



Technology Use in Rural Health Care: California Survey Results

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Prepared for the California HealthCare Foundation by

**First Consulting Group
and
California State Rural Health Association**

Authors

**Fran Turisco
Tania Shahid
Lauri Paoli**

Acknowledgments

First Consulting Group is a provider of consulting, technology, and outsourcing services for health care, pharmaceutical, and other life sciences organizations in North America and Europe. More information about FCG is available at **www.fcg.com**.

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476 Ninth Street
Oakland, CA 94607

Tel: 510.238.1040
Fax: 510.238.1388
www.chcf.org

Executive Summary

In the past, many factors have hindered access to quality and affordable health care for citizens of rural areas. Today, innovations in technology, connectivity, and financing, such as video conferencing to perform care delivery from remote locations and Web-based tools to allow patients to connect with providers, are lowering the barriers to improve care delivery in rural communities.

To gain a view of the progress of technology in rural practices in California, the California State Rural Health Association and First Consulting Group surveyed providers throughout the state to determine both their current use of IT and future plans for implementing technological solutions. Results from the survey showed that provider organizations in rural areas are quite technology savvy. Almost 58 percent of all health care organizations surveyed indicated that their organizations *relied heavily* on the use of Information Technology (IT). Twenty-eight percent indicated that their organizations *relied moderately* on IT and fewer than 15 percent said that their organizations depended on IT *minimally or not at all*.

Email exchange with providers, use of a general Web site, and scheduling and billing applications were the top three uses of technology across all provider organizations. More than 57 percent of hospitals said that they were using digital imaging and, more surprisingly, 37 percent of health clinics and 33 percent of hospitals said they were using video conferencing applications for patient consultation.

Top-listed barriers for additional implementation of technology were: inadequate funding for infrastructure investments and ongoing support, limited technical expertise in the organizations and inadequate reimbursement for telemedicine services.

Clearly, rural health care organizations are doing a great deal with technology given their limitations and are capable of doing more. Additional opportunities abound for academic medical centers and other urban and suburban care delivery organizations to collaborate with rural hospitals, clinics, and practices for purposes of providing remote specialty care, information exchanges, and training. Third-party organizations with a specific focus on improving care delivery can play an important role in identifying and facilitating the setup of collaborations.

Methodology

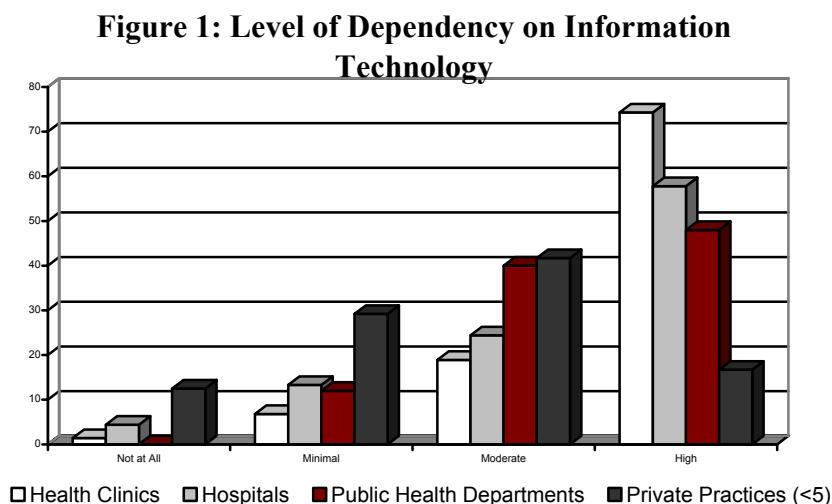
The survey was sent to a mailing list of 1,130 names, of which 781 reached a potential participant (9,349 were returned unopened). One hundred and ninety five surveys were completed and returned (a response rate of 25 percent). Of the completed surveys, 74 were from health clinics, 45 from hospitals, 25 from public health departments, 25 from private practice offices, and 34 from other types of organizations. Some organizations listed themselves under multiple organizational types.

The survey was sent with a letter of introduction to the highest-level manager in four target groups – health clinics, hospitals, public health departments, and private practice offices. The letter outlined the purpose of the survey and asked recipients to complete the survey and/or to ask the most suitable person in their organization to complete it.

