

SCR

6

HOUSE COMMITTEE REPORT

(7)

Date Referred to Committee: March 27, 1997

FURTHER REFERRALS:

Date of Committee Action: 4/28/97

The HEALTH, EDUCATION AND SOCIAL SERVICES Committee considered:

SCR 6 am

SENATE CONCURRENT RESOLUTION NO. 6 am

ALASKA TELEMEDICINE PROJECT

Relating to the Alaska Telemedicine Project.

recommends it be replaced
with the following committee substitute

HCS SCR 6 (HES)

the same title
 a new title

additional referral to _____ Committee
 attached amendment(s)

ADOPTS: _____ Letter of Intent

ATTACHES NEW FISCAL NOTE(S): (Dept)

APPROVES PREVIOUS: (Dept/Date)

fiscal note(s) _____

fiscal note(s) _____

zero fiscal note(s) _____

zero fiscal note(s) Senate HESS/3-24-97

SIGNING WITH RECOMMENDATIONS	DP	DNP	NR	AM
<i>Paul Brown</i>	✓			
<i>Car Beards</i>	✓			
<i>[Signature]</i>	✓			
<i>[Signature]</i>	✓			
<i>[Signature]</i>	✓			

CHAIR'S SIGNATURE *Car Beards*

Alaska State Legislature

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Senator Drue Pearce
District F

Sponsor Statement for SCR 6

The Alaska Telemedicine Project is a pioneering program focused on improving the availability and delivery of health care in Alaska using telecommunications and other information technologies. The project involves a consortium of over 34 organizational members, including the University of Alaska, most major telecom providers, Native health corporations, and many regional health care facilities.

Now in its fourth year of operations, the Alaska Telemedicine Project continues towards its goals of assessing the health care needs of the state, demonstrating appropriate telehealth and telemedicine applications for Alaska, and analyzing these applications for cost, benefit, satisfaction, and use.

The methods used by the Alaska Telemedicine Project have been recognized as models for rural areas, developing nations, and all health providers. The recognition of the project as a leader in providing low-cost telemedicine applications has come from many entities such as the National Library of Medicine, the U.S. Department of Commerce, and the Government of Romania.

In totality, the Alaska Telemedicine Project has accomplished all of its functions with independent grants and without dedicated state funding. Recently, the project was awarded a \$2 million contract from the National Library of Medicine to assist the Alaska Native Health Board in providing rural health services. Senate Concurrent Resolution 6 would officially recognize these achievements of the Alaska Telemedicine Project and commend it on promoting telemedicine and telehealth in the state of Alaska.

0-LS0689E
Cook
4/11/97

HOUSE CS FOR SENATE CONCURRENT RESOLUTION NO. 6()
IN THE LEGISLATURE OF THE STATE OF ALASKA
TWENTIETH LEGISLATURE - FIRST SESSION

BY

Offered:
Referred:

Sponsor(s): SENATORS PEARCE, Ellis

A RESOLUTION

1 Relating to the Alaska Telemedicine Project.

2 BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF ALASKA:

3 WHEREAS the Alaska Telemedicine Project, founded by the University of Alaska,
4 Anchorage, Providence Health Systems in Alaska, and AT&T Alascom, is a private/public
5 consortium of over 34 telecommunications carriers and health care organizations, including
6 Native health corporations, dedicated to using telecommunications and information technology
7 to improve the delivery of health care to all Alaskans; and

8 WHEREAS the Alaska Telemedicine Project is beginning its fourth year of operations;
9 and

10 WHEREAS the Alaska Telemedicine Project has predicated its existence on the idea
11 that "our" health care dollars must be used wisely, and that advances in telecommunications
12 and information technology offer the promise of health care system re-engineering that can
13 both contain costs of health care and improve the quality of health care for all Alaskans; and

14 WHEREAS the Alaska Telemedicine Project has performed planning for narrow
15 bandwidth telemedicine and telehealth applications that has been predicated on current and
16 planned end user telecommunications and information technology systems in Alaska; and

17 WHEREAS the Alaska Telemedicine Project has been dedicated to assessing the needs

1 of all health care organizations in the state, demonstrating appropriate telemedicine and
2 telehealth technologies and applications scaled to Alaska's current and planned infrastructure,
3 and evaluating these demonstration projects for cost and benefit, satisfaction, and use; and

4 **WHEREAS** the Alaska Telemedicine Project has developed an evaluation method,
5 sanctioned by the National Library of Medicine, designed to reveal cost and benefits,
6 satisfaction, and use of telemedicine and telehealth applications and technologies scaled to
7 Alaska's current and planned telecommunications and information technology infrastructure;
8 and

9 **WHEREAS** the Alaska Telemedicine Project has established a nonprofit Alaska
10 TeleHealth Network for e-mail, digital imagery, and continuing medical and health care
11 information and education throughout the state; and

12 **WHEREAS** the Alaska Telemedicine Project has been recognized by the government
13 of Romania, the National Library of Medicine, and the United States Department of
14 Commerce as a model for telemedicine and telehealth applications and technologies in rural
15 America and developing nations; and

16 **WHEREAS** the Alaska Telemedicine Project has performed all these accomplishments
17 without new, dedicated funding from the state;

18 **WHEREAS** the Alaska Telemedicine Project will not preclude other entities within
19 the state from applying for funding for technology, but support them in their efforts to develop
20 partnerships to secure funding and expertise in the telemedicine field;

21 **BE IT RESOLVED** that the Twentieth Alaska State Legislature recognizes the Alaska
22 Telemedicine Project, its founding organizations, and commends its leadership for advancing
23 telemedicine and telehealth in the State of Alaska.

