

In Missouri, a public health information system is being designed that transcends current categorical program structures and organizational boundaries so as to provide more integrated and comprehensive client-centered data. Reflecting a community health focus, "clients" in this system will encompass not only people, but also restaurants, hospitals, waste systems, swimming pools, and wells.

Information systems in Illinois, Georgia, Mississippi and North Carolina are being designed to integrate the delivery of care to individuals across numerous state and local agencies. These systems will support one-stop shopping, case-management, and the delivery of important preventive services, such as immunization.

Iowa is the first state in the country to link all of its counties via fiber optics (although local health departments are not yet connected). The system is currently being used for selected educational, health care (hospital telemedicine), and criminal justice purposes. Further connections to state agencies, libraries, and schools is planned.

In Utah, Internet users can now build their own tables and graphs through interactive queries from the statewide hospital discharge database and the E-code (external causes of injury) database, both available on the world-wide web. These interactive databases can be saved in text format for further analysis.

transmitted.

At the very least, the absence of nationally uniform policies to protect the privacy of individually-identifiable health information requires time-consuming, state-by-state negotiations in order to reach agreements that permit integration of data, as well as efforts to reassure the public that their data will receive reasonable protection. The absence of generally accepted "best practices" for preserving the privacy and security of health data in automated, networked systems or for linking and anonymizing health data in secure environments complicates these processes.

## 8.2 Health Data Standards

The lack of nationally uniform, multipurpose standards for the structure, content, and transmission of automated health data creates a "Tower of Babel" that seriously impairs the development of integrated information systems to support population-based public health. In this environment, states wishing to move forward must promulgate their own standards, negotiating with major health care payers and providers, as well as other parties whose data are critical to meeting health information needs.

These duplicative efforts are time-consuming and costly, and risk the adoption of standards that are more suitable for paying claims than for meeting the needs of clinicians, researchers, and the public health community. Moreover, they inevitably lead to differing state standards that impede the collection of regional and national health statistics, and complicate public health surveillance in the many major metropolitan areas that cross state lines.

Achieving nationally uniform standards for health data that support population health is complicated by several factors. To date, there has been little direct public health participation in the standards development process, and few in the public health community are well informed about national efforts to develop consensus standards for health data. At the same time, there is uneven knowledge about projects that could lead to standardized nomenclatures for multipurpose health information systems in the near future. For example, with the expansion of the UMLS into a health vocabulary, a nomenclature may soon be available which can record data in integrated information systems in the same detailed and meaningful form in which it is entered in computerized patient and public health records. Because the UMLS Metathesaurus makes it possible to map terms in the health vocabulary to multiple classification systems, information recorded once at the point of service can be used for many different purposes. Integrated information systems designed with the flexibility to accept information in this form will be able to capitalize on the increasing use of the UMLS by the clinical and public health communities.

## 8.3 Awareness of NII Applicability

The low level of public health participation in broad-based NII grant programs is symptomatic of a lack of appreciation, both on the part of the NII and public health communities, of the benefits and applicability of NII technologies to population-based public health. This lack of understanding extends to the commercial information technology sector and works against creative thinking about how commercial products might be applied to the full range of public health information problems.

Multiple factors are probably at work here, including the excessively high visibility of clinical applications of the NII, a lack of information about NII grant programs among the public health community, a poor understanding of population-based public health among the NII and

of the NII for a variety of reasons, including the range of expertise that is required, the need for information from diverse sources, community-wide benefits and use, and demands for a broad base of financing. Currently, however, most states and communities have neither the policy framework nor the structural mechanisms to bring potential partners in health-oriented information systems together. Without adequate incentives to collaborate or a forum for social interaction, feasible NII projects to support population health may not get started or may falter before implementation.

and to highlight the types of synergies that can be achieved through both intra- and cross-sector collaboration. Additional information can be obtained by contacting the sources listed in Appendices 1 and 2.

### 9.1 State and Local Public Health Agencies

Work with the broad public health community (including government agencies involved in mental health, substance abuse, environmental health, and occupational health as well as public health associations) to develop a compelling vision of how NII technologies can improve population health, including specific examples of the ways that NII technology can meet the information needs of public health professionals, consumers, and policymakers.

Actively seek out partnerships and funding opportunities with health care organizations, medical informatics groups, and the commercial sector.

Ensure that public health has a seat at the table as state or community decisions about privacy, standards, sharing, and ownership of health data are discussed.

Join forces with other groups, including the medical informatics, telemedicine, and managed care communities, in explaining the chilling effect of the lack of federal privacy legislation on health-related applications of the NII.

In the absence of federal legislation, work to enact state laws that protect the privacy of individually-identifiable health information while supporting critical analytic uses of this information to improve population health.

In the absence of national standards, work toward statewide partnerships for the implementation of multipurpose data standards (i.e., standards that make health data useful to those who record and collect them as well as to consumers, researchers, public health professionals, policymakers, and others who require these data for health-related purposes).

Assure that logically integrated health information systems currently under development in states, communities, or agencies, have the flexibility to incorporate emerging vocabulary and classification standards.

Encourage and support information technology training for public health professionals.

Develop and present to relevant federal agencies specific proposals for combining funding streams to implement logically integrated health information systems that meet the needs of multiple programs.

Take advantage of funding opportunities in the proposed Performance Partnership Grants to develop and maintain integrated health information systems.

### 9.2 Federal Agencies

Following the charge of the Vice-President, the Department of Health and Human Services (DHHS) should work closely with those in the public/private sectors who record and use health information to:

identify and disseminate current "best practices" for ensuring health data privacy and security;

assist in the development of model state laws that protect the privacy of individually-identifiable health data while preserving the usefulness of these data to support population health;

adopt uniform standards for health data collection/transmission to and from all federal agencies, and assure that these standards serve the needs of those who record and collect

the information needs of population-based public health.

Use meetings and publications to educate public health professionals about the importance of the privacy issue and the need to communicate their concerns to members of the U.S. Congress and state legislatures.

Join with professional associations in other fields, such as medical informatics, in efforts to highlight the importance of privacy legislation.

Encourage members to learn more about data standards, including emerging vocabularies and classification systems for health data.