The survey consisted of 10 questions in a multiple-choice format and an optional request for the respondent’s name, organization, city, and zip code. A copy of the letter and the detailed results are provided in the Appendix.

Overview of Survey Results

Analysis of the results obtained from the survey provided a detailed snapshot of the current level of penetration of technology in rural areas in California. Overall, a relatively high number of organizations indicated that they depended heavily on the use of information technology. Health clinics, hospitals, and public health departments all had a moderate to high level of IT use, whereas private practices were not as dependent on technology.



Some IT solutions, like scheduling/billing, were commonplace in most rural health care organizations. The three most prevalent solutions found at clinics, hospitals, public health departments and private practices are shown in Table 1.

Table 1: Most Commonly Used IT Solutions and Rankings

	Scheduling/ Billing	Email with Providers	General Web Site
Health Clinics	1	2	3
Hospitals	1	3	2
Public Health Depts.	3	2	1
Private Practices	1	3	2

Investment priorities for IT in the upcoming 1 to 2 years for all four groups surveyed were also similar, including both investment in infrastructure and applications. The top three priorities for the four groups are shown in Table 2.

Table 2: Highest Priority Investment Plans for IT in the Upcoming 1 to 2 Years

	1st Priority	2nd Priority	3rd Priority
Health Clinics	scheduling/ billing	upgraded/new hardware	faster network connectivity
Hospitals	upgraded/new hardware	EMR and scheduling/bil ling	email & Internet connectivity
Public Health Depts.	upgraded/new hardware	scheduling/ billing and faster network connectivity	email & Internet connectivity
Private Practices	upgraded/new hardware	scheduling/ billing	faster network connectivity /EMR/email & Internet connectivity

Results from the survey indicated a higher than expected use of IT in rural areas. However, many organizations felt that a lack of funding for infrastructure investments and ongoing operations and inadequate reimbursements for telemedicine services were the main barriers preventing them from using IT more extensively in their organizations. The top three factors as indicated by each of the four groups are shown in Table 3.

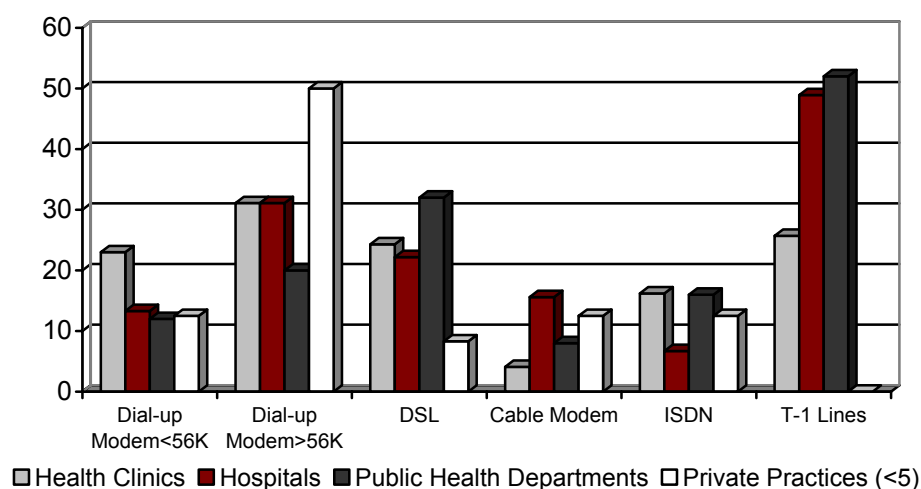
Table 3: Top Factors Preventing Higher Use of IT in Rural Health Care Organizations

	1st	2nd	3rd
Health Clinics	Inadequate funding for infrastructure investments	Inadequate funding for ongoing operations	Limited technical expertise in organization
Hospitals	Inadequate funding for infrastructure investments	Inadequate reimbursement for telemedicine services	Inadequate funding for ongoing operations
Public Health Depts.	Inadequate funding for infrastructure investments	Limited technical expertise in organization	Inadequate funding for ongoing operations
Private Practices	Inadequate funding for infrastructure investments/ limited technical expertise in organization	Inadequate access to broadband connectivity	Lack of partnering opportunities

Connectivity to support patient care could be a challenge in rural areas. However, results from this survey showed that high-speed, high-availability connectivity is being used. Half of the

public health departments and almost half of the hospitals surveyed said that they had T-1 lines for Internet access. Approximately a quarter of health clinics had DSL connections and another quarter had T-1 lines (high speed). Dial-up modems were still common but speeds greater than 56K were more prevalent than anticipated.