FISCAL NOTE

No. 1

STATE OF ALASKA
1997 LEGISLATIVE SESSION

Bill Version: SCR 6

(S) Publish Date: 3-24-97

Revision Date _____ Dept. Affected _____
 Title Relating to the Alaska Telemedicine Project BRU _____
 _____ Component _____
 Sponsor Senator Pearce _____
 Requester _____ Component Serial No. _____

Expenditures/Revenues (Thousands of Dollars)

OPERATING EXPENDITURES	FY 98	FY 99	FY 00	FY 01	FY 02	FY 03
Personal Services						
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	0.0	0.0	0.0	0.0	0.0	0.0

CAPITAL EXPENDITURES						
-----------------------------	--	--	--	--	--	--

CHANGE IN REVENUES []						
-------------------------------	--	--	--	--	--	--

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
1091 Designated Program Receipts						
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0

Estimate of any current year (FY97) cost: 0.0

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: (Attach a separate page if necessary)
 There is no fiscal impact with passage of this resolution.

Prepared by Gary Wilken Phone 465-3709
 Division State Senator Date 3/18/97
 Approved by 3/18/97 Date 3/18/97
 Agency _____

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ALASKA TELEMEDICINE PROJECT

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University of Alaska Anchorage*
Anchorage

Alaska State Department of
Health & Social Services
Juneau

Alaska State Hospital
& Nursing Home Association
Juneau

Alaska Native Health Board
Anchorage

Alaska Center for Rural Health
Fairbanks

Alaska Rural Development Council
Anchorage

Copper River
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Germantown

International Union for
Circumpolar Health
Anchorage

WAM Rural Telemedicine Network
Anchorage

Providence Alaska Health System*
Anchorage

Alaska Regional Hospital
Anchorage

Valley Hospital
Palmer

Alaska State Division of
Emergency Services
Juneau

Alaska Federal Healthcare Partnership
Anchorage

Ther Medical Group, Elmendorf AFB
Anchorage

U.S. Department of Veteran's Affairs
Anchorage

Alaska Area Native Health Service
Anchorage

Bevil Day Area Native Health Corporation
Dillingham

Eastern Aleutian Tribe, Inc.
Anchorage

Kodiak Area Native Association
Kodiak

North Slope Borough
Department of Health
Barrow

Noton Sound Health Corporation
Nome

Tukwot-Kushnook Health Corporation
Iktotuk

AT&T Alacom*
Anchorage

CCI
Anchorage

ATU Telecommunications
Anchorage

United Utilities
Anchorage

Telepresence of Alaska
Eggen River

Other Organizations*

Mission:

Improving delivery of health care in Alaska using telecommunications and information technologies.

Vision:

User-friendly access to electronic communication and information for every health provider in Alaska.

Goals:

- Seek collaboration to make available the highest quality health care to every Alaskan
- Empower health providers with the best possible access to information
- Assist members in acquiring individual or collective funding for improving access to health informatics and implementing telemedicine demonstrations throughout Alaska
- Test and evaluate various state-of-the-art telecommunications and information technologies in typical Alaskan environments
- Identify the most appropriate telemedicine technologies for Alaska
- Define telemedicine technologies capable of being implemented, supported, and sustained in Alaska
- Assess and quantify the cost-benefit impact on organizations who use telemedicine technology to deliver health care in Alaska
- Develop through new and existing resources a functional state-wide community health information network

Alaska Telemedicine Project

Responding to anticipated changes in Federal funding strategies which are seeking programs based on broad-based partnerships, the Alaska Telemedicine Project was designed to maximize the creativity of individual health care organizations by having the Project proper concentrate on a state-wide needs assessment and to provide evaluations of Project activities.

The Alaska Telemedicine Project was organized in 1994 by the University of Alaska Anchorage, Providence Health Systems in Alaska, and AT&T Alascom.

The purpose of the Project has been, from its beginning, to encourage new members to seek collaboration as they planned for expected changes in health care delivery.

The membership of the Project consists of professionals representing health care organizations, telecommunications carriers, and the University of Alaska. Additional non-Alaska members consist of organizations interested in narrow bandwidth telemedicine and telehealth applications and technologies and their viability in rural environments. Each member organization was required to request in writing membership in the Project.

The goal of the Project is to encourage member organizations to use telecommunications and information technologies, scaled to Alaska's current and planned telecommunications infrastructure, to improve the delivery of health care to all Alaskans.

The Project was designed to assess the capabilities of individual organizations for implementing telemedicine and telehealth applications; to demonstrate the range of telemedicine and telehealth applications and technologies scaled to Alaska's current and planned telecommunications infrastructure; and to evaluate individual projects using accepted standards of social science and economic research.