Participate and represent the needs of the public health community in the national consensus standards development work coordinated by the American National Standards Institute's Health Informatics Standards Planning Panel.

Include information about the NII, its applicability to public health, and funding opportunities at meetings and in publications.

Disseminate information about related funding opportunities to public health professionals.

Publish examples of successful public health applications of NII technologies in association journals and newsletters.

Increase continuing education programs on the development of information strategies and on the use of information technology and services by public health professionals.

Publicize opportunities and encourage participation in informatics training programs.

Encourage schools of public health to include informatics as part of the regular curriculum.

#### 9.4 Professional Associations (Health Care and Informatics)

Include information about the NII and the need to integrate health care and public health applications at meetings and in publications.

Publish examples of successful public health applications of NII technologies in association journals and newsletters.

#### 9.5 Schools of Public Health

Integrate into the curriculum education about the central role of informatics in the future of public health, training in information technology skills, and the use of information services.

*Illustrative Examples from a Selection of  
INPHO Grant States:*

**Report on 12 Question Survey on Telecommunications**

**compiled by**

**Thomas G. Lacher  
Centers for Disease Control and Prevention  
Public Health Practice Program Office  
Information Network for Public Health Officials  
Atlanta, Georgia 30341  
USA**

## **Report by New York State's INPHO Project on Telecommunications**

---

---

### Question 1.

New York State INPHO Project: New York State Health Information Network. The HIN project has two functions: provide access to the Internet for County Health Departments and provide a closed, secure "intranet" for the timely exchange of confidential health information between Local and State Health Departments.

### Question 2.

Site : New York State Department of Health: Albany, New York  
County Health Departments in 61 counties across the state.

### Question 3.

City:Albany Project is located within the City of Albany, but the connections extend to county health departments across the state.

### Question 4.

NY State Office of General Services EmpireNet is a State service which uses EMI and NYNEX as the underlying providers. NYNEX service is used only in the 518 calling area.

### Question 5.

Communications Service:  
56kbps Frame Relay Service to County Sites with PC lan  
( 31 sites currently)  
384 Kbps service to the Internet  
T1 Frame Relay for State DOH Local Loop  
Dial-up 800 service for counties with single PCs or w/o lans (14 sites currently).

### Question 6.

charges:  
monthly : yes \$10,000 in total  
usage : no  
distance: yes..reflected in monthly charge  
Installation fee: \$545. Discount/tariffed : discount. Costs are based on a State contract negotiated with vendor.

### Question 7.

usage: Internet access, exchange of all kinds of public health data, e-mail, file transfer, web access, training using html documents. network is used for many applications of time critical nature like: disease surveillance,

immunization and disease registries, tracking emerging pathogens, dealing with disease outbreaks, health alerts and emergencies, etc.

Question 8.

Less bandwidth would have a disastrous effect on the project and more importantly delivery of public health services at the local level. As the network grows there is a critical need to replacing dialup with real-time, on line access in all areas of the state, especially outlying rural areas, urban clinics, physician offices and the like. Rural and urban health sites and providers are very much undeserved and have no access to this technology.

Question 9.

More bandwidth and Access is essential to providing access to data/information for local public health officials, clinics and the like. However, there is a desperate need for increased bandwidth for distance learning telemedicine and to support desktop voice communications over the existing network infrastructure.

Question 10.

e-mail yes, the project supports e-mail for the counties, but smaller rural counties lack the resources to support a fully integrated LAN e-mail system that would seamlessly connect with the State health network.

Question 11.

Internet Access: County connections are given Internet access, but unless the county has an existing county wide LAN this extends only to the building where the health information network terminates. The smaller counties have the need for a ISDN type service that would permit local connectivity to the health information network point of presence. The total usage by ALL counties is on the order of 4,000-6,000 hours per month.

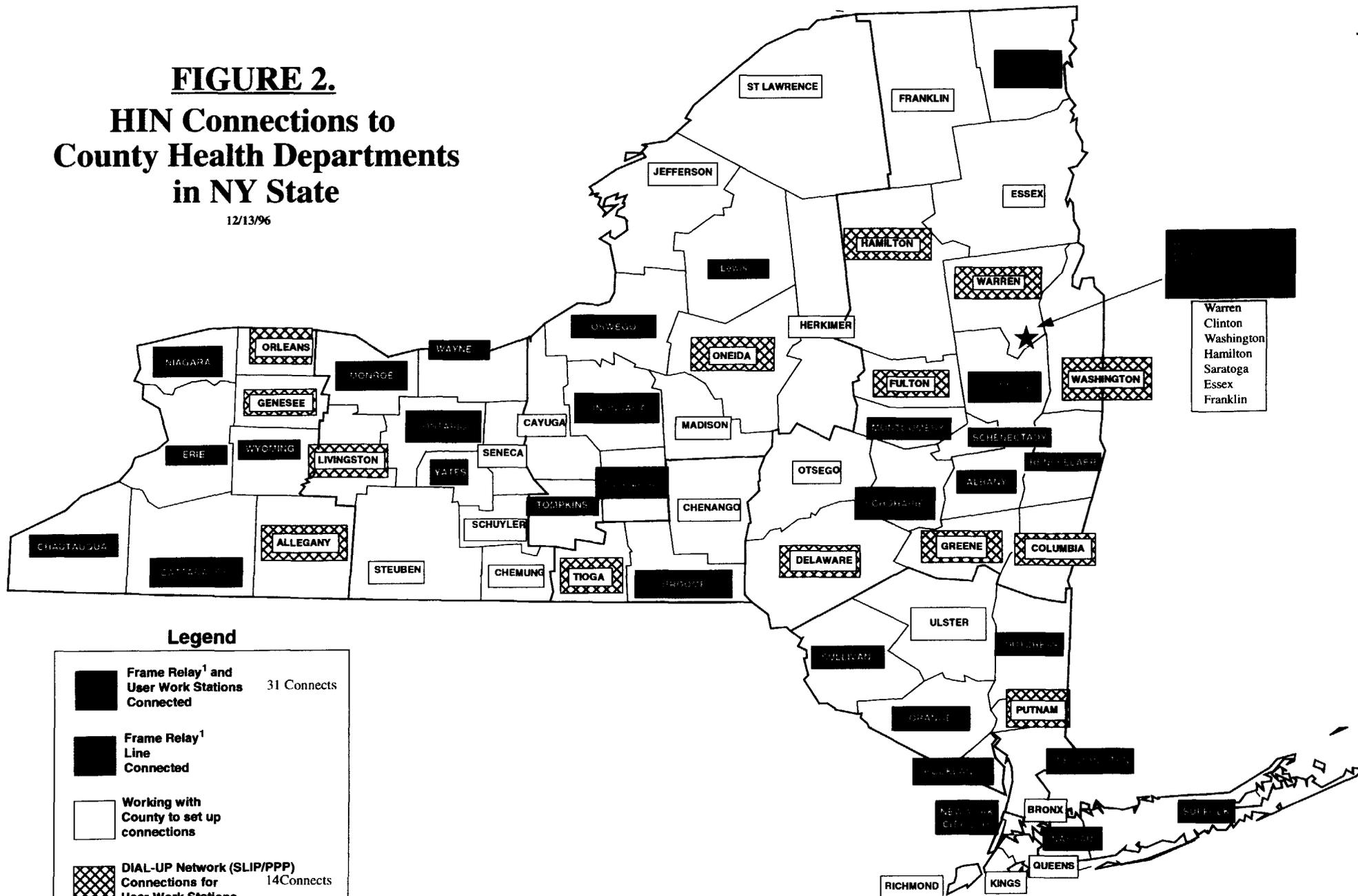
Question 12.