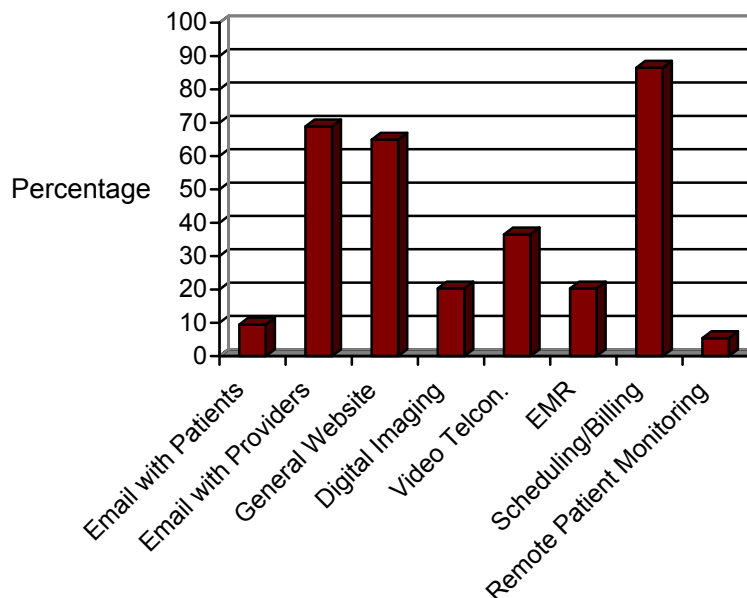
Figure 2: Current Types of Internet Access



Survey Results by Organizational Type

Health Clinics: Close to 75 percent of health clinics said that they rely heavily on IT and a mere 1.4 percent said that they do not rely on IT at all. Emailing between providers, scheduling and billing, and use of a general Web site were among the most prevalent IT solutions being used at clinics. More than 36 percent of health clinic respondents said that video teleconferencing with patients was in use at their organizations.

Figure 3: Information Technology Solutions Currently Used



Future investment plans for clinics were more internally focused – almost 40 percent of the respondents ranked upgrading or purchasing new hardware as their highest priority investment in the next 1 to 2 years. Although 86 percent of health clinics said that they were already using scheduling/billing applications, 41 percent ranked scheduling/billing as their top IT investment plan for the next two years. This indicates that many health clinics are looking to upgrade or add more functionality to what they currently have. Faster network connectivity (37 percent) was also ranked as a leading priority, which is in line with the need for better external connectivity for communication between physicians and also for use with a general Web site.

Table 4: Investment Priorities for Clinics for the Upcoming 1 to 2 years

Investment Plans	Ranking (Percent)				
	1	2	3	4	5
Upgraded/New Hardware	39	12	23	0	5
Faster Network Connectivity	37	10	16	8	1
Email and Internet Connectivity	16	12	16	4	11
Digital Imaging	16	15	3	7	19
Video Teleconferencing	8	5	8	15	18
Electronic Medical Records	31	16	12	5	7
Scheduling/Billing	41	11	5	3	3
Remote Patient Monitoring	7	4	0	7	22

