsible Party: DM Coordinator; CHR Manager

Outreach to patients should include:

- ✓ Reminder letters
- ✓ Home visit reminders with transportation to clinic
- ✓ CHR to stuff chart Audit reminder for clinic staff to follow-up with patients

Screening:

Photographers should be trained before using any of the optical camera equipment and software. New photographers should have at least 10 patients photographed, and graded, and be will versed in areas of, lighting, flash, patient positioning and focusing.

1. Power up equipment
   Responsible Party: Trained Photographers; Clinic Managers; TH_TM Coordinator

   - ✓ Make sure the three cables that come from the computer are plugged into the camera unit. Each cable is labeled for identification of where to plug it in.
   - ✓ You will need the password when turning on our computer it is XXXXX.
   - ✓ Make sure the optical camera is also on. There is a power switch located at the right side of the unit.

2. To ensure recording in the electronic record by data entry personnel, a PCC form should be completed accurately. Appendix 3 "PCC Ambulatory Encounter Record".
   Responsible Party: Trained Photographers; Clinic Managers; TH_TM Coordinator

   - ✓ "TH_TM clinic" at upper left corner of form.
   - ✓ Under the "purpose of visit" section a note including the words "Retinal Screening" along with the code "V80.2".
   - ✓ Primary provider initials (upper right corner_ should be those of the RVIHC provider, then above that the photographer and above that all other personnel associated with that visit.

3. Patient education:
   Responsible Party: Trained Photographers; Clinic Managers; TH_TM Coordinator

   - ✓ Explain procedure to client and share hand-out on the retina, Appendix 4.
   - ✓ Have patient sign "Consent", Appendix 5 – "Authorization and Consent to Participate in Telemedicine Consultation.
   - ✓ **Give Patient Survey**, Appendix 6 – "Round Valley Indian health Center Client Survey, American Indian Diabetic Retinopathy Program".

4. Acquire Images
Responsible Party: Trained Photographers; Clinic Managers; TH_TM Coordinator

- ✓ Open the Image net software program located at the "desktop" of the Teleophthalmoloy computer.
- ✓ Choose "Capture"
- ✓ Choose "Non_mid"
- ✓ Choose "Register Patient" a registration window will open
- ✓ Fill in "ID Code" using the patients birth date (if you have a person with the same birth date as another client you will need to add a "-2" or "-3" etc to the end of the date as needed e.g. 07/15/91-2.
- ✓ "Last Name First name" (self explanatory)
- ✓ "Birth Date" (fill in again, no need to account for repeat Birthdates)
- ✓ "Male or Female" (self explanatory)
- ✓ "Chart Number" – fill in birth date here add "N-" if the patient in Non-Indian e.g. N-07/15/91.
- ✓ "Entry Class" Type "Indian" "Other" (Non-Indian) as appropriate
- ✓ Under "Physicians", click down arrow on Number 1 and choose "Dr Mason"
- ✓ Under "Physicians", click down arrow on Number 4 and choose the appropriate photographer
- ✓ Under "Custom Fields" click down arrow on "Referring Clinic" choose Round Valley Indian Health.
- ✓ Click "OK". This will bring up your capture window and you are now ready to take pictures.
- ✓ **Remember to remove dust cover from lens**
- ✓ **Remember if equipment sits idle for a few minutes your viewing screen will go blank, press top of joy stick to regain picture.**

NOTE: (New photographers should have at least 10 patient photographed, and graded, and be well versed in areas of, lighting, flash, patient positioning and focusing.)

- ✓ Position patient adjust lighting and flash and take pictures, you will need two images per eye
- ✓ For each eye you will need a 90 degree and a 45 degree angle shot.
- ✓ External pictures can be taken as appropriate to show cataracts or other abnormalities.
- ✓ **Remember you may not be able to capture images on all clients due to, small pupil size, pigmentation, cataracts and other eye conditions. These clients will need to be referred to directly to Dr Mason.**
- ✓ To save images go to "file" and choose "save". This will bring up a window labeled "save captured images" (do not save as proof sheet). Repeat these steps for all images you want to save.

5. Preparing images to send:
Responsible Party: Clinic Manager; TH_TM Coordinator

To send images you will need to save all images to a file on your desk top as well as make a face sheet (this gives demographic info to the provider) and save it to the file with all the images. You will need to be familiar with RPMS. Images need to be sent to Dr XXXX as well as CQI staff. Follow steps below to do this.

- ✓ From the image net opening window, choose "patient" then choose "Select Patient".
- ✓ Click on the patient name and then click "OK" (Upper Rt) this will bring up the patient and a list of their images.
- ✓ To choose images hold down the "CTRL" key and click on the images you want to pull up. Release the "CTRL" key.
- ✓ Click on "OK" (Upper Rt) This will bring up all chosen images.
- ✓ The image on top will be your active image. Choose "utilities" (from menu items at the top of the screen) and then choose "Export Image". This will allow you to browse for the folder you would like to place the image in.
- ✓ Browse to desktop and choose the "Images to send" folder.
- ✓ Make a new folder and name it using the patients name and birth date (Doe, John – 08-28-54).
- ✓ Name image using the photographers initials and the number of the image e.g. CG-234 **(remember to save images as Type JPEG (*jpg))** save image to file by clicking "Open"
- ✓ Make sure the "JPEG Quality" window has "Maximum" chosen and click "OK"
- ✓ Save all other images to this file.
- ✓ Close Image net window

Acquire Face Sheet:
Open Net term and acquire a face sheet for this client, to do this:

- ✓ Using Net Term open RPMS for Round Valley and choose the "Face sheet" option by typing in "Face" at the main menu prompt and then press "Enter" you will then be prompted for "Patient Name".
- ✓ Click on the "File" menu item at the top right of the Net Term window and choose "Session Logging". (This will allow you to save the face sheet you are about to create in a retrievable file). Session logging will allow you to browse to the "Images to Send" folder on the "desk Top" and then to your patients folder.
- ✓ Name the file "FACEDoe, John" and click open.
- ✓ Type Doe, John at the "Patient Name" prompt and "Enter". Keep pressing the "Enter" key until the face sheet report is completed.
- ✓ Go to "File" menu item at the top of the Net Term window and choose "Session Logging" again to uncheck it. This stops Session Logging. Your face sheet file is now created.
- ✓ Close Net Term window.

6. Send Images to Dr Mason
Responsible Party: Clinic Manager; TH_TM Coordinator
   - ✓ Open Image Net main window from the "Desk Top" and bring up patient images you want to send. To do this see the first four steps under 5. Preparing images to send.
   - ✓ With images showing click on "file" (from menu at top of window) and choose "send image".
   - ✓ This will bring up email window and you need to choose Dr Mason's email address
   - ✓ Click "OK"
   - ✓ Click "OK" at the warning window *"the profile name is not valid…)*
   - ✓ Click "OK" at the *"choose profile window"*
   - ✓ Enter password (%Roun1Oph) and click "OK"
   - ✓ Click "Yes" at "Microsoft Outlook" warning window *(a program is trying to access email…)* The image will be inserted to the email along with demographic data.
   - ✓ Using the "attach" utility on the email window insert the rest of the images from the patient image file you created including the face sheet file.
   - ✓ Click "Send"
   - ✓ Click "Yes" at virus warning window
   - ✓ Enter password (%Roun1Oph) when prompted and hit enter. Email will be sent.