Too many to list, but in general accessing www-based health care and public health related resources on the Internet. CDC's Internet resources are very popular. Also MedLine, NIH, EPA. Searches on disease information and protocols, Federal guidelines, reference literature, information dealing with hazardous materials and spills outreach programs, etc. are some of the types of information accessed. (An attachment follows)

==== end New York State Report=====

# FIGURE 2. HIN Connections to County Health Departments in NY State

12/13/96



## **Florida's Report on Telecommunications**

---

---

1. Name of Project: Florida Statewide Public Health Information Network
2. Site Names: (see attached)  
All sites are in Florida
3. Nearest city of population equal to or greater than 50,000 in your state...  
(see attached - county populations are provided)
4. Name of project's telecommunications service provider:  
The primary provider of telecommunications service to this project is the state agency, the Florida Division of Communications. This agency has established a wide area network called the router transport system. On the attachment, "RTS" refers to a connection to this system.
5. Level of telecommunications service:  
(see attached)
6. Charges for telecommunications service:  
Yes. Both the local telephone company and the Division of Communications charge a fee. The sum of these two fees are indicated on the attachment.

Is there a usage-based charge?  
Not for the RTS service.

Is there a distance component?  
Yes.

Was there an installation fee?  
Yes. The amount shown on the attachment is the installation fee of both the Division of Communications and the telephone company.

Is the charge the regular tariff rate?  
unknown

7. How does the project use telecommunications in the delivery of health care? Our agency is currently using the system to increase access to several administrative systems (fiscal, personnel, client information, etc.) and to enhance performance through the high speed

connections. Wide area connectivity has made systems available to staff who are connected to local area networks and has eliminated the need for specialized, dedicated lines to be installed for use of single purpose systems. The network has brought electronic mail and enabled us to share files on a statewide basis. It has also provided us, as a statewide agency, with access to the Internet. A public health homepage ([http://www.state.fl.us/hrs\\_hsi/](http://www.state.fl.us/hrs_hsi/)) provides information to both agency staff and the public on health goals, trends, and current status. We are in the early phases of testing our statewide immunization registry through this network as well and anticipate increased use in direct services in the future. For example, there is an interest in transmitting sonograms from the health department to specialists in the Orlando Regional Medical Center rather than having these staff visit the health department once per month.

8. Could the project provide the services it is currently providing with less bandwidth? What effect would a lesser level of bandwidth have?

Our projects were funded to pay for 56KB lines in counties with populations less than 50,000 and for T1 lines in counties with populations over 50,000.

We would not want to have less than a 56KB connection. It was determined at the start of the project that this would be the minimum standard.

9. What would the implications of having a greater bandwidth be?  
Better, faster transmission speeds, greater potential for use of the line (ie-video transmission).

10. Do you have e-mail?  
Yes. [steelej@hrs.state.fl.us](mailto:steelej@hrs.state.fl.us)

11. Do you have Internet access?  
Yes.  
Estimated number of hours of Internet use per month?  
(unknown- access is available to our entire agency, statewide)

12. If you have access to the Internet, please list any purposes other than e-mail for which it is used:

The Internet is used for accessing a variety of information such as statutes, practice guidelines, databases (ie-CDC Wonder), literature reviews, and information about other public health projects and issues. (An attachment follows)