The Project has been committed to encouraging local ownership, and retaining local control, of individual telemedicine and telehealth applications and technologies while participating in a state-wide initiative. For example, since 1994, Project members have accomplished the following:

- Evaluated Third Medical Group video teleconferencing project;
- Providence Health Systems in Alaska seven site teleradiology project has over 3,500 patient encounters in last 18 months;
- Co-sponsored telemedicine symposium for International Congress for Circumpolar Health;
- Developed Alaska Telemedicine Project website (<http://www.telemedicine.alaska.edu>);
- Developed and deployed statewide telehealth information network for health care professionals with over 1,200 users;
- Presented at four national telemedicine conferences;

- Implemented and tested appropriate and sustainable telemedicine and telehealth applications and technologies throughout Alaska;
- Demonstrated teledermatology and informatics program in conjunction with the Ministry of Health in Romania;
- Signed letter of intentions with Ministry of Health of Romania;
- Deployed telehealth informatics network in Russian Far East;
- Awarded \$2.0 M National Library of Medicine contract to evaluate telemedicine and telehealth applications and technologies in rural Alaska;
- Acted as project and evaluation consultants for member projects throughout Alaska;
- Project members have been awarded over \$5.0 M in Federal telemedicine funds;
- Upcoming projects for evaluation include a teledermatology project to selected sites; wireless personal digital assistant home health demonstration project; telecardiology project; statewide continuing medical and health care delivery program including TCP/IP and video "on demand."



THE ALASKA TELEMEDICINE PROJECT

*A joint non-profit project for the care of the people of Alaska administered by
Providence Alaska Medical Center, The University of Alaska Anchorage, and Alascom*

Oct. 10, 1995

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Thank you for your interest in telemedicine and the Alaska Telemedicine Project. Your support, and the participation of your organization, is vital to improving the delivery of health care in Alaska. While we are working on letters of agreement with health care organizations around the State, this project has been actively and financially supported by Providence Alaska Medical Center, the University of Alaska Anchorage, and AT&T Alascom. The goal of this project is an ongoing study of health care needs and telemedicine in Alaska.

The application of telecommunications and information technology to medicine in Alaska has generated enormous interest throughout the State. Telemedicine projects in Kodiak, Valdez, Homer, Cordova, Unalaska, Glenallen, Nome, Bethel, and other activities, are promising to change the way health care is delivered in the State. And, as you know, telemedicine projects in Georgia, Kansas, Oklahoma, West Virginia, and Texas suggest that telemedicine can improve health care delivery and contain costs of health care in Alaska.

The Alaska Telemedicine Project is committed to a comprehensive needs assessment of telemedicine in the State based on provider and patient usage. In addition, we are committed to demonstrating the range of telemedicine applications "across the technology" and "across the State," and to a comprehensive evaluation of these projects to describe and predict what telemedicine applications are most appropriate to the health care needs of the citizens of Alaska.

Following the lead of other working projects, we believe that telemedicine may be defined as the application of telecommunications and information technology to medical services. It includes traditional 2:2 (two-way video and audio) teleconferencing for remote consultation and diagnosis, as well as new desktop teleconferencing, image transfer, and "virtual" community information systems. Simply, telemedicine presumes that the many changes that have occurred in telecommunications and computing hardware and software can be applied to medical procedures to contain costs and improve health care delivery, especially in rural settings. These applications now include remote diagnosis using video teleconferencing and digital medical image transfer, electronic patients records archival and retrieval, interactive information systems designed to train patients in self-

examination and self care, training for public health and emergency medicine techniques. According to Dr. Jay Sanders, principle investigator for the broad band applications group of the Georgia Telemedicine Project.

Changes in communication technology and information processing and management are occurring at a more rapid pace than even the most optimistic predictions. Functionality must control structure and the technology should have a transparent interface between users.

Consistent with this notion that "functionality must control structure...and technology," the following is a chronology of activities performed by members of the Alaska Telemedicine Project workgroup:

Summary of Activities

The following is a chronological summary of the activities of *The Alaska Telemedicine Project* work group. This chronology represents specific events and accomplishments by the Project work group in the last 18 months.

1. April 24, 1994: a technology and economic development workshop sponsored by the Applied Sciences Laboratory, the College of Arts and Sciences at UAA, and the Alaska Science and Technology Foundation raise the issues of telecommunications and economic and social development in Alaska. Interest in telemedicine is expressed by State leaders;
2. Sept. 6, 1994: telemedicine workshop at UAA sponsored by the Applied Sciences Laboratory and the College of Arts of Sciences. Guest speakers include Mr. John Evans of Medical Defense Performance Review (MDPR) and MITRE/ESC and Dr. Paul Zinnick of U. S. Air Force and PROMED;
3. Oct. 6-9, 1994: site visit of MITRE/ESC and Harvard Teaching Hospitals sponsored by the Applied Sciences Laboratory and MITRE/ESC;
4. Nov. 5, 1994: a professional Internet forum for support and education of rural health care providers, Rural-Care of InterPsych (Rural-Care@netcom.com), is developed and implemented by members of the Alaska Telemedicine workgroup;
5. Dec. 5-7, 1994: Members of the Alaska Telemedicine workgroup address the Alaska Native Health Information Conference. Dr. Beth Stamm and Mr. John Hoban develop and implement an Internet forum, the Alaska Citizen's Health Network (AK-Health@netcom.com). Alaska Health Network discussions will include guest such as Dr. Ellen Cole, a child psychologist (June, 1995) and Dr. Louis Tennin of the West Virginia School of Medicine (July, 1995);
6. Dec. 15, 1994: preliminary telemedicine meeting between invitees at UAA and ESC/MITRE in Boston; discussion among invitees regarding the possibility and plausibility of the Alaska Telemedicine Project;