7. Send Images to CQI
Responsible Party: Clinic Managers; TH_TM Coordinator
   - ✓ Close all windows
   - ✓ Open "Outlook" from the desk top
   - ✓ Enter password (%Roun1Oph)
   - ✓ Click on "New" to bring up email window
   - ✓ Click on "to" to bring up addresses
   - ✓ Choose CQI and click "To" and click "OK"
   - ✓ Using the attachment utility browse to patient file in the "Images to Send" folder on the Desk top and attach images. (you can hold the "Ctrl" key down and with your mouse click all images you want to attach and then click on "Insert"). **Do not attach a face sheet, the images should have no identifying information when sent to CQI.**
   - ✓ Click "Send".
   - ✓ Click yes at virus warning window
   - ✓ Enter password (%Roun1Oph) when prompted and hit enter. Email will be sent.

8. Survey:
   - ✓ **Retrieve Patient Survey,** Appendix 6.

Report Follow-up:

1. Reports with attached billing slips are sent to the telemedicine coordinator from Dr. Mason's office.
   - ✓ A purchase order is to be completed and turned in to the fiscal department with billing slips attached.
   - ✓ The ophthalmology report is to be given to medical records
   - ✓ Medical records will stuff chart with report and give to appropriate RVIHC provider.
2. Normal results
   - ✓ A referral is to be make to the Outreach CHR for follow-up with patient at their next quarterly Diabetic visit. The result of the test should be conveyed on the referral so the CHR can report negative findings to the client while making a new appointment for the patient.
3. Abnormal results – No referral to outside provider needed at this time
   - ✓ A referral is to be made to the Outreach CHR for follow-up with patient at an appropriate time interval to be chosen by the RVIHC provider.
   - ✓ The CHR will not discuss positive results with the patient. The CHR will facilitate RVIHC provider visit as requested.
   - ✓ Once patient has met with RVIHC provider, follow up visits should be monitored and/or scheduled by the CHR.
4. Abnormal results – Referral to outside provider needed
   - ✓ It is up to the RVIHC provider whether to visit with client before referring to an outside provider.
   - ✓ A CHS referral will be sent directly to the CHS officer and an outreach referral will be sent to the CHR for facilitation of visit to an outside provider.

Appendix I-i TRIBAL HEALTH CENTER, INC.

POSITION: Information Systems Technician
SUPERVISOR: Technology Department Director
HOURS: Full Time – 40 hrs per week
SALARY: $00,000 annually

DUTIES AND RESPONSIBILITIES:

1. Provide technical assistance to "HEALTH CLINIC" staff. Assist in training staff for basic PC functions and use of video conferencing equipment.
2. Maintain and troubleshoot digital and analog phone systems.
3. Communicate with vendors and provide product research to meet the expanding needs of all "HEALTH CLINIC" departments.
4. Communicate with IT staff from partnering agencies regarding all information and medical device operational issues.
5. Maintain and troubleshoot medical peripherals used for patient visits that require video conferencing.
6. Maintain and troubleshoot wireless network connections.
7. Actively participate as support to program technology activities.
8. Web site maintenance
9. Install, configure, and maintain complex application systems and communication software in a heterogeneous environment.
10. Install, configure, and maintain video conferencing hardware/equipment.
11. Install and configure PC software packages.
12. Work with vendor technical support to resolve problems.
13. Coordinate installation and maintenance of circuits associated with data and video communication.
14. Identify and document corrective modifications to the information system.
15. Prepare and maintain network diagrams, inventory sheets, and inventory control.
16. Gain working knowledge of HIPPA regulations as it pertains to transfer of patient information electronically.
17. Maintain virus control software and maintain backup logs for key computers.
18. Have working knowledge of Microsoft operating systems and peripheral software.

QUALIFICATION REQUIREMENTS:
The requirements listed below are representative of the knowledge, skills and/or abilities preferred.

EDUCATION AND/OR EXPERIENCE:

1. BA Degree or higher and/or combination of education and experience.
2. Valid CA Drivers License

DRUG FREE WORKPLACE RELATED REQUIREMENTS:

1. Must be willing to take and pass a pre-employment drug screening.

- *Indian preference will be given (in accordance with the Indian Preference Act – Title 25, US Code, Section 472 and 473)*

TRIBAL HEALTH CENTER, INC.

POSITION: Telehealth/Telemedicine Site Coordinator
SUPERVISOR: Executive Director
HOURS: Full Time – 40 hrs per week
SALARY: Negotiable / $00,000 - $00,000 annually

The Site Coordinator is responsible for the daily operation of "HEALTH CLINC" TH/TM project, scheduling appointments, setting-up and testing equipment, collection of evaluation data, supporting physicians and other providers during consultation, promotion of the project in local community.

DUTIES AND RESPONSIBILITIES:

PROGRAM COORDINATION –

1. Primary contact with clinic administration and project partners.
2. Organizing and scheduling on site training.
3. Coordinating clinics with consulting Site Coordinator.
4. Scheduling video conferencing consultations.
5. Organizing demonstrations of the system for visitors.
6. Basic technical support and general systems maintenance.
7. Data collections and report marketing.
8. Public relations and marketing.
9. Provide organized feedback to the Executive Director regarding operational issues to facilitate further program development.
10. Develop materials for program summary, annual report and various presentational materials.
11. Provide administrative support, when required, for physicians and other medical staff in order to enhance their functions and support Telemedicine.

CLINIC ADMINSITRATION –

1. Insure that surveys are completed.
2. Insure contents are signed and all clinical protocols are adhered to with respect to clinical data collection, transmission and storage.
3. Prepare consult room and equipment prior to scheduled consults.
4. Insure that successful video connections are established prior to consult.
5. Be available during consult to provide technical assistance when necessary.
6. Create and distribute promotional materials, documents, consent forms, satisfaction surveys and various items of information to on-site medical staff and patients.
7. Act as a liaison between referring physicians, patients, specialty physicians, clinic staff, admissions, patient accounts, funding sources and other departments or services as needed.

QUALIFICATIONS AND REQUIREMENTS

To perform this job successfully, an individual must be able to perform each duty satisfactorily. The requirements listed below are representative of the knowledge, skills and/or abilities preferred.

EDUCATION AND/OR EXPERIENCE:

1. High school diploma or GED.
2. BA Degree and/or combination of education and experience.
3. Valid CA Drivers License.
4. Verbal and written communication skills, and the demonstrated ability to understand and to convey information clearly.
5. Experience working in a clinical setting with technicians, nurses and physicians.
6. General knowledge of clinic scheduling.
7. Computer skills and an ability to learn and understand the general technical requirements for the telemedicine systems.
8. Ability to provide basic technical support and to triage more difficult problems to appropriate staff.
9. Ability and skill to operate a PC for word and the internet.
10. Organizational skills to prioritize workload and meet deadlines, develop and carryout project assignments in an efficient and timely manner and to provide accurate and succinct documentation of activities.
11. Demonstrated ability to communicate effectively with physicians and clinical staff.
12. Ability to positively represent the Grant to external organizations and participants.
13. Skill to exercise tact, courtesy and diplomacy when dealing with individuals at any level.
14. Knowledge about institutional short-and long-term goals.
15. Ability to maintain confidentiality, exercise discretion, use independent and mature judgment, work independently without supervision and commit to excellence.
16. Analytical skills to independently and tactfully assume responsibility for coordination and completion of complex projects requiring interactions with many individuals in a matrix organizational structure. Ability to work with minimal direction and to take the initiative to follow up on projects.