==== **End of Florida Report** =====

Florida Department of Health

12/13/96

SITE	WAN Connectivity	Population	Telephone Company	Level of Telecommunications	Monthly Charge	Installation Fee
Escambia CHD	RTS	273,874	Southern Bell	T1 Line	864	1,765
Okaloosa CHD	RTS, Frame relay	157,101	Southern Bell	T1 Line	1,479	1,865
Santa Rosa CHD	RTS	93,649	Southern Bell	T1 Line	1,462	1,865
Walton CHD	RTS	31,835	Southern Bell	56 KB	603	1,035
Bay CHD	RTS	137,987	Southern Bell	T1 Line	827	1,765
Calhoun CHD	RTS	11,708	Southern Bell	56 KB	522	1,035
Franklin CHD	RTS	9,682	Southern Bell	56 KB	544	1,000
Gadsden CHD	RTS	43,131	Southern Bell	56 KB	604	1,000
Gulf CHD	RTS	11,882	Southern Bell	56 KB	490	1,000
Holmes CHD	RTS	16,294	Southern Bell	56 KB	523	1,000
Jackson CHD	RTS	42,385	Southern Bell	56 KB	546	1,035
Jefferson CHD	RTS	12,689	Centel	56 KB	457	1,077
Leon CHD	Leon Co MAN-TCP/IP	215,212	Centel	T1 Line	994	1,745
Liberty CHD	RTS	5,862	Southern Bell	56 KB	526	1,000
Madison CHD	RTS	17,039	Centel	56 KB	541	1,077
Taylor CHD	RTS	17,630	Centel	56 KB	553	1,173
Wakulla CHD	RTS	15,718	Centel	56 KB	438	1,077
Washington CHD	RTS	18,198	Southern Bell	56 KB	523	1,000
Alachua CHD	Frame Relay-ISDN	197,362	Southern Bell	T1 Line	864	1,765
Bradford CHD	Frame Relay-ISDN	23,439	Southern Bell	56 KB	505	1,000
Columbia CHD	Frame Relay-ISDN	46,494	Southern Bell	56 KB	571	1,000
Dixie CHD	Frame Relay-ISDN	11,257	Southern Bell	56 KB	535	1,000
Gilchrist CHD	Frame Relay-ISDN	11,414	Southern Bell	56 KB	481	1,000
Hamilton CHD	Frame Relay-ISDN	11,448	Southern Bell	56 KB	625	1,000
Lafayette CHD	Frame Relay-ISDN	6,224	Southern Bell	56 KB	670	1,000
Levy CHD	Frame Relay-ISDN	29,091	Southern Bell	56 KB	463	1,000
Putnam CHD	Frame Relay	71,116	Southern Bell	T1 Line	1,760	1,865
Suwannee CHD	Frame Relay-ISDN	29,116	Southern Bell	56 KB	631	1,000
Union CHD	Frame Relay-ISDN	11,299	Southern Bell	56 KB	532	1,000
Baker CHD	RTS	20,101	Southern Bell	56 KB	475	1,000
Clay CHD	RTS/Frame Relay	122,758	Southern Bell	T1 Line	1,278	1,865
Duval CHD	RTS-Frame Relay	716,107	Southern Bell	T1 Line	864	1,765
Nassau CHD	Frame Relay	48,910	Southern Bell	56 KB	454	1,000
St. Johns CHD	RTS	178,540	Southern Bell	T1 Line	1,516	1,865
Pasco CHD	RTS	316,992	GTE	T1 Line	1,800	1,967
Pinellas CHD	RTS frame relay	895,281	GTE	T1 Line	1,343	1,967
Hillsborough CHD	Frame Relay, RTS	905,938	GTE	T1 Line	989	2,036
Manatee CHD	RTS	237,191	GTE	T1 Line	1,558	1,967
Brevard CHD	Frame Relay, RTS	455,457	Southern Bell	T1 Line	1,564	1,865
Orange CHD	ISDN, RTS	785,317	Southern Bell	T1 Line	827	1,765
Osceola CHD	RTS	137,628	United	T1 Line	984	1,745
Seminole CHD	RTS	341,567	Southern Bell	T1 Line	1,338	1,865
Charlotte CHD	RTS	136,138	United	T1 Line	1,278	1,745
Collier CHD	RTS and frame relay	189,366	United	T1 Line	1,571	1,745
Desoto CHD	RTS	26,379	United	56 KB	433	1,161
Glades CHD	RTS	8,591	United	56 KB	453	1,161
Hendry CHD	RTS	29,976	United	56 KB	413	1,161
Lee CHD	RTS	391,714	United	T1 Line	838	1,545
Sarasota CHD	RTS	310,654	GTE	T1 Line	1,862	1,831
Palm Beach CHD	RTS	984,207	Southern Bell	T1 Line	790	1,765
Broward CHD	frame relay	1,372,478	Southern Bell	T1 Line	1,423	1,865
Dade CHD	RTS, ISDN	2,065,634	Southern Bell	T1 Line	921	1,865
Monroe CHD	RTS	84,938	Southern Bell	T1 Line	3,333	1,865
Volusia CHD	RTS	38,065	Southern Bell	56 KB	457	1,000
Flagler CHD	ISDN	417,729	Southern Bell	T1 Line	938	1,765

Florida Department of Health

12/13/96

SITE	WAN Connectivity	Population	Telephone Company	Level of Telecommunications	Monthly Charge	Installation Fee
Citrus CHD	RTS & Frame Relay	110,210	Southern Bell	T1 Line	2,134	1,865
Hernando CHD	Frame Relay, ISDN	125,541	Southern Bell	T1 Line	2,142	1,865
Lake CHD	RTS	175,695	Southern Bell	T1 Line	2,023	1,865
Marion CHD	Frame Relay, ISDN	226,873	Southern Bell	T1 Line	1,576	1,865
Sumter CHD	frame relay thru district	34,690	Southern Bell	56 KB	671	1,095
Hardee CHD	RTS	20,143	Southern Bell	56 KB	512	1,161
Highlands CHD	RTS	78,537	United	56 KB	2,248	1,745
Polk CHD	Frame Relay, RTS	445,770	GTE	T1 Line	1,616	1,867
Indian River CHD	RTS	103,792	Southern Bell	T1 Line	2,043	1,865
Martin CHD	RTS	116,996	Southern Bell	T1 Line	1,426	1,865
Okeechobee CHD	RTS	33,383	United	56 KB	564	1,161
St. Lucie CHD	RTS	98,026	Southern Bell	T1 Line	1,714	1,865

CHD = county health department

## **Report by Georgia's INPHO Project on Telecommunications**

---

---

1. Georgia INPHO
2. Please see attachment A. All sites are in Georgia.
3. See Attachment A.
4. Department of Administrative Services, state of Georgia
5. Router based internetwork using 56 Kbps circuits (leased lines)
6. monthly charge: \$714: \$250 56kbps, \$350 state network backbone, \$114 router maintenance  
no usage based charge, no distance component, installation fee- yes  
do not know discount rate- negotiated by state
7. The network is used today for office automation including E-mail, file transfer, calendars,  
meeting schedules etc.
8. Minimal impact except for inconvenience. would impact future database applications  
however.
9. Improve database performance, opens possibility for imaging and video, could support training
10. Yes, E-mail
11. Yes, Internet access. No long distance charges
12. World Wide Web

(An attachment follows)