Note: More than one investment plan can be selected for each ranking

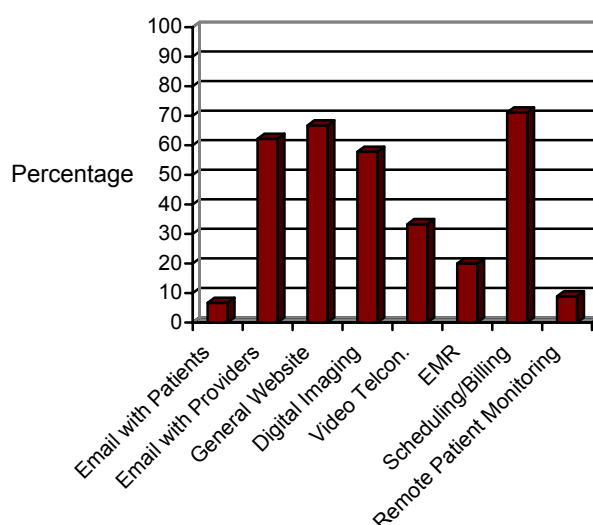
Inadequate funding for infrastructure investments and for ongoing operations prevented 65 percent and 54 percent of health clinics, respectively, from using IT more extensively. Other factors hindering IT usage included limited technical expertise in clinics (41 percent), inadequate reimbursement for telemedicine services (34 percent), inadequate access to broadband

connectivity (32 percent), lack of connectivity (16 percent), no technical support (15 percent), and a lack of partnering opportunities (14 percent).

Most senior executives at health clinics learn about technology developments in health care through attending conferences (70 percent) and talking to colleagues (61 percent).

Hospitals: Fifty-eight percent of hospitals rely heavily on IT; however, reliance is lower in hospitals than in health clinics and public health departments (See Figure 4). As in health clinics, the most common IT solutions in use were emailing with providers, scheduling and billing, and use of a general Web site. Unlike other settings, more than 57 percent of hospitals use digital imaging; but like clinics, about 33 percent use video teleconferencing for patient consultations.

Figure 4: Information Technology Solutions Currently Used



As shown in Table 5, executives at hospitals planned to emphasize upgrading and purchasing new hardware, electronic medical records, and scheduling and billing in IT investments in the next 1 to 2 years. Investment plans for hospitals were similar to those seen for health clinics.

Table 5: Investment Priorities for Hospitals for the Upcoming 1 to 2 years

Investment Plan	Ranking (Percent)				
	1	2	3	4	5
Upgraded/New Hardware	33	13	13	4	2
Faster Network Connectivity	11	9	16	9	4
Email and Internet Connectivity	16	11	7	7	11
Digital Imaging	13	16	13	2	13
Video Teleconferencing	9	9	4	7	7
Electronic Medical Records	22	13	22	4	4
Scheduling/Billing	22	7	7	7	9
Remote Patient Monitoring	9	7	4	9	11

Note: More than one investment plan can be selected for each ranking

Most hospital executives felt that inadequate funding for infrastructure investments was the biggest hurdle preventing a greater use of IT in their organizations. As with health clinics, the other major hurdles were inadequate reimbursement for telemedicine services (47 percent) and inadequate funding for ongoing operations (42 percent). Limited technical expertise in the organization (36 percent) was also a significant hurdle.

Public Health Departments: A high percentage of respondents from public health departments said that their organizations relied heavily or moderately on the use of information technology. Use of a general Web site was the most popular IT solution in such organizations followed by emailing with providers and scheduling/billing activities (Figure 5). Public health departments used electronic medical records (40 percent) more than hospitals or health clinics did but relied less on remote care delivery (digital imaging [0 percent] and video teleconferencing [4 percent]).

Figure 5: Information Technology Solutions Currently Used

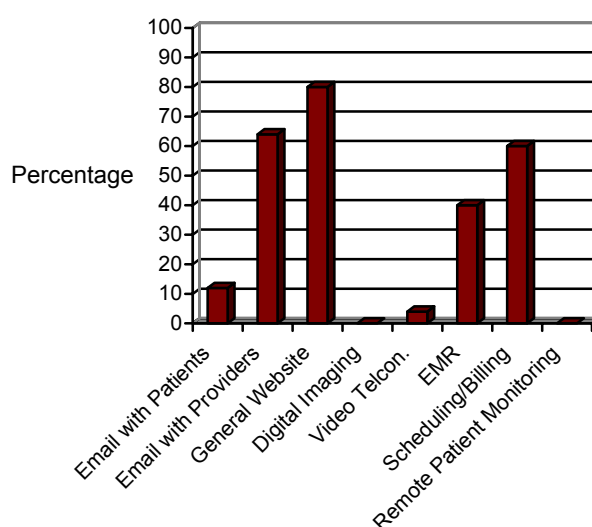


Table 6 shows how public health departments in rural areas ranked their IT investment plans.