DRUG FREE WORKPLACE RELATED REQUIREMENTS:

1. Must be wiling to take and pass a pre-employment drug screening.

- *Indian preference will be given (in accordance with the Indian Preference Act – Title 25, US Code, Section 472 and 473)*

Teleopthalmology Photographer
Job Specific Responsibilities

Job Specific Responsibilities:

A. Captures quality images.
B. Adheres to department protocols.
C. Ensures patient comfort and safety during procedure.

Additional Responsibilities:

D. Explains the process of taking a retinopathy image to the patient including follow-up.
E. Explains to patients the progression of retinopathy and the impact of factors under patient control.
F. Explain the difference between teleophthalmology and a full-eye exam.
G. Utilizes computer system as needed for information and to complete tasks (i.e., entering all client information prior to screen).
H. Selects and send images to the consulting ophthalmologist.
I. Selects and send images and appropriate data to CQI consultant.
J. Determines appropriate action on return reports from consulting ophthalmologist.
K. Identifies deficiencies during image capture and applies methods to correct.
L. Takes measures per protocol to protect patient confidentiality.
M. Per clinic policy measures visual acuity and intraocular pressure.
N. Per clinic policy instills eye drops with an understanding of the potential side effects.
O. Able to set up camera and associated equipment. Able to perform basic equipment maintenance and know when and who to call for technical help.

I have reviewed the job description and am willing and able to fulfill all of the responsibilities herein outlined.

Signature: _____ Date: _____

Photographer

Responsibility: Patient Care:	Satisfactory	Unsatisfactory	Comments	Date/Signature
1. Ability to make the patient comfortable. Can operate equipment associated with patient comfort.				
2. Ability to implement alternative strategies for increasing pupil size. Can name two alternative strategies.				
3. Able to articulate instructions for image capture.				
4. Able to verify image is good for capturing a sufficient image. Focus; field determination; artifacts.				
5. Able to save image to patient record. Use of software.				
6. Able to send data file with images to ophthalmologist.				
7. Able to save images for CQI using export function to CQI directory. Trainee should use appropriate file naming scheme				

8. Able to send images in CQI directory to Quality Improvement center.				
9. Able to implement and follow basic security protocols to protect patient information. Logs off of system when complete; protects password.				
10. Able to reference manual and online helpdesk to answer questions.				
11. Have an understanding of basic disease information, including progression and treatment options.				
12. Able to recognize overt disease.				
13. Understand what an ophthalmologist considers a sufficient image.				
14. Ability to identify & name artifacts. Name 3 types.				
15. Able to retrieve report from ophthalmologist.				

16. Able to run query on various data fields - especially diagnosis and patient totals.				
17. Able to interpret CQI report.				
18. Able to identify and implement strategies to improve image quality.				
19. Identify a system to send data to be tracked.				
20. Identify a system to send data to diabetes case management program.				
21. Able to explain the difference between teleophthalmology and conventional ophthalmologic encounter.				
22. Able to name 2 limits of teleophthalmology.				
23. Understand telemedicine program mandates - consent forms.				
24. Able to name two other telemedicine applications that may be appropriate for future telemedicine expansion in IHP's.				

P.O. Box 123
Anywhere, CA 97728

Appendix I-j

TRIBAL HEALTH CENTER

Date

Ms.
609 Banks Rd
Anywhere, CA 97728

Dear Ms. :

A review of your chart shows that you are now due for your annual eye screening / exam. Eye screening takes place here at the clinic in Anywhere and the exam only takes a few minutes. Please cal our Outreach Department and ask for Joan Alright and she will make you an appointment. There is no waiting for these screenings; you come right in and get the screening done in approximately 15 minutes.

FACTS ABOUT DIABETIC AND EYE DISEASE & CARE:

1. People with diabetes are 25 times more likely to become blind than are people without diabetes.
2. Almost half of all people with diabetes will develop some degree of diabetic eye disease.
3. All people with diabetes need to be referred to an ophthalmologist for eye exams at least once per year.
4. **YOU CAN PREVENT EYE DISEASE AND BLINDNESS IN YOURSELF OR LOVED ONES BY COMING IN FOR EYE SCREEN OR EXAM ANNUALLY.**
5. Please take the time to contact us for this valuable service. Call 888-4444 extension 555.

Sincerely,

Joan Alright
Diabetic CHR

Appendix 1-k TRIBAL HEALTH CENTER
CLIENT SURVEY

AMERICAN INDIAN DIABETIC RETINOPATHY PROGRAM

This technology is a new opportunity for the Tribal Health Center to bring eye-screening services to your community. Please take a few minutes to tell us about your experience with the screening process.

Age: _____ ☐ Male ☐ Female

Ethnicity:
☐ American Indian/Native American ☐ Hispanic/Latino
☐ Caucasian/White ☐ African American/Black
☐ Asian/Pacific Islander ☐ Multi-racial
☐ Other Please List: _____

Education:
☐ Elementary School ☐ Some High School ☐ High School Graduate
☐ GED ☐ Some College ☐ College Graduate ☐ Degree? _____

1. How did you first hear about the diabetic eye screening services at the clinic? ***(Please check one box)***
   ☐ Diabetes education ☐ A friend
   ☐ Community Health Representative ☐ Health care provider
   ☐ Other – ***please name:*** _____

2. How long has it been since you had your eyes dilated for an exam? ***(Please check one box)***
   ☐ Less than one year ago ☐ I have never had my eyes examined
   ☐ One to two years ago ☐ I can not remember
   ☐ More than two years ago

3. Where have you gone for your eye exams in the past? ***(Please check all that apply)***
   ☐ Willits ☐ Ukiah
   ☐ Santa Rosa ☐ Lakeport
   ☐ Williams ☐ Sacramento
   ☐ San Francisco ☐ Other _____
   ☐ I have never had my eyes examined.

4. What has presented the greatest problem in getting an eye exam in the past? ***(Please check all that apply)***
   ☐ getting an appointment ☐ traveling
   ☐ time off from work ☐ family obligations
   ☐ other _____

5. Was your visit to the clinic today only for your eye exam? ☐ Yes ☐ No

   If NO, what was the other purpose? ☐ Diabetic exam ☐ Other _____

6. Did you expect to have your eyes screened today? ☐ Yes ☐ No

7. Did you feel that you could ask the staff questions today?

☐ Yes ☐ No If NO, Why not? _____

_____

_____

8. Did you learn anything about your eye health that you didn't already know? ***(Please circle the number that best represents your opinion)***

Nothing		A little		Very Much
1	2	3	4	5

Please circle the number that best describes your view of the eye screen services you received today:

	STRONGLY DISAGREE				STRONGLY AGREE
9. The staff treated me with respect.	1	2	3	4	5
10. The person with whom I spoke understood my needs.	1	2	3	4	5
11. It helped to have all the services in one location	1	2	3	4	5
12. The materials I received make sense to me.	1	2	3	4	5
13. I was comfortable while waiting	1	2	3	4	5
14. I am worried about the confidentiality of my medical information.	1	2	3	4	5
15. This kind of screening is convenient	1	2	3	4	5
16. This kind of screening is an improvement.	1	2	3	4	5
17. This staff cares about my well being.	1	2	3	4	5
18. I would like my next eye screening to be done this way.	1	2	3	4	5
19. I would recommend this exam to my family members.	1	2	3	4	5

THANK YOU FOR YOUR TIME

Appendix I-L CLIENT SURVEY -- TRIBAL HEALTH CENTER TELEMEDICINE ENDOCRINOLOGY SERVICES

This technology is a new opportunity for the Tribal Health Center to bring specialty health care services to your community. Please take a few minutes to tell us about the telemedicine services you received.