**====End of Georgia Report====**

**Attachment A**

<b>District</b>	<b>Nearest City &gt; 50,000</b>	<b>Distance (miles)</b>
Albany	Albany	0
Athens	Atlanta	50
Augusta	Savannah	110
Brunswick	Savannah	70
Clayton	Atlanta Metro	0
Cobb	Atlanta Metro	0
Columbus	Columbus	0
Dalton	Chattanooga, TN	25
Dekalb	Atlanta Metro	0
Dublin	Macon	45
Fulton	Atlanta Metro	0
Gainesville	Atlanta	40
Gwinnett	Atlanta Metro	0
LaGrange	Columbus	35
Macon	Macon	0
Rome	Atlanta	50
Savannah	Savannah	0
Valdosta	Albany	70
Waycross	Savannah	90

## Report by North Carolina's INPHO Project on Telecommunications

---

The State Telecommunications Services (STS) determines one price across the state for monthly 56 kbps and T1 line charges. At this time I believe it is \$650 per month and \$1050 per month respectively. Additional ports for each speed are \$250 per month. Each port handles about 250 users. Since North Carolina is a state with a 50/50 rural/urban split, this standard pricing is a boon to the rural areas. The State Telecommunications Services absorbs the price differences. Anything above T1 would be handled on an individual basis. STS works with the phone companies to get the services. The State also charges an initial installation fee of I believe \$500.

Our two CDC INPHO projects that most apply to this are the Desktop GIS and the E-mail for health directors.

In order for Desktop GIS to be feasible over phone lines, you would need faster speeds than T1; therefore, we recommend providing each county with its data and having them do their analysis on site. They would like us to run the software on our systems and have them access it, but it would be impossible to send that graphic data over the phone lines today. In the future probably as the standard line speeds get faster above T1, then it would be possible.

Also, we have set up E-mail for health directors, most of which is done through dial up lines and local Internet providers. We tried to use the dial up provider that the state contract had set up, but those areas where there was no local access line, the users had to work with local providers. Pricing for that connectivity has been all over the map from \$15 to \$75 mostly unlimited access per month. Using an 800-line through the state contract dial up Internet provider was too costly for the health departments (11 1/2 cents per minute).

In the end, true to the 50/50 rural/urban split, we had originally 43 planning to use the state contract provider and 43 planning to go local. In the end, more have gone local, 49 using local providers or planning to and 37 using the state contracted dial up provider. This does give you a feel for rural versus urban settings.

If you require any additional information today, please contact Kirk Keller, (919) 715-5593.

## **Washington State INPHO Project Report on Telecommunications**

---

General information follows:

Now that I know you can read the spreadsheet, I can modify it to plug in the numbers we are paying for T-1 connections to each place and the populations. This will give a pretty clear picture of the variances from rural the urban in line costs. We don't get any discounts that are not part of the State contract that are specifically for Health. If this FCC legislation passes it will be interesting to see if we do. Especially in our shared environment with other state and county agencies.

USWest is making a large effort to become the Intranet provider for health care in the State of Washington and has the commitment to place modern network facilities everywhere we need them in the State for our INPHO project and to meet our schedule. So far they have been doing well. I figure their plan is to use INPHO for the public health connections and use their Interact Services to connect up all the privates. This is in their interest, because they are already our vendor for all the INPHO connections.

### **Washington State Narrative Report Follows**

1. Name of Project: Washington State Information Network for Public Health Officials (INPHO)
2. List of Project sites: See attached spreadsheet
3. Proximity to city of 50K: See attached spreadsheet
4. Project Telecommunications Provider: USWest
5. Level of telecommunications service: Frame Relay T-1 w/ 384 CIR
6. Charges for telecommunications services: See attached spreadsheet
7. How project uses telecommunications: The project utilizes E-mail and list services to provide immediate information to Local Public Health Officials about outbreaks and trends. The list services are also used for discussion of public health topics amongst peers. The network provides access to public health applications for collecting reportable disease information, drinking water systems information, the state immunizations registry, birth records, and hospital discharge information. With many other applications under development. The network also provides Internet access to all public health

staff at a minimum of T-1 speeds.

8. The T-1 access is adequate today for current applications and may be slight over-kill in some of the remote offices. We are looking into expanding the use to include voice and video in the future and T-1 access will be a limiting factor for these applications.

9. What would be the implication of greater bandwidth: Our ability to service the remote locations using multi-media would become a reality.

10. Do we have E-mail: Yes

11. Do we have Internet access: Yes, There is no long distance charge because of our direct connection. We currently have several thousand employees with Internet access and we are utilizing 3 T-1 circuits (4.5mb) at an average of about 25% capacity. I can not even give you any kind of guess of about how many hours per month is being used.

12. We use the World Wide Web to provide information to the public and health community. We plan on making some data available to the public in the near future.

++++  
(An Excel spreadsheet follows separately)  
++++

Ron Seymour  
Project Manager  
Information Network for Public Health Officials  
PO Box 47904  
Olympia, WA 98504-7904  
Voice: (360) 705-6333  
Fax: (360) 705-6104  
Internet: res0303@hub.doh.wa.gov  
\*\*\*\*\*