Table 6: Investment Priorities for Public Health Departments for the Upcoming 1-2 years

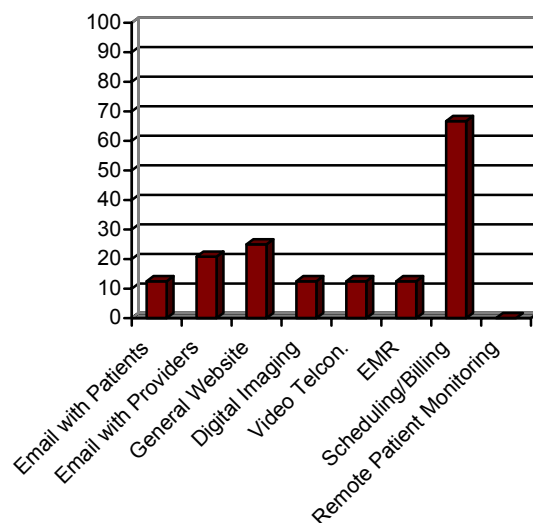
Investment Plan	Ranking (Percent)				
	1	2	3	4	5
Upgraded/New Hardware	28	24	16	0	0
Faster Network Connectivity	24	12	4	4	12
Email and Internet Connectivity	16	4	20	0	12
Digital Imaging	8	0	0	8	28
Video Teleconferencing	4	0	0	8	28
Electronic Medical Records	12	8	20	8	8
Scheduling/Billing	24	12	4	4	12
Remote Patient Monitoring	8	0	0	4	24

Note: More than one investment plan can be selected for each ranking

The main factors preventing public health departments from using IT more extensively were similar to the ones identified by health clinic and hospital executives. Inadequate funding for infrastructure investments (72 percent) and limited technical expertise in organization (40 percent) were the leading factors, followed by inadequate funding for ongoing operations (32 percent) and no technical support (20 percent). This group also learned about technology developments in health care mostly through colleagues and by attending conferences.

Private Practices: Private practice offices in rural areas were much less technologically oriented than their hospital counterparts. As shown in Figure 6, only 17 percent of private practice managers said they relied heavily on the use of IT. Almost 13 percent said that they did not rely on IT *at all* whereas 42 percent and 29 percent, respectively, said they relied *moderately* or *minimally*.

Figure 6: Information Technology Solutions Currently Used



Limited use of digital imaging, video teleconferencing, and EMRs was seen in the results from private practice offices. Scheduling/billing was used by 67 percent of private practices and 25 percent had Web sites. All other solutions were used in less than 25 percent of the practices.

IT investment plans for private practices in the upcoming 1 to 2 years fell in a similar category as the other types of organizations in the survey.

Table 7: Investment Priorities for Private Practices for the Upcoming 1 to 2 years

Investment Plans	Ranking (Percent)				
	1	2	3	4	5
Upgraded/New Hardware	38	17	8	0	4
Faster Network Connectivity	17	8	8	8	12
Email and Internet Connectivity	17	4	8	8	13
Digital Imaging	13	0	0	4	29
Video Teleconferencing	4	0	8	4	21
Electronic Medical Records	17	8	8	0	17
Scheduling/Billing	21	8	4	0	8
Remote Patient Monitoring	0	0	0	0	25

Note: More than one investment plan can be selected for each ranking

Private practice offices are more focused on practice management systems. For future IT investment plans, no respondents expressed interest in investing in remote patient care as their top priority; video teleconferencing (4 percent), and digital imaging (13 percent) were priorities for some practices.

Administrators and senior executives at private practice offices felt that limited technical expertise in their organizations and inadequate funding for infrastructure investments were the two most important factors that prevented them from using IT more extensively.