Age: _____ ❑ Male ❑ Female

Education: ❑ Elementary School ❑ Some High School ❑ High School

Graduate: ❑ GED ❑ Some College ❑ College Graduate ❑ Degree? _____

1. How did you first hear about the telemedicine endocrinology services at the clinic? ***(Please check one box)***

   ❑ From a friend or family member ❑ Community Health Message Board
   ❑ From a health care provider ❑ Other _____

2. Have you received endocrinology care before?

   ❑ Yes ❑ No

   - **If you answered "Yes" to question #2,** where did you go for the endocrinology care? ***(Please check all that apply)***

     ❑ I never had to go ❑ Willits
     ❑ Williams ❑ Lakeport
     ❑ Santa Rosa ❑ Sacramento
     ❑ Ukiah ❑ San Francisco
     ❑ Clinic ❑ Other _____

   - How did you get there? ***(Please check one)***

     ❑ I never had to go ❑ Friend/family member's car
     ❑ My own car ❑ CHR (Community Health Representative)
     ❑ Other _____

3. How comfortable were you with the telemedicine services you received through this program? ***(Please circle the number that best represents your opinion)***

Not very		Moderately		Completely
1	2	3	4	5

4. Did you feel that you could ask the Clinic staff questions today?

❑ Yes ❑ No If No, Why not? _____

_____

5. Did you feel that you could ask the doctor questions today?

❑ Yes ❑ No If No, Why not? _____

_____

6. Do you feel the "Clinic" staff was well prepared to use this technology?
(Please circle the number that best represents your opinion)

Not very		Moderately		Completely
1	2	3	4	5

7. Did you learn anything today that will help you keep control of your health?
(Please circle the number that best represents your opinion)

Nothing		A little		Very Much
1	2	3	4	5

Thoughts on your response:

_____

_____

_____

_____

Please circle the number that best describes your view of the telemedicine specialty health services you received today:

	STRONGLY DISAGREE				STRONGLY AGREE
8. Dr. ??? understood my needs	1	2	3	4	5
9. Dr. ??? was able to provide the information I needed to take control of my health.	1	2	3	4	5
10. I trust Dr. ??? recommendations	1	2	3	4	5
11. I feel my health problems are going to be resolved.	1	2	3	4	5
12. The presence of the "Clinic" staff during the service was helpful.	1	2	3	4	5
13. I will recommend these services to others.	1	2	3	4	5
14. I was able to speak freely with Dr. ???	1	2	3	4	5
15. I am worried about the confidentiality of my medical information being transmitted.	1	2	3	4	5
16. This method of 'seeing' a specialty provider is convenient.	1	2	3	4	5
17. This method of 'seeing' a specialty provider is an improvement.	1	2	3	4	5
18. The "Clinic" staff cares about my well being.	1	2	3	4	5
19. Dr. ??? cares about my well being.	1	2	3	4	5
20. I would like my next endocrinology visit to be done this way.	1	2	3	4	5

21. Overall, how satisfied are you with the telemedicine services you received? ***(Please circle the number that best represents your opinion)***

Very Dissatisfied		Somewhat		Very Satisfied
1	2	3	4	5

Thoughts on your response:

_____

_____

_____

THANK YOU FOR YOUR TIME

Appendix 1-m, IHS Standards of Care for Patients With Type 2 Diabetes
August 2003

The standards of Care for Type 2 diabetes have been developed and updates by the HIS National Diabetes Consultants to help provide consistent, quality care to patients with diabetes.

1. Baseline Studies

Height – Measure once and record on PCC health Summary. If PCC is not available, record on diabetes flow sheet. For children <18 years of age, height and weight should be recorded at each visit. Use to calculate body mass and ideal or reasonable body weight.

Date of Diabetes Diagnosis – Record on PCC Health Summary. If PCC is not available, record on diabetes flow sheet. Longer duration of diabetes correlates with increased risk of complications.

ECG – Obtain baseline then repeat every 1-5 years as clinically indicated (for those age 40 and above, or with diabetes duration over 10 years, every 1-2 years is recommended).

PPD – Should be documented once after diagnosis of diabetes (Offer INH prophylaxis to patients according to protocol – refer to Section 9).

Depression – Studies have shown that many patients with diabetes also have depression and that depression may affect the control of their diabetes. Record if an assessment for depression has been done and a diagnosis made. The following website from the National Institute of mental Health has information on screening and treatment of depression:
http://www.nimh.nih.gov/practitioners/index.cfm

2. Each Clinic Visit

At each clinic visit, the appropriate education, intervention, referral, and or follow-up will be provided as indicated.

Weight – Compare with measurements from prior visits to identify trends.

Blood Glucose – Results of lab determinations and self-mentoring should be available for timely discussion with the patient. Hemoglobin A1c (A1C) is the "gold standard" for assessing glucose control. This test should be conducted at 3-4 month intervals. Lowering A1C has been associated with a reduction in micro vascular and neuropathic complications of diabetes.

- Fasting.post-prandial glucose measurement and self-monitoring should be available for timely discussion with the patient at each visit. Self-monitoring BG records are vital to diabetes management decisions.

- Determine if **A1C** has been performed within the past 3-4 months, and order of due. **A1C** estimates the average degree of glycemic control over the preceding 3 months. **A1C** is the standard way to measure glycemic control.

- **A1C** results should be discussed with the patient at the time of the patient visit. If in-house measurement is unavailable, blood sample should be obtained several days before the clinic visit.

Blood Pressure – Target BP > 130/80. Additional protection against complications, including renal failure and cardiovascular disease, may be obtained by lowering BP even further.

In persons older than 50 years, systolic blood pressure greater than 140 mm Hg is a much more important cardiovascular disease risk factor than diastolic blood pressure. Individuals with a systolic blood pressure of 120-139 mmHg is a diastolic blood pressure of 80-89 mmHg should be considered as prehypertensive and require health-promoting modifications to prevent cardiovascular disease.

- Accurate blood pressure measurement us the office is stressed.
- BP numbers and goals should be provided to patients.
- Ambulatory Blood Pressure Monitoring is warranted for evaluation of "white-coat" hypertension in the absence of target organ injury. It may also be helpful in assessing patients with apparent drug resistance, hypotensive symptoms with antihypertensive medications, edisodic hypertension, and automatic dysfunction.
- Major lifestyle modifications shown to lower BP include weight reduction in overweight or obese individuals, adoption of the Dietary Approaches to Stop Hypertension (DASH) eating plan which is rich in potassium and calcium, dietary sodium restriction, physical activity and moderation of alcohol consumption.