		Local											
	Primary or	Health									Site		
Install	Secondary	Dept./District	County	City	City	Proximity	Street	Router	Line	Area	Phone	Monthly	Circuit
Status	Site	Name	Pop	City	Pop	city of 50k	Address	Installed	Speed	Code	Number	Line costs	Install
Completed	Primary	ISLAND	60,195	Coupeville	1,575	40mi	7th & Main	Yes	T-1 (F/R)	360	679-7305	1,575	702
Completed	Primary	ISLAND		Coupeville			6th & Main	Fiber	10mb	360	679-7305		
Completed	Secondary	ISLAND		Coupeville			410 North Main	Fiber	10mb	360	679-7350		
Completed	Secondary	ISLAND		Oak Harbor	19,160	55mi	7343 - 70th Street NE	Yes	T-1 (F/R)	360	679-1972	663	552
On-hold	Secondary	ISLAND		Camano Island			185 E. McElroy			360	387-0184		
Completed	Primary	KITITITAS	26,725	Ellensburg	12,990	30mi	205 West 5th	Yes	T-1 (F/R)	509	962-7530	1,425	1,073
Completed	Secondary	KITITITAS		Ellensburg			507 Nanum Street	Fiber	10mb	509	962-7515		
Completed	Secondary	KITITITAS		Cle Elm	1,865	60mi	201 Harris Street	Yes	T-1 (F/R)	509	674-5513	596	725
Completed	Primary	SEATTLE-KING	1,507,319	Seattle	532,900		110 Prefontaine, Suite 500	Yes	T-1 (F/R)	206	296-4196	1,158	1,000
Completed	Primary	SEATTLE-KING - METROKC		Seattle			821 2nd Avenue, 2nd floor	Yes	T-1 (F/R)	206	684-1688	508	1,000
Completed	Primary	SNOHOMISH	465,642	Everett	79,180		3000 Ruckerfeller	Yes	T-1 (F/R)	206	388-3023	1,784	865
Completed	Secondary	SNOHOMISH		Everett			3020 Rucker Street	Micro-W	20mb	206	339-5210		
Completed	Secondary	SNOHOMISH		Lynnwood	31,950	12mi	6101 200th SW	Yes	T-1 (F/R)	206	775-3522	1,032	865
Completed	Primary	THURSTON	161,238	Olympia	37,170	30mi	2000 Lakeridge Drive	Yes	T-1 (F/R)	360	786-5420 ext. 6444	1,021	944
Completed	Secondary	THURSTON		Olympia			529 West Fourth	Yes	T-1 (F/R)	360	786-5581	461	725
Completed	Primary	BREMERTON-KITSAP	189,731	Port Orchard	6,240	25mi	614 Division Street, MS-21	Yes	T-1 (F/R)	360	895-3705	681	865
Completed	T-1 (F/R) to Cnt	BREMERTON-KITSAP		Bremerton	39,610	30mi	109 Austin Drive	Yes	T-1 (F/R)	360	478-2091	681	865
Completed	T-1 (F/R) to Cnt	BREMERTON-KITSAP		Port Orchard			1026 Sidney	Yes	T-1 (F/R)	360	895-5720	681	865
Completed	T-1 (F/R) to Cnt	BREMERTON-KITSAP		Poulsbo	5765	50mi	19540 Front Street	Yes	T-1 (F/R)	360	478-5247	681	865
Completed	Primary	SKAGIT	79,555	Mt. Vernon	21,580	30mi	700 South Second, Room 112	Yes	T-1 (F/R)	360	336-9370	1,439	1,327
Completed	internal connect	SKAGIT		Mt. Vernon			700 South Second Complex	N/A	10mb	360	336-9370		
Completed	Primary	TACOMA-PIERCE	586,203	Tacoma	184,500		3629 South D Street	Yes	T-1 (F/R)	206	596-2887	670	830
Completed	fiber	TACOMA-PIERCE		Tacoma			615 South 9th Street	FDDI	100mb	206	596-6758		
Completed	Primary	LEWIS	59,358	Chehalis	6,910	60mi	360 NW North Street, Health Svc	Yes	T-1 (F/R)	360	740-1371	861	865
waiting on	Secondary	LEWIS		Chehalis			351 North Market, Public Svcs Bldg	fiber	10mb	360	740-1227		
health e-mail	Secondary	LEWIS		Chehalis			351 West Main	fiber	10mb	360			
Completed	Primary	SPOKANE	361,364	Spokane	188,865		815 North Jefferson	Yes	T-1 (F/R)	509	456-5766	1,056	847
Completed	Fiber	SPOKANE		Spokane			West 1101 College Avenue	Fiber	10mb	509	324-1513		
Completed	Primary	YAKIMA	188,823	Yakima	60,850		104 North First Street	Yes	T-1 (F/R)	509	576-7424	1,007	865
Completed		YAKIMA		Yakima			North 2nd Street, Room 200	Fiber	10mb	509	574-2006		
Site closing		YAKIMA		Sunnyside	11,710	20mi	closing site			509	575-8978		
Completed	Primary	MASON	38,341	Shelton	7,555	60mi	411 North 5th Street	Fiber	10mb	360	427-6970 ext. 502		