7. Dec. 19, 1994: pre-proposal grant for the Alaska Telemedicine Project submitted by the Applied Sciences Laboratory at the University of Alaska Anchorage to Alaska Science and Technology Foundation;
8. Jan. 6, 1995: follow-up communication with interested participants to discuss ASTF grant proposal; planning for Jan. 27, 1995 teleconference;
9. Jan. 16, 1995: Alaska Science and Technology Foundation approves the pre-proposal for the Alaska Telemedicine Project;
10. Jan. 27, 1995: multi-site teleconference telemedicine meeting between Alaskan sites, the Russian Far East, and ESC/MITRE to discuss the nature of telemedicine and projects in Boston, Texas, Georgia, and Kansas. On-line participants include Dr. Jay Sanders (Georgia Telemedicine Project), Dr. Ace Allen (Kansas Telemedicine Project), and Dr. Jane Preston (Texas Telemedicine Project);
11. Feb. 10, 1995: telemedicine teleconference between Alaska sites and the Medical College of Georgia: demonstration project research and planning continue;
12. Feb. 13, 1995: a letter of agreement is signed between the Applied Sciences Laboratory of UAA and Elmendorf AFB to assess the Air Force's telemedical applications in Alaska. This 18 month project will provide a prototype for assessment, demonstration, and evaluation of telemedicine practices in Alaska;
13. Feb. 27-8, 1995: members of the ATP workgroup attend telemedicine workshops sponsored by American Telemedicine Association in Dallas;
14. March 7, 1995: Members of the ATP workgroup meet with Yukon-Kuskokwim Health Corporation in Bethel to establish a working agreement for telemedicine applications;
15. April 3, 1995: a letter of agreement is signed between the Applied Sciences Laboratory of UAA and the Alaska Department of Emergency Services to conduct a Health Aid Communications Review. This project, conducted by Dr. Beth Stamm of the Psychology Department at UAA, is contacting each Health Aid Clinic to determine telecommunications capacity in rural Alaska;
16. March 15-8, 1995: Members of the ATP workgroup meet with physicians and health care providers in Magadan and Kharaborsk, the Russian Far East to establish a working agreement for telemedicine applications;
17. March 17, 1995: Members of the ATP workgroup meet with Norton Sound Health Corporation in Nome to establish a working agreement for telemedicine applications;
18. April 17-19, 1995: members of the ATP workgroup attend telemedicine workshops sponsored by American Telemedicine Association at the Mayo Clinic in Rochester, Minnesota;

19. April 24, 1995: members of the Alaska Telemedicine workgroup hold teleconference with Dr. Rhett Drugge, of the Internet Dermatology Society to discuss applications of the Global Dermatology Grand rounds Project in Alaska;
20. May 5, 1995: remote diagnosis and medical education demonstration sponsored by ATP from Anchorage to Bethel, Fairbanks, Juneau, and Khabarovsk, the Russian Far East;
21. June 15-17, 1995: members of the Alaska Telemedicine Project attend "Telemedicine 2000 Conference" at Lake Tahoe as respondents to a panel discussion by the Medical Defense Performance Review regarding promising initiatives attempting to improve the delivery of health care to civilian, military, and native constituencies;
22. June 16, 1995: members of the Alaska Telemedicine Project present "Health Resources on the Internet" at Providence Hospital in conjunction with the National Network of Libraries of Medicine Pacific Northwest Region;
23. July 4 - 6, 1995: Members of the Alaska Telemedicine Project meet with Gen. James Hasting and representatives from Tripler Medical Center to discuss the Akamai Project and points of cooperation regarding telemedicine initiatives in the Pacific rim; Lori Eussen travels to Nome to discuss AT&T "Picasso" picturephone demonstration project with Tripler;
24. July 13 - 14, 1995: Members of the Alaska Telemedicine Project meet with representatives from the National Institute of Drugs and Alcohol and various State of Alaska groups to form the Alaska State Epidemiological Work group;
25. July 25, 1994: Members of the Alaska Telemedicine Project meet with Mr. Dan Johnson, Director of the Alaska Rural Health Board, to discuss joint efforts to sponsor and schedule two telemedicine educational forums for the State Division of Health and Social Services;
26. Aug. 1, 1995: Ms. Kathe Boucha-Roberts continues participation in Steering Committee work for "Alaska 2001;" members of the Alaska Telemedicine Project continue committee participation on economic development and universal service committees;
27. Aug. 2, 1995: Members of the Alaska Telemedicine Project meet with Mr. Marty Robinson, General Manager of Prime Cable of Alaska, to discuss the uses of broadband connectivity for urban telemedicine applications;
28. Aug. 11, 1995: Members of the Project meet with Mr. Don Johnstone, Director of the East Aleutians Borough Health Corporation, to discuss cooperation regarding telemedicine activities. Work begins on cooperation for system buildout and on a grant submitted by Johnstone;