Further recommendations and guidelines for the prevention, detection and treatment of high blood pressure may be found in the "The Seventh Report f the joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure," published in the May 21, 2003 issue of JAMA or visit the National Heart, Lung, and Blood Institute (NHLBI) web site at http://www.nhldi.nih.gov.guidelines/index.htm.

Facts about the DASH eating plan are also available on this website. Published data on the benefits of the DASH eating plan may be found in the New Journal of Medicine article published in the January 4, 2001 issue: "Effects on blood pressure of reduced dietary sodium and the dietary approaches to stop hypertension (DASH) diet."

In children and adolescents, hypertension id defined as BP that is, on repeated measurement, at the 95th percentile or greater adjusted for age, height, and gender. Lifestyle interventions are strongly recommended, with pharmacologic therapy instituted for higher levels of BP or if there is insufficient response to lifestyle modifications. ACE inhibitors and ARB's should not be used in pregnant or sexually active girls.

For BP tables and further information regarding hypertension in children and adolescents see the NHBLI 1996 Update on the Task Force Report (1987) on High Blood Pressure in Children and Adolescence: A Working Group Report from the National High Blood Pressure Education Program in the NHLBI web site at http://nhlbi.nih.gov/health/prof/heart/hbp/hbp_ped.htm. To use the tables, the height percentile is determined from standard growth charts. The child's measured systolic and diastolic BP is compared with the numbers provided in the table (page 14 for boys, page 15 for girls) for age and height percentile.

Foot Inspection – Inspection of feet and nails. Check for ingrown toenails, calluses, deformities, pressure points, ulcers, and cellulites. A more comprehensive foot exam should be done at least annually (see below).

3. Annual

Serum Creatinine – The serum creatinine is used to screen for renal insufficiency. Obtain a serum creatinine yearly and then use a formula to estimate Glomerular Filtration Rate (GFR). GFR should be used to stage chronic kidney disease. Estimated GFR < 60ml/min/1.73m² should prompt evaluation for anemia (Hgb), metabolic bone disease (Ca, Phosphorus, alkaline phosphates, PTH), and malnutrition (albumin).

Complete UA/Microalbuminuria – A test for urine protein should be performed yearly. If negative, a screening test for microalbuminuria should be performed (by A/C ratio or dipstick test). Dipstick-positive microalbuminuria should be confirmed on a separate specimen using an A/C ratio (abnormal microalbumin is 30-299 ug/mg; overt proteinuria is ≥ 300mcg/mg or 24 hour urine.

ACE inhibitors and angiotension receptor blockers (ARB's) are recommended in patients with microalbuminuria or proteinuria, even if normotensive, unless contraindicated.

Lipid Profile

Risk factors for atherosclerosis include LDL>100 mg/dl, HDL <40 mg/dl in men and <45 mg/dl in women, and TG>150mg/dl. Even lower LDL and TG values represent increased risk in persons with previously documented atherosclerosis. These risk factors, especially elevated LDL, should be treated aggressively. Caution should be used when considering agents that aggravate hyperglycemia.

A lipid panel should be performed at least annually (TC, LDL, HDL, TG). Consider direct LDL measurements, especially if TG>400 mg/dl or if the specimen is to be obtained non-fasting. Elevated TC, LDL, TG and low HDL confer greater risk for atherosclerosis. Optimal LDL cholesterol levels for adults with diabetes are <100 mg/dl. All patients with LDL>100 mg/dl require Medical Nutrition Therapy and other lifestyle modifications. Pharmacologic intervention is recommended if dietary interventions and lifestyle modifications are ineffective in lowering LDL to <100 mg/dl or immediately if LDL>160 mg/dl. The Heart Protection Study indicates that people with diabetes may benefit significantly from statin therapy even if their LDL is below 100 mg/dl. Read more about the Heart Protection Study in the July 6, 2002, issue of Lancet, available on the following website www.thelancet.com.

Information regarding the management of dysliplidemia in children and adolescents with diabetes may be found in the new American Diabetes Association Consensus Statement: "Management of Dysliplidemia in Children and Adolescents with Diabetes," published in the July 2003 issue of Diabetes Care. It reviews how frequently lipid levels should be monitored, how abnormal levels should be treated, and what additional research is needed. Or visit the ADA website at http://americandiabetesassn.org.

Eye Exam – Retinal exam through dilated pupils or stereo fundus photos. People with type 2 diabetes should receive an initial exam at diagnosis and at least yearly thereafter.

Dental Exam – Annual screen for periodontal disease and other oral pathology.

Complete Foot Exam – Risk assessment to include pulse check and sensory evaluation with monofilament, identification of foot deformity, and documentation of history of foot ulcers. More frequent follow-up foot care may be required based on clinical findings.

Screen for Neuropathy – By history and physical; include sensory, motor and autonomic evaluation.

4. Immunizations and Skin Tests

Flu Vaccine – Yearly in diabetes at all ages. Influenza vaccine can reduce diabetes-related hospitalizations by up to 79% during influenza epidemics.

Pneumovax – Immunize everyone ay the time of diagnosis. Reimmunization should be strongly considered five (5) years after the first dose for those patients at highest risk of fatal pneumococcal infection (e.g.. aslenic patients) or those at highest risk of rapid decline in antibody levels (e.g., those with chronic renal failure, nephrotic syndrome, or transplanted organs). Reimmunize all patients ≥ age 65 years if it has been >5 years since initial vaccination.

Td – Every 10 years.

Hepatitis B – Immunize persons whose renal disease is likely to lead to dialysis or transplantation (estimated GFR < 60 ml/min/1.73m²).

PPD – Once after diagnosis unless known positive. PPD-positive people with diabetes, including AI/AN with Type 2 diabetes, have 5 times the risk of reactivating TB. All diabetic patients with positive PPD including those over age 35 should be given INH chemoprophylaxis according to current guidelines (see Section 9).

5. Special Aspects of Diabetes Care

Antiplatelet Therapy

Aspirin has been used as a primary and secondary prevention strategy to prevent cardiovascular events. Men and women with diabetes have a 2-4 fold increase in risk of dying from complications of cardiovascular disease (CVD). Aspirin in doses of 162-325 mg/day is recommended for adult patients with diabetes. Aspirin should not be used in patients under 21 years of age because of the risk of Reye's syndrome.

Strongly consider aspirin therapy *(or other Antiplatelet therapy)* as a primary prevention strategy in high risk men and women age 30 and above with diabetes. This includes individuals with family history of CVD, cigarette smoking, hypertension, obesity, albuminuria and dysliplidemia.

Use aspirin therapy *(or other Antiplatelet therapy)* as a secondary prevention strategy in diabetic men and women who have evidence of large vessel disease, such as history of MI, stroke, peripheral vascular disease, claudication or angina.

Clopidogrel (Plavix) is another antiplatelet therapy known to reduce CVD in people with diabetes. Consider using this medication as an alternative to aspirin therapy if patient has significant GI intolerance or true aspirin allergy. Studies show similar if not better efficacy when compared to aspirin. Ticlopidine is another option but has been shown to have less efficacy than aspirin and requires more intensive monitoring.

Tobacco Use

Current tobacco use should be documented and a referral made to a program for counseling for cessation of tobacco use.