Completed	Secondary	MASON		Shelton			303 North Fourth, Bldg 4	Fiber	10mb	360	427-9670		
Completed	Secondary	MASON		Shelton			303 North Fourth, Bldg 2/3	Yes	T-1 (F/R)	360	427-8425	681	865
Feb-97	Secondary	MASON		Belfair	700	60mi	NE 23780 Highway 3	on-hold		360	427-5506		
Completed	Primary	SAN JUAN	10035	Friday Harbor			350 Court Street	Yes	T-1 (F/R)	360	378-2108	2,000	865
Completed	Secondary	SAN JUAN		Friday Harbor	1,810	40mi	145 Rhone Street	Fiber	10mb	360	468-2421		
Completed	Secondary	SAN JUAN		Lopez Island			Cormorant Building	Yes	T-1 (F/R)	360	468-2421	1,500	865
Completed	Secondary	SAN JUAN		Lopez Island	700	40mi	Fire station	L - 56k		360	468-3390		
Completed	Secondary	SAN JUAN		Orcas Island	700	40mi	5 North Beach Road	Yes	T-1 (F/R)	360	376-6119	1,500	865
Completed	Primary	WAHKIAKUM	3327	Cathlamet	520	60mi	64 Main Street	Yes	T-1 (F/R)	360	795-3242	1,980	865
completed	Primary	WHATCOM	127,780	Bellingham	57,830		509 Girard Street	Yes	T-1 (F/R)	360	676-7620	2,000	865
completed		WHATCOM		Bellingham			1500 North State Street	Yes	T-1 (F/R)	360	676-6729	1,500	865
completed		WHATCOM		Bellingham (CO. IS)			311 Grand Avenue	21-Nov	T-1 (F/R)	360	676-7684	1,500	865
completed		WHATCOM		Ferndale (CO. IS)	6,830	10mi	901 West Smith	21-Nov	T-1 (F/R)	360	676-7684	1,500	865
On-hold	Primary	SOUTHWEST-Clark	238,053	Vancouver (JOIT)	65,360		110 East 13th Street		T-1 (F/R)	360	699-2381	1,500	865
completed	Secondary	SOUTHWEST		Vancouver			2000 Fort Vancouver Way	Yes	T-1 (F/R)	360	696-8436	2,000	865
completed	Secondary	SOUTHWEST		Vancouver (Orchards)			12004 G- 4th Plain Blvd.	Yes	T-1 (F/R)	360	696-8436	1,500	865
Jan-97	Secondary	SOUTHWEST-Klickitat	16,616	Goldendale	3,460	55mi	205 South Columbus	ordered	T-1 (F/R)	509	773-5900	1,500	865
Jan-97	Secondary	SOUTHWEST-Klickitat		Goldendale			228 West Main Street	N/A	T-1 (F/R)	360	696-8436	1,500	865
Jan-97	Secondary	SOUTHWEST-Klickitat		White Salmon	1,975	65mi	170 North Lincoln	ordered	T-1 (F/R)	509	493-1558	1,500	865
Mar-97	Secondary	SOUTHWEST-Skamania	8,289	Stevenson	1,165	40mi			T-1 (F/R)	509	427-5138	1,500	865
Mar-97	Secondary	SOUTHWEST-Skamania		Stevenson			Mile Post 96L		T-1 (F/R)	360	696-8436	1,500	865
Jan-97	Primary	ADAMS	13,603	Ritzville	1,745	60mi	210 West Broadway	Ordered	T-1 (F/R)	509	659-0090 ext 240	2,000	865
Jan-97	Primary	ADAMS		Ritzville			103 West Main Street	Fiber	10mb	509	659-0090 ext 206		
Jan-97	Secondary	ADAMS		Othello	5,240	80mi	475 North 14th Street	Ordered	T-1 (F/R)	509	448-2031	1,500	865
Completed	Primary	NE-TRI / STEVENS	30,948	Colville	4,580	60mi	215 South Oak		T-1 (F/R)	509	775-5242	2,000	865
Completed	Secondary	NE-TRI / STEVENS		Colville			240 East Dominion	Fiber	10mb	509	684-1301		
Completed	Secondary	NE-TRI / STEVENS		Colville			260 South Oak Street	Fiber	10mb	509	684-2262		
Feb-97	Secondary	NE-TRI / FERRY	6,295	Republic	1,100	110mi	350 East Delaware		T-1 (F/R)	509	775-5242	1,500	865
Feb-97	Secondary	NE-TRI / FERRY		Republic			147 N. Clark Ave, Suite 11 & 12	Fiber	10mb	509	775-3111		
On-hold	Secondary	NE-TRI / PEND OREILLE	8,915	Newport	1,840	40mi			T-1 (F/R)	509	unknown	1,500	865
On-hold	Secondary	NE-TRI / PEND OREILLE		Newport			231 South Garden Avenue		T-1 (F/R)	509	447-3131	1,500	865
Jan-97	Primary	JEFFERSON	20,146	Port Townsend	8,165	70mi	615 Sheridan Street		T-1 (F/R)	360	385-9400	2,000	865
Jan-97		JEFFERSON		Port Townsend			1820 Jefferson		T-1 (F/R)	360	385-9370	1,500	865
Jan-97	Secondary	WHITMAN	38,775	Colfax	2,820	60mi	North 310 Main Street		T-1 (F/R)	509	397-6280	2,000	865
Jan-97	Primary	WHITMAN		Colfax			North 404 Main Street	Fiber	10mb	509	397-6280		
Jan-97	Secondary	WHITMAN		Pullman	24,360	75mi	NE 235 Olsen Street		T-1 (F/R)	509	332-6752	1,500	865
Feb-97	Primary	CLALLAM	56,464	Port Angeles	18,540	110mi	223 East Fourth	scheduled	T-1 (F/R)	360	452-7831	2,000	865
Feb-97		CLALLAM		Forks	3,369	170mi	140 'C' Street		T-1 (F/R)	360	374-3121	1,500	865
Feb-97		CLALLAM		Forks			500 East Division	T-1 (F/R)??		360	374-6383		



FCC Joint Board Responses							
Source: Grant Projects from the Office of Rural Health Policy							
State	Bandwidth	Type	Charge Data				
			Monthly	Usage	Distance	Installation	Tarrif
<b>NE</b>							
<b>Good Samaritan</b>							
Broken Bow	1.54 Mbps	T-1	\$11,500.00	No	Yes	Waived	\$4,000-5,000
Callaway	1.54 Mbps	T-1	\$11,500.00	No	Yes	Waived	\$4,000-5,000
Cambridge	1.54 Mbps	T-1	\$11,500.00	No	Yes	Waived	\$4,000-5,000
Cozad	1.54 Mbps	T-1	\$11,500.00	No	Yes	Waived	\$4,000-5,000
Sargent	1.54 Mbps	T-1	\$11,500.00	No	Yes	Waived	\$4,000-5,000
Norton	1.54 Mbps	T-1	\$370.20	.04/ min. over 10 hrs.	Yes	Waived	
Phillipsburg	1.54 Mbps	T-1	\$11,500.00	No	Yes	Waived	\$4,000-5,000
Kearney	1.54 Mbps	T-1	\$90.00	.04/ min. over 10 hrs.	Yes	Waived	\$4,000-5000
<b>South Dakota</b>							
<b>McKenna Health Services</b>							
Flandreau	384 kps	ISDN	\$336.00	Beyond a LATA	No	Unknown	20% of Usage
Yankton	128 kb	ISDN	\$168.00	.25-.30/miniute	Yes	NA	20% of Usage
Mitchell	384 kbps	ISDN	\$252.00	Yes (NA)	Yes	\$600.00	.23/minute
<b>Sioux Valley Health System Telemedicine Network</b>							
Sioux Falls	384 Kbps	ISDN	\$84.00	\$20/hr	No	\$85-555	5-15%
Vermillion	384 Kbps	ISDN	\$60-84	\$18/hr	No	\$85-300	5-15%
Viborg	384 Kbps	ISDN	\$60.00	.02/min.	No	\$85-450	NA
Canton	384 Kbps	ISDN	\$60.00	.02/min.	No	\$300.00	NA
Chamberlain	384 Kbps	ISDN	\$84.00	\$20/hr	No	\$340.00	5-15%
Webster	384 Kbps	ISDN	Yes (N/A)	Yes (N/A)	No	Yes (N/A)	N/A
Worthington (MN)	384 Kbps	ISDN	\$339.78	Yes (N/A)	No	33.70 per line	N/A