29. Aug. 16, 1995: Members of the Project meet with Dr. John Ingram, Medical Director, Providence Alaska Medical Center Emergency Department, to test the applicability of FirstClass e-mail for emergency operations;
30. Aug. 17, 1995: Members of the Project meet with Dan Moller, Administrator, and medical staff of Valdez Community Hospital to discuss Valdez as a demonstration site for project activities;
31. Aug. 23, 1995: Members of the Project meet with Prof. Don May, Alaska Pacific University, to discuss the Project and the economics of telecommunications;
32. Aug. 30, 1995: Members of the Project meet with Dan Johnson, Center for Rural Health, and Ms. Debra Erickson, DHSS, to plan Oct. 26 education workshop on telemedicine for DHSS; Members meet with Ms. Barbara Sokolov, Dir., University Consortium Library, to plan for medical library access privileges for demonstration projects;
33. Aug. 31, 1995: Members of the Project meet with Mr. Sean O'Shea, Dir. of Marketing, AT&T/Alascom, to discuss continuing support of the project by AT&T/Alascom.
34. Sept. 6, 1995: Members of the Project meet with Mr. Thomas Edrington, General Manager of Anchorage Telephone Utility, to discuss continuing support for the project by ATU;
35. Sept. 7/8, 1995: Members of the Project meet with members of the Elmendorf AFB telemedicine staff for training on reporting processes and evaluation demonstration; members present information regarding joint operations demonstrating patient medical records applications;
36. Sept. 9, 1995: Members of the Project meet with the Southwest Alaska Municipal Conference in Kodiak, to discuss health care delivery systems and the selection of Kodiak as a Project demonstration site;
37. Sept. 21, 1995: Members of the Project participate in a Providence system video teleconference to Portland, Or. The meeting is a failure because system incompatibilities between GCI and AT&T teleconferencing systems;
38. Sept. 23: Ms. Kathie Boucha-Roberts presents the Telemedicine Project to Medical Transcriptionists of Alaska to discuss the implications of changes in health care delivery and electronic medical records;
39. Sept. 29, 1995: Members of the Project meet with representatives of Rural Development Corporation, Indian Health Services, ANMC, ATU, GCI, AT&T/Alascom to plan a two hour presentation on current telemedicine technology and applications in Alaska; members of the Project review draft of "Alaska 2001" document for attention to telecommunications systems and telemedicine applications;

40. Oct. 1, 1995: the teleradiology demonstration project begins to collect data. Teleradiology sites include Providence Alaska Medical Center, Cordova Hospital, Unalaska Family Clinic, Homer Hospital

41. Oct. 4, 1995: Ms. Kathe Boucha-Roberts meets with Home Health Care directors and supervisors to discuss the implications of telemedicine initiatives for home health care;

42. Oct. 6, 1995: Members of the Alaska Telemedicine Project attend the Russian Peace Conference, sponsored by Rotary International, and discuss health care systems and delivery problems in the Russian Far East.

Telemedicine: will it serve rural Alaska?

X-ray fax machines? Diagnosis and treatment of injuries and illness via video from one Rural Alaska community to Anchorage?

These are just two concepts of "telemedicine" that members of Providence Alaska Medical Center and the University of Alaska Anchorage (UAA) are researching.

Telemedicine is the practice of health care delivery, diagnosis, consultation, treatment, transfer of medical data and education using interactive audio, visual and data communications.

The Alaska Telemedicine Project is assessing the current medical delivery systems to determine the appropriate telemedicine applications for Alaska,

says Fred Pearce, of the UAA Dept. of Journalism and Telecommunications.

Telemedicine is the practice of health care delivery, diagnosis, consultation, treatment, transfer of medical data and education using interactive audio, visual and data communications. The use of telemedicine can help eliminate the constraints of towns spread far apart and the ever-present factor of weather.

Telemedicine empowers local providers and consumers by providing them with "instant" feedback on health problems as well as ongoing treatment such as pregnancy.

Specifically, the Alaska Telemedicine Project is attempting to determine whether telemedicine is cost effective. For example, would it be cheaper to set up an x-ray fax machine in a rural community and send an x-ray into Providence Alaska Medical Center, rather than send the injured softball player into Anchorage on the next plane?

The answer to that is a qualified, "that depends," say Pearce and Kathie Boucha-Roberts, Director of Affiliations, Telemedicine and Teleconferencing for Providence.

Expanding further, it takes dedicated

telephone lines to transfer the x-ray by fax and it takes a qualified medical staff person in the community to take the x-ray first. Keeping that equipment and a trained medical person in each community will cost dollars. If there are significant number of hurt knees, then there is a cost savings of the transportation. But the unknown is the total cost to keep the equipment up-to-date and the personnel trained.

Another problem, Pearce says, is that Alaska's satellite telecommunications infrastructure is not capable of the bandwidth needed to handle x-ray transfer or video teleconferencing. Lines are only available between Anchorage, Fairbanks and Juneau, and not between other communities where the service is most needed.