Distinguishing Type 1 from Type 2 Diabetes

Distinguishing adult-onset latent type 1 diabetes from type 2 diabetes is not always straightforward. Several laboratory studies may be helpful when the diagnosis is not clear clinically: C-peptide, the other half pro-insulin, can evaluate a patient's endogenous insulin secretion and measuring autoantibodies, GADA and ICA (antibodies to glutamic acid decarboxylase and islet cells) can detect an underlying autoimmune process. These tests can be useful in at least three clinical situations:

1. Solving a clinical problem about using oral agents vs. insulin.
2. Evaluating a patient with history of ketoacidosis when stable (useful in setting of ETOH, acidosis, and diabetes to determine ongoing need for insulin).
3. Evaluating a patient who is no-ketotic off if insulin, but has few or none of the components of the metabolic syndrome.

6. **Self-Care Education** – Use of the PCC education codes to document education is encouraged.

Nutrition Education – Meal planning, nutrition education, and exercise are the primary treatment strategies for Type 2 diabetes. The Indian Health Service Diabetes Program supports the American Diabetes Association position that all persons with diabetes should receive regular nutrition counseling and should be seen by an RD/nutritionist every six months to 1 year. Some people may require more frequent evaluation and counseling.

Diabetes Education – All patients with diabetes and their families should receive diabetes self-care information. The National Standards for Diabetes Care and Patient Education provide guidelines for education program development with criteria specific for AI/AN health care facilities. Every facility should work towards providing systematic mechanisms to make culturally relevant self-care information available for patients.

Exercise Education – Exercise is associated with improvement in both short- and long-term metabolic control. Exercise counseling should be provided to all persons with diabetes. The appropriate type of activity, including frequency, duration, and intensity, should be individualized for each patient.

Education and Glycemic Control

- Self monitoring results should be discussed with the patient at each visit.
- HbA1c results should be discussed with the patient within 2 weeks of the test, preferably ay the patient visit.

Self-Blood Glucose Monitoring (SBGM) – The purpose of SBGM is to determine the pattern of blood glucose throughout the day. This pattern provides information for selection and adjustments in therapy. Frequency of monitoring must be individualized and may vary as day-to-day circumstances require.

7. Routine Health Maintenance

Physical Exam
Complete exam as baseline, then routine.

Pap Smear/Pelvic Exam
Yearly

Further recommendations and guidelines for cervical cancer screening may be found on the following websites:
http://ahrq.gov/clinic/3rduspstf/cervcan/cervcanwh.htm and
http://www.ncbi.nlm.gov/entrez/query.fcgi?=Retrieve&db=PubMed&list_uids=12469763&dopt=Abstract
The American College of Obstetricians and Gynecologists is in the final stages of preparing their own Practice Bulletin for release later in 2003.

Breast Exam
Yearly

Mammogram
Every 1-2 years in women ages 40-49, yearly thereafter.

Rectal Exam and PSA may be offered for prostate evaluation in men ≥ 50 years of age.

Colorectal Cancer Screening

Potential screening options are numerous. However, within the Indian Health Service setting, access to care and cost constraints may limit provider options.

As a result, the Indian Health Service recommends the following:

1. Renewed emphasis on CRC screening
2. Improved patient education about CRC screening
3. Fecal occult blood testing (three samples gathered at home) every year if possible; every 2 years at minimum
4. Appropriate follow-up for positive FOBT results
5. Additional screening options if available
    a. Flexible sigmoidoscopy within the last 5 years
    b. Annual FPBT plus flexible sigmoidoscopy every 5 years
    c. Double contrast enema very 5 years
    d. Colonoscopy within the last 10 years

If the Patient is at risk for earlier onset CRC (eg, first degree relative with onset of CRC before age 50), screening should begin earlier and more frequently.

8. Pregnancy and Diabetes

All women who are in their childbearing years should receive pre-pregnancy counseling for optimizing metabolic control prior to conception. Counseling for family planning is essential to achieve this goal.

American Indian and Alaska Native women are at increased risk for developing gestational diabetes (GDM), as are women with certain other risk factors, including but not limited to the following:

- previous gestational diabetes
- previous fetal macrosomia
- unexplained stillbirth
- congenital anomaly
- obesity
- insulin resistance syndrome
- polycystic ovarian syndrome (PCOS)
- family history of diabetes

American Indian and Alaska Native women should be screened for pre-existing diabetes early in pregnancy. If early screening is negative, a screen for GDM should be repeated at 24-28 weeks gestation.

Women with GDM are at increased risk of developing type 2 diabetes after delivery (about one third of all AI/AN women with GDM will develop diabetes within 5 years). These women should be re-tested by OGTT at least 6-12 weeks post delivery to determine their glycemic status. Women with a normal postpartum OGTT should be re-tested every 1-3 years. Bear in mind that diagnostic standards for diabetes in breastfeeding women have not been established. Blood glucose should be monitored in the postpartum and lactating period, including regular self blood glucose testing, as clinically appropriate.

All women with a history of GDM should receive counseling/education regarding lifestyle modifications that will reduce or delay the development of type 2 diabetes. Moreover, the importance of maintaining optimal glucose control prior to and during any subsequent pregnancy should be stressed. Mothers should be made aware that children of GDM pregnancies should be monitored for obesity and abnormalities of glucose utilization.

Further recommendations and guidelines for the screening, diagnosis and treatment of GDM may be found in the most recent *Clinical Practice Recommendations* of the American Diabetes Association (published annually) and Metzger BE, Coustan DR (eds.): Proceedings of the Fourth International Workshop-Conference on Gestational Diabetes Mellitus. Diabetes Care 21 (Suppl. 2): B1-B167, 1998.

9. Tuberculosis and Diabetes Patients*

A positive PPD skin test (i.e., ≥ 10 mm induration 48-72 hours after administration) means that a person either has latent tuberculosis infection (LTBI) or active tuberculosis (TB) disease. Active TB disease needs to be ruled out prior to starting patients with LTBI on treatment. Treatment for active TB and LTBI are different.*

Patients with diabetes and LTBI are at high risk of progressing to active TB, if they are not treated for LTBI. Studies have shown that the risk is 2 to 6 times higher in patients without diabetes. Other factors that further increase the risk for TB include: recent PPD conversion within 2 years, intravenous drug use, chest film showing prior active disease that was never treated, immunosuppressive drugs, and ESRD. Cutaneous anergy increases as patients' age develop complications of diabetes such as ESRD. Anergy may lead to false negative PPD test results.

In most cases progression of LTBI to active TB can be prevented by treatment with INH. In general, patients with diabetes who have a positive PPD (accurately read by a provider trained in interpretation of PPD) should receive treatment for LTBI, *except* in the following circumstances:

- severe liver disease
- suicidal ideation
- adverse reaction to INH

Patients receiving treatment for LTBI should be followed and monitored for potential hepatotoxicity. While national recommendations emphasize monitoring hepatotoxicity through systematic repetitive patient education and clinical evaluation for signs and symptoms of hepatotoxicity, baseline measurements of liver function tests and after one month should be considered, especially in patients receiving other potentially hepatotoxic medications. Some experts recommend that INH be discontinued if transaminase levels exceed three times the upper limit of normal when associated with symptoms or five times the upper limit of normal if the patient is asymptomatic.