Implications

Rural health care organizations have much more going on for them from a technology perspective than anticipated. Connectivity is becoming more prevalent at higher bandwidths and use of technology is commonplace in many of the organizations that were surveyed. A continued interest in investments for IT applications/infrastructure indicates that rural organizations are not going to be as far behind in technology as originally suspected. Further opportunities for partnerships are evident – whether it is one rural provider partnering with another rural provider to use each other’s facilities for technology or a larger urban integration delivery network (IDN) or clinic partnering with a smaller rural hospital, clinic, or practice for patient care support, physician communications, or educational purposes.

Rural health care organizations are technologically ready to collaborate with institutions like academic medical centers to conduct research studies that will enhance patient care in these areas. Partnerships will also encourage physician-to-physician communication between rural and urban areas. Rural physicians will get an opportunity to contact their urban counterparts to get second opinions. Another positive role that academic medical centers can play is that of providing education around the value of information technology in patient care. One of the ways to do this is through Web sites that contain rural-specific content and Web-based seminar sessions.

Vendors can play a very important role in educating and supporting providers in rural areas as well through similar means. To increase the use of their technology in these locations, vendors can provide remote monitoring and Web-based technical training to reduce the need for technical on-site staff. In addition, systems should be preconfigured for minimal setup time and effort. The survey results indicated that providers are very interested in learning how technology can benefit rural care delivery, but typically learn about IT either from colleagues or from conferences. Vendors can take advantage of that by attending similar conferences to network with rural health care providers to demonstrate and discuss system capabilities.

Lessons learned from this survey indicate that rural health care organizations are ready and equipped to take advantage of opportunities to connect with other providers and care delivery organizations. Inadequate funding is the main factor holding them back from doing much more with technology. Lifting the reimbursement barrier and introducing grant programs in these areas will take these organizations a long way to improve communications and patient care opportunities with urban delivery systems and providers.

Appendix A: Survey Tool

October 7, 2002

Dear CSRHA Member and Friends:

The California HealthCare Foundation (CHCF, the Foundation) and the California State Rural Health Association (CSRHA) are asking for your assistance to complete the enclosed statewide survey so we may gain an understanding of the use of technology in rural health care practices to support communication, education and patient care. The purposes of this survey are the following:

- There is currently no benchmark data on the current uses, challenges and plans for technology in rural areas. These results will be very useful for rural planning, research and policy programs.
- Specific to CSRHA, the results will be helpful to identify its role in the technology arena and help to seek additional funding to support its own technology infrastructure.
- Survey results will also be provided to the California Telehealth and Telemedicine Center. The information will be added to their database and utilized in evaluating provider capacity, mapping connectivity statewide, making strategic funding decisions, and identifying the technical support and education needs.
- Finally, the results will be published in CHCF's iHealthBeat, an online daily newsletter to announce a new iHealth Report on technology in rural areas called "Practical Information Technology Solution to Support Rural Care Delivery." The report can be found on CHCF's Website (www.chcf.org).

Your input is very important to the success of this survey. Please take the time to complete the survey or give it to the person most appropriate in your organization. **The survey should take approximately 10 minutes to complete.**

The survey needs to be completed and returned to us by November 10, 2002. An envelope is included for your convenience. We look forward to hearing from you. Please feel free to call us at (916) 930-9330 if you have additional questions.

Sincerely,

Lauri A. Paoli
Executive Director
California State Rural Health Association

Tom Lee
Senior Program Officer, iHealth & Technology
California HealthCare Foundation

Technology Survey for Improved Patient Care and Education

Thank you for helping us better understand how rural organizations are currently using information technology to support improved patient care and education. Your candid responses are appreciated.

Survey results will be published this fall in iHealthBeat at www.ihealthbeat.org.

- 1) Circle the letter that most closely describes your primary organization.
 - a. Health clinic
 - b. Hospital
 - c. Public health department
 - d. Private practice (<5 providers)
 - e. Private practice (>5 providers)
 - f. Other: Please clarify

- 2) To what extent does your organization currently depend on information technology? Circle the letter that most closely describes your reliance on information technology.
 - a. Not at all – information technology is not used to support practice management or care delivery
 - b. Minimal – we can easily function without current information technology
 - c. Moderate – both practice management and care delivery can work without information technology although with some difficulty
 - d. High – we rely heavily on information technology and would find it difficult to work without it
- 3) What information technology solutions does your organization currently use? Circle all letters that apply.
 - a. Email communications with patients
 - b. Email communications with providers
 - c. Web site with general information
 - d. Web site with patient-specific information
 - e. Digital imaging for remote interpretation, consultation
 - f. Video conferencing for patient consultation
 - g. Electronic medical record
 - h. Scheduling and billing
 - i. Remote patient monitoring
 - j. None
 - k. Other: please specify