But even with all the complications, the Alaska Telemedicine Project is working with others to set up systems. Providence is working on setting up a system currently including Homer, Cordova and Dutch Harbor. The Elmendorf Hospital has a two-way video system with Fort Wainwright in Fairbanks, Adak and Kodiak. The UAA WAMI program has a project in

Petersburg and Juneau's Bartlett Memorial Hospital is connected with Seattle, Virginia Mason. Even an E-mail system is being suggested.

All of these programs will be evaluated for effectiveness. Questions to be answered include:

- What are the current local capabilities of rural and bush systems in Alaska?
- How much will it cost to upgrade the systems to accommodate telemedicine?
- What are the current technical capabilities of Alaska's health care providers?
- What sort of training will be needed and at what cost?
- Will clients like the new delivery systems? What steps need to be taken to educate clients about telemedicine?
- How much will hardware and computer software cost?
- What policies need to be developed in order to maintain quality care, protect patient confidentiality and provide liability?

Boucha-Roberts believes that the only way telemedicine will work is when the equipment will be so easy to use, it'll be like common sense. ■

NBA opens new Ketchikan Shoreline Branch

On Monday, July 17, National Bank of Alaska opened its newest branch, the Ketchikan Shoreline Branch located at 4966 North Tongass Highway. The branch is a full-service bank offering the convenience of drive-up windows, an automated teller machine, safe deposit boxes and all of the bank's personal and business services.

The Shoreline Branch is open Monday through Friday with lobby hours from 10 a.m. to 5 p.m. and drive-up banking from 9 a.m. to 6 p.m. ■

National Bank of Alaska Ketchikan Shoreline Branch Ribbon cutting, July 17, 1995. Pictured are (l to r): Jim Carlton, Ketchikan Gateway Borough Mayor; Pete Crandall, NEIA Senior Vice President; Pierre Kaplaran, Shoreline Branch Manager; and Forrest DeWitt, Suzman Mayor.



Rural businesses well represented in Alaska's

AJ Publishing, Inc.

GLOBAL TELEMEDICINE REPORT

International Telemedicine
Markets & Business Opportunities

March 1996
ISSN 1075-5047

ALASKA REPORT: STATE CONSORTIUM SEEKS SUSTAINABLE TELEMEDICINE

Now a year underway, the Alaska Telemedicine Project (ATP) appears to be on the verge of bearing fruit.

The ATP has kept a low profile to date, but after a number of interviews conducted by GTR, we can tell you that won't be the case for much longer. ATP is worth taking notes on for two reasons: 1) the diverse technologies it employs; and 2) the cooperation across a wide variety of stakeholders to make the project work.

(cont'd. page 1)

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ALASKA (cont'd. from page 1)

The ATP is basically an Alaskan state initiative to build a low-cost and sustainable telemedical/health delivery infrastructure. It is sponsored by all major sectors: the telcos, the DoD, the Indian Health Service, the providers and the state government. The technical strategy is to create an online service-style community health information network (CHIN) that anybody can hook into — whether nurses serving remote villages, or physicians across the waters in the Russian Far East.

The plan is for all parties to work together on needs assessment and needs evaluation. Different members of the consortium have different levels of technical sophistication. The military, for example, already has a five-site videoconferencing system connecting its hub at Elmendorf Air Force Base with clinics and stations stretching across the Aleutian Islands. "Each individual member has complete autonomy over their project," says Univ. Alaska-Anchorage's Fred Pearce, one of the ATP's initiators. Still, with only two tertiary-level care centers in Anchorage, it makes sense that they and the military have agreements to share facilities for remote consulting.

As of today, the CHIN — based on "First Class" software put out by a Toronto-based vendor SoftArc — is just being installed. (First Class, already the basis of the state's emergency medical system, incorporates bulletin board and e-mail features.) In a related project, data from over 250 teleradiology cases remote "undriveable" locations and big-city providers is being collated. Over time teleradiology will be integrated within the First Class suite and be carried out over the local Internet.

Alaska has history as technology testing ground

Given its geography and location and strategic importance, Alaska has long been a site for both commercial and military technology testing, especially for satellites. The people we spoke to all make the point that in Alaska — once you get away from the "big" coastal cities — you are dealing with essentially third-world conditions obtaining in the interior — a frozen white wasteland that is as large as

the U.S. east of the Mississippi.

Much of the interior is a long way from anything, let alone health care providers; in fact, there are many sites that are only accessible by plane. The natural appeal is to get some kind of cheap technical setup in place in these villages to eliminate medical transports which can easily run upwards of \$25,000, according to Kathy Brucha-Roberts of Providence Medical Center, a tertiary care provider in Anchorage (part of the Sisters of Providence chain). Brucha-Roberts, along with Fred Pearce at the University of Alaska (also in Anchorage), is the founder of the ATP initiative.

But one thing Alaskans are a bit sensitive towards is outsiders from the lower 48 coming in and putting, as they say, a Native face on their grant applications. That is, doing TM projects with their own interests at heart in projects ostensibly intended to improve Alaskan health care. Thus the emphasis in this project on the non-flashy side of telemedicine: e-mail, phone links, slow teleradiology. The general feeling is that something cheap and low-tech will be practical and can be built on, but something high-tech and flashy like expensive videoconferencing is better left to the future.