HIS TB Protocol for Patients with Diabetes:

- Check if the PPD status of all patients with diabetes.
- If the PPD status is negative or unknown:
  - PDD testing should be done within one year of initial work up for diabetes diagnosises, and treated if they have LTBI.
  - If no PPD has been *placed* since the diagnosis of diabetes, and the patient's PPD status is negative or unknown, a PPD status needs to be ascertained.
  - Subsequent PPD testing is done only if there is contact with an active TB case.
- If the PPD status is positive:
  - Check for the completion for past treatment for active TB or LTBI (6-9 months of INH for LTBI or multiple drug therapy for active disease).
  - If the patient has not been adequately treated, search for active disease by history (weight loss, etc), fever (record temperature) and recent chest x-ray (within 6 months). If there is no evidence of active disease, recommend treatment for LTBI (9 mos. Of INH 300 mg daily) to all patients with diabetes, regardless of age, unless the patient has liver disease, suicide ideation or a previous adverse reaction to INH. Patients with diabetes should be given pyridoxine (10-50 mg/day) with their INH. Consider directly observed therapy of LTBI when possible, especially for patients on dialysis.

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* Recommendations for targeted tuberculin testing and treatment of LTBI in MMWR, June 09, 200/49(RR06); 1-54 or at www.cdc.gov/mmwr//indrr_2000.html Or at: Treatment for active TB disease is detailed in: CDC Core Curriculum in TB: What the Clinician Should Know. CDC, 2000 (4h edition).

Appendix I-n California Area Indian Health Sevice Telepsychiatry Referral to Dr. Sprenger

Patient Guidelines

This is a extended consultative model of care: meaning management of your care beyond eight (8) consultative sessions will return to the referring Primary Care Clinician, and Behavioral Health Provider. Telepsychiatry sessions are carefully planned for and scheduled. If you need to cancel an appointment, you should contact the Telemedicine Coordinator at their referring site 2 working days before their appointment, so this time can be used by another patient. Failure to do so may disqualify you from future Telepsychiatry consultations.

I have read and understood the above information and instructions.

_____
Patient Signature

Patient Name: _____ Date: _____

Tribal Health Program: _____

Reason for Referral:

_____

_____

History of Past Illness Including Past Psychopharmacology, any In-patient or Residential Treatment, and Psychotherapies:

_____

_____

Current Meds: 1) _____ 2) _____ 3) _____
Psychiatric and non-psychiatric
4) _____ 5) _____ 6) _____

Referring Behavioral Health Provider: _____ Phone ( ) _____

(Required) Signature: _____

Referring Prescribing Provider: _____ Phone ( ) _____

(Required) Signature: _____

Referring Telepsychiatry Site Coordinator: _____ Phone ( ) _____

Fax completed form to Shingle Springs Tribal Health Telepsychiatry Coordinator Raven Fonseca at (530) 672-8057 Phone: (530) 672-8059 x 5

UC Davis Health System Telemedicine Program Referral Request Form

Fax To: 1-866-622-5944 Date/Time faxed to UCD _____

Consult Appointment Information:

Date: ___/___/___ Time: ___:___ Location: _____ Specialist: _____

From: _____ Clinic Name: _____
(Remote site TM Coordinator) Phone #: ( ) -

____ New Patient – complete this box and item #s **1-18**

____ Follow-up – Complete this box and item #1 (**include a front and back copy of the insurance card**)

Specialty Requested: _____

Reason for Consult: _____

PATIENT INFORMATION:

1. Patient Name: _____ Date of Birth: _____ ____ Female ____ Male ____
2. Address: _____ City _____ Zip _____
3. Telephone Numbers: Home _____ Work _____
4. Social Security Number: _____ Ethnicity: _____
5. Marital Status: Married _____ Single _____ Separated _____ Divorced _____

GURANTOR INFORMATION: ***(Complete this section ONLY if different from patient or if patient is under 18)***

6. Guarantor Name: _____ Date of Birth: _____
7. Address if different than patient: _____
8. Employer Name: _____ Employer Phone # _____
9. Social Security Number: _____

INSURANCE INFORMATION:

10. Name of insurance: _____ Policy # _____
11. Policy Holder's Date of Birth (if different from patient) _____
12. Authorization #: _____ Expiration date: _____
13. What does the authorization cover and how many visits does it cover? _____

(Please attach copy of insurance card and a copy of insurance authorization.)

POLICY HOLDER INFORMATION: ***(Complete this section ONLY if different from patient and Guarantor)***

14. Policy Holder Name: _____ Date of Birth: _____
15. Social Security Number: _____
16. Relationship to Patient: _____

REFERRING PHYSICIAN INFORMATION:

17. First and Last Name: _____ Telephone Number: _____
18. Street Address: _____ City _____ State _____ Zip _____
19. AMA License #: _____

(Please Attach All Pertinent Medical Records To This Request For Consulting Physician To Review Before Patient Is Seen.)

Site Coordinators: All information requested is necessary for patient registration prior to scheduling.

Please call the UCDHS Telemedicine Program at 1-877-430-4332 if you have any questions.

TRIBAL INDIAN HEALTH CENTER
UNIVERSITY OF CALIFORNIA, DAVIS HEALTH SYSTEM
CONSENT / REFUSAL

Name _____ Unit Number

Authorization and Consent to Participate in Telemedicine Consultation

1. **PURPOSE.** The purpose of this form is to obtain your consent to participate in a telemedicine consultation in connection with the following procedure(s):

2. **NATURE OF TELEMEDICINE CONSULTATION.** During the telemedicine consultation:
   a. Details of your medical history, examinations, x-rays, and tests will be discussed with other health professionals through the use of interactive video, audio and telecommunications technology.
   b. Physical examination of you may take place.
   c. Non-medical technical personnel may be requested to enter the telemedicine studio to aid in video transmission.
   d. Video, audio, and/or photo recordings may be taken of the procedure(s).

3. **MEDICAL INFORMATION AND RECORDS.** All existing laws regarding your access to medical information and copies of your medical records apply to this telemedicine consultation. Additionally, dissemination of any patient-identifiable images or information from this telemedicine interaction to researchers or other entities shall not occur without your consent.

4. **CONFIDENTIALITY.** Reasonable and appropriate efforts have been made to eliminate any confidentiality risks associated with the telemedicine consultation, and all existing confidentiality protections under federal and California law apply to information disclosed during this telemedicine consultation.

5. **RIGHTS.** You may withhold or withdraw consent to the telemedicine consultation at any time without affecting the right to future care or treatment, or risk the loss or withdrawal of any program benefits to which you would otherwise be entitled.

6. **DISPUTES.** I agree that any dispute arriving from the telemedicine consult will be resolved in California, and that California law shall apply to all disputes.

7. **RISKS CONSEQUENSES AND BENEFITS.** I have been advised of all the potential risks, consequences and benefits of telemedicine. My health care practitioner has discussed with me the information provided above. I have had the opportunity to ask questions about this information and all of my questions have been answered. I understand the written information provided above.

Signature: _____
Patient (or patient's legal representative)

I refuse to participate in a telemedicine consultation for the procedure(s) described above.

Signature: _____

Date: _____ Time: _____ A.M. P.M.

Procedure: _____

If signed by other than patient, indicate relationship: _____ Witness: _____

Photo Release Form

If permitted, the Tribal Indian Health Center will be photographing you and your work area. These pictures will be used for the sole purpose of adding value to the Round Valley website at www.indianhealth.com.