- 4) What are your organization's highest priority investment plans for information technology in the upcoming 12-24 months? Please rank each of the following options from 1 to 5. (1 = highest priority, 5 = lowest priority)
 - a. New or upgraded hardware (e.g., PCs, servers, printers) _____

- b. Faster network connectivity (e.g., DSL, modem, T1) _____
 - c. Email and Internet connectivity _____
 - d. Digital imaging for remote interpretation, consultation _____
 - e. Video teleconferencing for patient consultation _____
 - f. Electronic medical record _____
 - g. Scheduling and billing _____
 - h. Remote patient monitoring _____
 - i. None _____
 - j. Other: please specify _____
-

5) What factors prevent you from using information technology more extensively in your organization? Circle all letters that apply.

- a. Inadequate funding for infrastructure investments
 - b. Inadequate funding for ongoing operations
 - c. Inadequate reimbursement for telemedicine services
 - d. No technical support
 - e. Limited technical expertise in our organization
 - f. Lack of connectivity
 - g. Inadequate access to broadband connectivity
 - h. Lack of partnering opportunities
 - i. Other: Please specify: _____
-

6) Where do you go to learn about technology developments in health care? Circle all letters that apply.

- a. Medical journals
 - b. Technology journals/newsletters
 - c. Web sites – healthcare focused (e.g., CHCF)
 - d. Web sites – technology/vendor focused (e.g., telemedicine information exchange)
 - e. Web sites – delivery setting (e.g., UC Davis Medical Center)
 - f. Conferences
 - g. Colleagues
 - h. Healthcare/medical associations
 - i. Other: Please specify _____
-

7) What types of Internet access do you currently have? Circle all letters that apply.

- a. Dial-up modem <56K
- b. Dial-up modem 56K or greater
- c. DSL
- d. Cable modem
- e. ISDN
- f. T-1 lines
- g. Don't know

h. Other: Please specify_____

8) Approximately how many full-time equivalents (FTEs) work in your organization? _____

9) Approximately how many full-time equivalents (FTEs) work in your organization to support and maintain your information technology infrastructure? _____

10) How can the California State Rural Health Association better support your information technology needs? Circle all letters that apply.

- a. Provide information and resource specific to rural health
- b. Support initiatives and funding at the state level
- c. Provide information about how the use of technology can benefit rural health organizations
- d. Provide trainings for provider continuing education
- e. Other – Please specify:

Thank you for your participation! Please include your city and zip code below.

City: _____ Zip Code: _____

Appendix B: Analysis of Survey Results

Technology Survey for Improved Patient Care and Education

Total Number of Respondents	195
Health Clinics	74 - 37.9 percent
Hospitals	45 – 23.1 percent
Public Health Departments	25 – 12.8 percent
Private Practice <5 providers	24 – 12.3 percent
Private Practice >5 providers	1 – 0.5 percent
Other	34 – 17.4 percent

To what extent does your organization currently depend on IT?

	Not at All (percent)	Minimal (percent)	Moderate (percent)	High (percent)
Health Clinics	1.4	6.8	18.9	74.3
Hospitals	4.4	13.3	24.4	57.8
Public Health Departments	0	12.0	40.0	48.0
Private Practices (<5)	12.5	29.2	41.7	16.7
Private Practices (>5)	0	0	100.0	0
Others	2.9	8.8	32.4	55.9
Total	3.6	10.8	28.2	57.9

What IT solutions does your organization currently use?