"Today it's safe to say that almost everyone in the state at any level of dealing with TM issues — whether planning or fullblown — is in collaboration with the Alaska Telemedicine Project," says Roberts, adding: "The uniqueness of this particular project is that we are spending a tremendous amount of energy trying to figure out how we can do this together and not in competition. I think it is the only TM project where all the health care providers in the state have come together."

Since the inception of the ATP idea in August 1994, the group is now set — at the outset of 1996 — to formalize as a not-for-profit corporation and kick off an 18-24 month period of demonstrations. Some demonstrations — more informal — have already been performed by the group over the course of 1995. ATP will apply for grants from the state science and technology foundation.

The principal communications technology employed will be satellites. "Some areas up here will never have fiber," says Fred Pearce, Ph.D., of the

University of Alaska - Anchorage. "Therefore we have to look at narrow bandwidth applications." Services will be supplied by the local provider, which has gone through a number of name changes, eventually to emerge as AT&T Alaska. The hope is to get from \$250,000 to \$1 million from the state, but as Roberts told us, "The attitude in Alaska is about collaboration — not money. What we are doing is spending our health care dollars smarter."

Demos come to an end: future unclear

In the second half of 1995, coming to an end at the start of 1996, Alaska has been testing teleradiology over T1 bandwidth satellite links to three remote villages. These expensive links have been subsidized by the phone company but that subsidization will end shortly. Over a three month period, 258 TR cases were carried out. Although the technology proved successful, the related costs and personnel issues are still being sorted out to determine further deployment.

Providence Medical Center itself is considering a range of connectivities, including home telemedicine via partnerships with cable providers or through home health agencies equipping its nurses with personal digital assistants (PDAs). According to Boucha-Roberts, the vendor and carrier community will be ready when Providence makes up its mind which way to go.

On the other hand, the University is laying the ground work for links to the Russian Far East through visits by Pearce and other experts. A number of people are interested in these talks — including the military and potential exporters, he told GTR. A couple of teleconferencing meetings have been held with major healthcare facilities in Vladivostok, Magadan, Andyr and Kharabosk.

Although satellite is the primary means of coverage, beams can still be "iffy." The major bird is the Aurora II, owned by GTE and Pacific Telecom Inc. (PTI), which in the last year sold off Alascam to AT&T. You can get all the bandwidth you want over the satellite, but a T1 connection will run \$10-\$12,000 per month in many cases. Switched services such as ISDN are not available.

One common Alaskan communications prob-

ELMENDORF'S FIVE-SITE SYSTEM OFFERS LOW-TECH WAY TO CUT COSTS

Here are some notes on the Elmendorf five-site video system that will link, in part, to the ATP project:

— Col. Emma Forkner is the TM project director (and nurse executive).

— it uses S-56 lines supplied under the feds' FTS 2000 telecom contract.

— operators are exploring opportunities for real-time videoconferencing with a variety of clinical specialties. (Forkner) To date tested have been: internal medicine, physical therapy, dentistry, oral surgery, orthodontics, EMT, dermatology. Mental health and allergies are to be.

— system runs over 28.8 modems; doing real-time is "tough," so store-and-forward capabilities will be added soon to the md/tv-supplied system (Case and Forward and Housecall).

— has been running since Labor Day

— sites include: Kodiak Coast Guard Station, Adak Naval Air Station (in Aleutians) and the community hospital at Ft. Wainwright in Fairbanks.

— equipment per site cost around \$28K (\$3k per switch, \$25K per VCU)

— Alaska does NOT fit into the military's 12-region worldwide system from the medical point of view; it is under the Pacific Command in military terms.

— Forkner is "exploring" possible low-cost connection to Project Seahawk in Seattle.

— Anticipates getting ISDN to run full-scale Housecall by June or July.

— Lesson of Elmendorf: "Low-bandwidth technology really does work as an alternative to full-motion video." (Forkner)

— Elmendorf pays about \$1-12 per minute communications costs, removing the need in some cases for \$600 to \$700 — or even \$20,000 Life Flights — patient transfers. "It's cost-avoidance we're keying on," she says.

lem is that to reach many rural sites you have to make a "double satellite hop," in many cases fooling the modem into thinking the connection is terminated. "Until the middle of July there were only four voice-grade circuits licensed from Alaska to the [Russian Near East]," says Pearce. Typically, calls place there travel the reverse way around the world: From

Alaska to Seattle, New York, London, Leningrad, Moscow and then, finally, to Magadan. Yet Magadan by air is but as far away from Anchorage as Seattle. AT&T and the ATP are working to try to upgrade the infrastructure.

Development in Russia will take twenty years, estimates Pearce, adding that the way to get started is to get the Russians hooked into the Alaska network through AT&T so that they can start taking advantage of simple e-mail.

The rollout for ATP has occurred in three stages: 1) bringing together the consortium (completed in 1995); 2) doing teleradiology because it can be done (mostly completed, but probably to be expanded in this year); and, 3) rolling out an e-mail system that meshes with the systems at the university. "We have a beta version of [First Class] out," says Pearce, who particularly praises the conferencing and file-attaching features of the product along with its "robustness" (handling down to speeds of 1200 baud).