Please read the following statements and ask the photographer any questions you may have. Indicate that you understand and agree to the conditions stated in this form by signing and dating below.

☐ I give Tribal Health Center permission to photograph me and my workspace for the website.

☐ I understand that the photographs will not be used for commercial advertising.

☐ I have been given the opportunity to ask questions, and my questions have been answered to my satisfaction.

_____

Participant's Signature

_____

Tribal Indian Health Center

_____

Date

Appendix 1-o

Location: ____________________ Site Liaison: ____________________ Title Frame: ____________________

TELEMEDICINE CONSULTATION LOG

Date of TM Specialty Clinic	Type of TM Specialty Clinic	Patient Location: a. Clinic Personnel Asst. Consult b. Name of Referring Clinician(s)	Consulting Location: a. Name of Provider b. Location	Consult Format	# Patients Pre-Registered	# Patients Treated
	☐ Mental Hlth. Med. Mgmt. ☐ Dermatology ☐ ENT ☐ Audiology ☐ Other: ______	a. ______ b. ______	a. ______ b. ______	☐ Interactive Real Time: Patient Present ☐ Interactive Rea Time: Patient NOT Present ☐ Store-and-Forward		
	☐ Mental Hlth. Med. Mgmt. ☐ Dermatology ☐ ENT ☐ Audiology ☐ Other: ______	a. ______ b. ______	a. ______ b. ______	☐ Interactive Real Time: Patient Present ☐ Interactive Rea Time: Patient NOT Present ☐ Store-and-Forward		
	☐ Mental Hlth. Med. Mgmt. ☐ Dermatology ☐ ENT ☐ Audiology ☐ Other: ______	a. ______ b. ______	a. ______ b. ______	☐ Interactive Real Time: Patient Present ☐ Interactive Rea Time: Patient NOT Present ☐ Store-and-Forward		
	☐ Mental Hlth. Med. Mgmt. ☐ Dermatology ☐ ENT ☐ Audiology ☐ Other: ______	a. ______ b. ______	a. ______ b. ______	☐ Interactive Real Time: Patient Present ☐ Interactive Rea Time: Patient NOT Present ☐ Store-and-Forward		

Location: ____________________ Site Liaison: ____________________ Title Frame: ____________________

Appendix 1-o

Marketing Activities Log

Date of activity	Describe marketing activities to disseminate information about TM to community members • Newspaper articles • Public open house • Presentation to clubs • Chamber of Commerce	Participants/Speakers/Audience	Printed Media • Where did this info appear • Please forward copies of printed materials to ???

Location: _____ Site Liaison: _____ Title Frame: _____

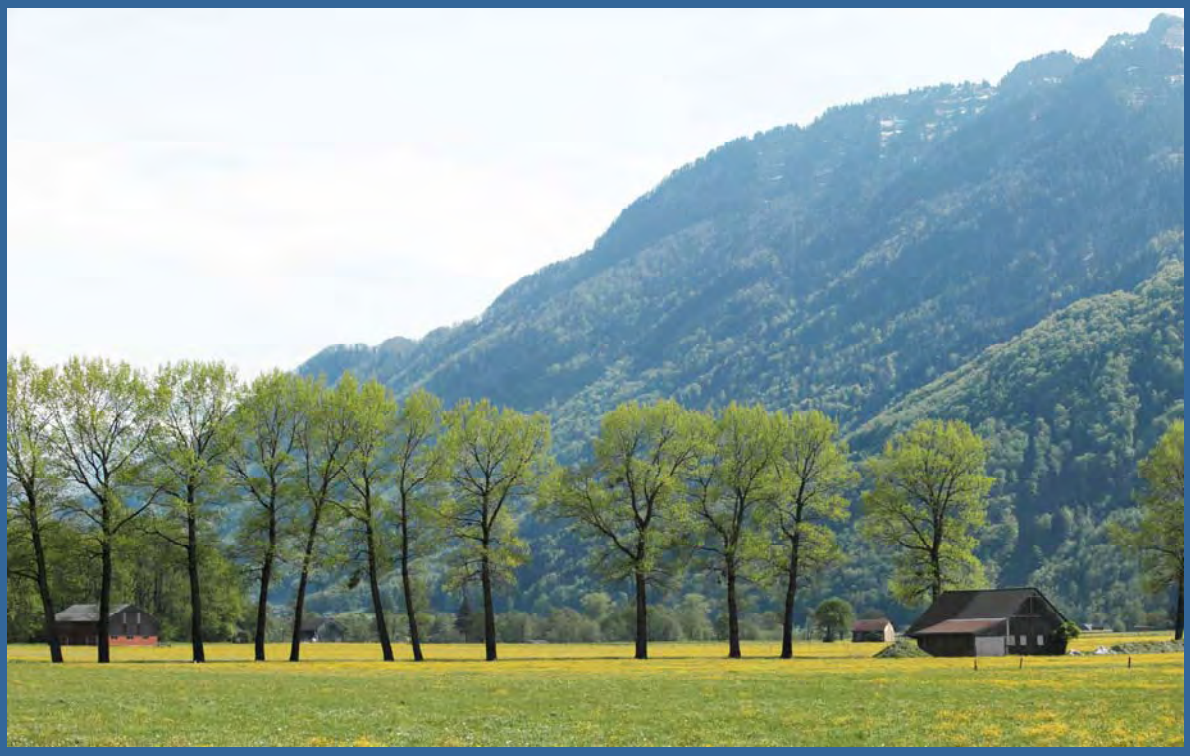
Appendix 1-o

Non-Clinical Use of System Log

Date of Video-conference	Type of Activity	Description: • Topic • Audience • Purpose	Training/Service Provided by:	a. # of Sessions b. # of Participants
	☐ Provider & Staff In-service Training (on TM Equipment use) ☐ Education for health Professionals (for degree or cert. req.) ☐ Other Education for Health Professionals (elective CME) ☐ Grand Rounds ☐ Community Health Education Support Group ☐ Administrative Meetings ☐ Community Business Meetings (non-health) ☐ Commercial Conferencing Services (business pays a fee)			a. b.
	☐ Provider & Staff In-service Training (on TM Equipment use) ☐ Education for health Professionals (for degree or cert. req.) ☐ Other Education for Health Professionals (elective CME) ☐ Grand Rounds ☐ Community Health Education Support Group ☐ Administrative Meetings ☐ Community Business Meetings (non-health) ☐ Commercial Conferencing Services (business pays a fee)			a. b.
	☐ Provider & Staff In-service Training (on TM Equipment use) ☐ Education for health Professionals (for degree or cert. req.) ☐ Other Education for Health Professionals (elective CME) ☐ Grand Rounds ☐ Community Health Education Support Group ☐ Administrative Meetings ☐ Community Business Meetings (non-health) ☐ Commercial Conferencing Services (business pays a fee)			a. b.
	☐ Provider & Staff In-service Training (on TM Equipment use) ☐ Education for health Professionals (for degree or cert. req.) ☐ Other Education for Health Professionals (elective CME) ☐ Grand Rounds ☐ Community Health Education Support Group ☐ Administrative Meetings ☐ Community Business Meetings (non-health) ☐ Commercial Conferencing Services (business pays a fee)			a. b.

CTEC

THE CALIFORNIA ENDOWMENT



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Telemedicine and American Indians in California

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