State NY	Bandwidth	Type	Charge Data					
			Monthly	Usage	Distance	Installation	Tarrif	Discount
<b>Bassett Healthcare</b>								
Cooperstown	N/A	T-1	\$4,087.00	*	None	\$963.00	*	N/A
Delhi	N/A	T-1	\$2,516.00	*	None	\$963.00	*	N/A
Cobleskill	N/A	T-1	\$2,198.00	*	None	\$963.00	*	N/A
Cherry Valley	N/A	POTS	\$310.00	*	None	\$2,462.00	*	N/A
Cobleskill	N/A	POTS	\$267.00	*	None	\$2,675.00	*	N/A
Edmeston	N/A	POTS	\$156.00	*	None	\$1,227.00	*	N/A
Herkimer	N/A	POTS	\$175.00	*	None	\$1,104.00	*	N/A
Oneonta	N/A	POTS	\$156.00	*	None	\$1,717.00	*	N/A
Sharon Springs	N/A	POTS	\$173.00	*	None	\$1,469.00	*	N/A
Stamford	N/A	POTS	\$173.00	*	None	\$1,097.00	*	N/A
(* Based on Time and Carrier)								
<b>MT</b>								
<b>Eastern Montana Telemedicine Network</b>								
Behavioral Hlth	384 Kbps	N/A	\$200.00	N/A	\$12.04/mile	\$1,200.00	Yes	
Billings	384 Kbps	N/A	\$1,945.40	N/A	\$12.04/mile	\$1,200.00	Yes	
Colstrip	384 Kbps	N/A	\$934.40	N/A	\$12.04/mile	\$1,200.00	Yes	
Glendive	384 Kbps	N/A	\$1,186.66	N/A	\$12.04/mile	\$1,200.00	Yes	
Sidney	384 Kbps	N/A	\$922.00	N/A	\$12.04/mile	\$1,200.00	Yes	
Culbertson	384 Kbps	N/A	\$472.77	N/A	\$14.99	\$1,200.00	Yes	
Billings dial up	384 Kbps	N/A	\$486.92	\$36/hr	N/A	\$600.00		36%
Helena dial up	384 Kbps	N/A	\$486.92	\$36/hr	N/A	\$600.00		36%
Glasgow	384 Kbps	N/A	\$815.67	N/A	\$15.06	\$1,200.00		15%
Baker	384 Kbps	N/A	\$600.00	N/A	N/A	\$850.00		50%
<b>Southwestern Montana Telepsychiatry Network</b>								
Boulder	N/A	T-1	\$1,201.00	\$60-90/hr	N/A	\$1,600.00	Yes	
Warm Springs	N/A	T-1	\$1,272.00	\$60-90/hr	N/A	N/A	Yes	
Bozeman	N/A	ISDN	\$138.18	\$60-90/hr	N/A	\$900.00	Yes	
Helena	N/A	T-1	\$482.31	\$60-90/hr	N/A	\$1,200.00	Yes	
Anaconda	N/A	N/A	\$609.52	\$60-90/hr	N/A	\$1,200.00	Yes	

State	Bandwidth Type		Charge Data					
	Monthly	Usage	Distance	Installation	Tarrif	Discount		
MN								
University of Minnesota Telemedicine Project								
Red Wing	N/A	T-1	\$1,159.00	\$28/hr	\$28/hr	\$1,500.00	Yes	No
Hibbing	N/A	T-1	\$1,158.00	\$35/hr	\$35/hr	\$1,500.00	Yes	No
Moose Lake	N/A	T-1	\$958.00	\$35/hr	\$35/hr	\$1,500.00	Yes	No
Staples	N/A	T-1	\$500.00	\$35/hr	\$35/hr	\$1,500.00	Yes	No
Univ. of Minn	N/A	T-1	\$365.00	\$15/hr	\$35/hr	\$1,500.00	Yes	No
Wadena	N/A	T-1	\$250.00	\$35/hr	\$35/hr	\$1,500.00	Yes	No

<b>FCC Joint Board Responses</b>				
<b>From the Office of Rural Health Policy Grantees</b>				
<b>State</b>	<b>Nearest City</b>	<b>Distance</b>	<b>Email</b>	<b>Internet</b>
<b>VA</b>				
Appal-Link	Roanoke	50-200	No	No
<b>NE</b>				
Good Samaritan				
Kearney	Lincoln	120-200	No	No
<b>MT</b>				
<b>Eastern Montana Telemedicine Network</b>				
Seven Sites	Billings	216 Avg	No	Yes
<b>Southwestern Montana Telepsychiatry Network</b>				
Boulder	Billings	116	N/A	N/A
Warm Springs	Billings	100	N/A	N/A
Bozeman	Billings	142	N/A	N/A
Helena	Billings	990	N/A	N/A
Anaconda	Billings	105	N/A	N/A
<b>SD</b>				
<b>McKenna Health Services</b>				
Flaundreau	Sioux Falls	55	No	No
Yankton	Sioux Falls	65	No	No
Mitchell	N/A	N/A	No	No
<b>Sioux Valley Health Systems Telemedicine Network</b>				
Vermillion	Sioux Falls	55 miles	No	No
Viborg	Sioux Falls	45 miles	No	No
Canton	Sioux Falls	25 miles	No	No
Chamberlain	Sioux Falls	150 miles	No	No
Webster	Sioux Falls	120 miles	No	No
Worthington, MN	Sioux Falls	60 miles	No	No
<b>MN</b>				
<b>University of Minnesota Telemedicine Demonstration</b>				
Wadena	Fargo	50	yes	yes
Staples	St. Cloud	90	yes	yes
Moose Lake	Duluth	60	yes	yes
Hibbing	Duluth	60	N/A	N/A
<b>LA</b>				
<b>S. Cameron Hospital Rural Health Outreach Telemedicine Network</b>				
South Cameron	Lake Charles	51	Yes	Yes