"It comes out to around a buck a client, so I use the analogy that we are building a system like Compuserve or America Online," he told us. Users will be able to access the National Library of Medicine's Grateful Med and make other use of the Internet. Alascom will provide the 1-800 dial-in service free of charge for the first 18 months, with the local exchange carrier picking up dial-in costs on its end. (There is a SNET ring in Anchorage.)

Right now the parties are testing out the Internet and First Class for use in teleradiology to remote sites. "[First Class] works superbly," says Pearce, adding, "We are playing around with video capture capabilities, again using First Class." After all, even if it takes four hours to transfer a 2K x 2K file over Internet, so what? It's still cost effective versus a three-week travel turnaround time.

The global game

It is important to keep a broad focus to make sense of what is going on. Health care is only one aspect of a bigger picture. Basically, says Pearce, the goal is to make Anchorage into a major hub of healthcare informatics, telecommunications and transportation and to be an incubator for new tech-

nologies and techniques. It is definitely in a good position to be a gateway to the Russian coast. Over time you can expect to see new telecom partnerships between Alaska and the Russians: Sen. Stevens from Alaska is a key player in this emerging world.

The Russian Far East is one of the few not totally picked-over portions of the earth in terms of mining, timber and other natural resources, and the big oil companies are now attempting to extend their presence. This is difficult without infrastructure, both telecom and otherwise. Medical care — occupational health — also gets pushed to the forefront. Health care aid is a good way for some of these firms to get a foot in the door in this section of Asia.

Activity is brewing around linking the so-called Atlantic Rim effort (headed up by the Electronic Systems Command at Hanscom Air Force Base in Massachusetts, whose John Evans has been in to give a talk to the Alaskan consortium), which aims to connect East Coast American providers to peers in Norway and England, to military and civilian TM practitioners in Alaska and — one day — the Russian Far East.

These ideas are pushed through talks and small meetings, plus a couple of big conferences coming up later in 1996: 1) a global telemedicine and federal technologies meeting to be held in Williamsburg, Va., July 17-20; and, a congress on circum-polar health in Anchorage in May, bringing together Russians, Japanese, Norwegians and others to discuss economic and health care infrastructure as well as telemedicine. (For information on the polar conference, refer to the numbers for Pearce and Boucha-Roberts below.)

Concludes Pearce, "There's a history in this state of grant money coming in and drying up, and [our goal with the ATP] is to build the foundation first, and then, as switched services become available, migrate to [higher bandwidth] applications." We'll keep you posted...(Kathy Boucha-Roberts, Providence Alaska Med. Ctr., 907-261-3195; Fred Pearce, Ph.D., Univ. Alaska - Anchorage, 907-786-4183; Denver Lodge, Indian Health Service, 907-271-4700; Lori Eussen, ATT Alascom, 907-264-7380; Soft Arc (vendor of First Class) — Alaska contact: John Shepherd, 907-694-5141; Sen. Ted Stevens, 202-224-3004.)

Alaska Telemedicine Project Member Organizations

University of Alaska Anchorage, Anchorage
Providence Health System in Alaska, Anchorage
AT&T Alascom, Anchorage
Academy of General Dentistry, Anchorage
Alaska Area Native Health Service, Anchorage
Alaska Center for Rural Health, Fairbanks
Alaska Division of Emergency Services, Anchorage
Alaska Federal Healthcare Partnership, Anchorage
Alaska Native Health Board, Anchorage
Alaska Primary Care Association, Anchorage
Alaska Rural Development Council, Anchorage
Alaska State Department of Health & Social Services, Juneau
Alaska State Division of Emergency Services, Juneau
Alaska State Hospital and Nursing Home Association, Juneau
Anchorage Diagnostic Imaging Center, Inc.
ATU Telecommunications, Anchorage
Bartlett Regional Hospital, Juneau
Bristol Bay Area Health Corporation, Dillingham
Chugachmiut Health Care Program, Seward
Columbia Regional Hospital, Anchorage
Commonwealth North, Anchorage
Copper River Economic Development Council, Glennallen
Eastern Aleutian Tribes, Anchorage
Electronic Systems Command, Hanscom AFB
Fairweather, Inc., Anchorage
GCI, Anchorage
Geneva Woods, Anchorage
GTE, Anchorage
International Union for Circumpolar Health, Anchorage
KAKM, Anchorage
Kodiak Area Native Association, Kodiak
Manilaq Association, Kotzebue
Medical Defense Performance Review, Hanscom AFB

Ministry of Health, Romania, Bucharest
MITRE Corporation, Boston
North Slope Borough Department of Health, Barrow
Norton Sound Health Corporation, Nome
PTI, Anchorage
SEARCH, Sitka
SG&A, Dallas
SouthCentral, Anchorage
Troika Technologies, Anchorage
United Utilities, Anchorage
US Department of Veteran's Affairs, Anchorage
Valley Hospital, Palmer
WAMI Rural Telemedicine Network, Anchorage
Yukon-Kuskokwim Health Corporation, Bethel