	Email w/ patients (percent)	Email w/ providers	General Website	Patient specific Website	Digital Imaging	Video Teleconf.	EMR	Scheduling / Billing	Remote Patient Monitoring	None	Other
Health Clinics	9.5	68.9	64.9	16.2	20.3	36.5	20.3	86.5	5.4	0	20.3
Hospitals	6.7	62.2	66.7	13.3	57.8	33.3	20.0	71.1	8.9	6.7	13.3
Public Health Departments	12.0	64.0	80.0	12.0	0	4.0	40.0	60.0	0	0	24.0
Private Practices (<5)	12.5	20.8	25.0	12.5	12.5	12.5	12.5	66.7	0	25.0	25.0
Private Practices (>5)	0	0	0	0	0	0	0	100.0	0	0	0
Others	20.6	64.7	64.7	20.6	23.5	32.4	17.6	55.9	2.9	2.9	26.5
Total	11.3	59.5	62.6	14.9	24.1	26.7	21.0	71.8	4.1	5.1	19.0

What are your organization's highest priority investment plans for IT in the upcoming 12-24 months? Rank from 1-5 (1 being highest)

What percentage ranked these investment plans as their highest priority (1)?

	Upgraded / New hardware (percent)	Faster Network Connectivity	Email & Internet Connectivity	Digital Imaging	Video Teleconf.	EMR	Scheduling / Billing	Remote Patient Monitoring	None	Other
Health Clinics	39.2#	36.5†	16.2	16.2	8.1	31.1	40.5*	6.8	4.1	4.1
Hospitals	33.3*	11.1	15.6†	13.3	8.9	22.2#	22.2#	8.9	11.1	8.9
Public Health Departments	28.0*	24.0#	16.0†	8.0	4.0	12.0	24.0#	8.0	0	12
Private Practices (<5)	37.5*	16.7†	16.7†	12.5	4.2	16.7†	20.8#	0	16.7†	4.2
Private Practices (>5)	0	0	0	0	0	0	0	0	0	0
Others	35.3*	14.7	26.5#	5.8	2.9	8.8	0	0	2.9	17.6†
Total	35.4*	22.1†	15.9	11.8	6.7	21.0	25.6#	5.6	6.7	8.2

For each organization, priority is ranked as follows: * = First, # = Second, † = Third

What factors prevent you from using information technology more extensively in your organization?

	Inadequate funding for infrastructure investments (percent)	Inadequate funding for ongoing operations	Inadequate reimbursement for telemedicine services	No technical support	Limited technical expertise in organization	Lack of connectivity	Inadequate access to broadband connectivity	Lack of partnering opportunities	Other
Health Clinics	64.9	54.1	33.8	14.9	40.5	16.2	32.4	13.5	13.5
Hospitals	64.4	42.2	46.7	22.2	35.6	8.9	24.4	13.3	6.7
Public Health Departments	72.0	32.0	12.0	20.0	40.0	16.0	20.0	4.0	24.0
Private Practices (<5)	50.0	20.8	25.0	20.8	50.0	4.17	33.3	29.2	16.7
Private Practices (>5)	100.0	0	100.0	0	100.0	0	100.0	0	0
Others	58.8	58.8	32.4	23.5	50.0	23.5	29.4	17.6	17.6
Total	61.5	44.6	32.3	17.9	42.1	13.3	28.7	14.4	14.4

Where do you go to learn out about technology developments in healthcare?

	Medical Journals (percent)	Technology Journals / Newsletters	Healthcare focused Websites	Tech./Vendor focused Websites	Delivery setting Websites	Conferences	Colleagues	Healthcare / Medical Associations	Other
Health Clinics	29.7	43.2	43.2	24.3	12.2	70.3	60.8	44.6	12.2
Hospitals	42.2	51.1	42.2	22.2	15.6	62.2	84.4	40.0	6.7
Public Health Depts	24.0	44.0	36.0	28.0	12.0	64.0	64.0	24.0	12.0
Private Practices (<5)	58.3	33.3	12.5	12.5	0	45.8	45.8	33.3	8.3
Private Practices (>5)	0	0	100.0	0	0	0	0	0	0
Others	38.2	50.0	47.1	14.7	14.7	67.6	61.8	26.5	17.6
Total	36.4	45.1	39.5	21.5	11.8	65.6	64.1	37.9	10.8

What types of Internet access do you currently have?

	Dial-up Modem <56K (percent)	Dial-up Modem >56K	DSL	Cable Modem	ISDN	T-1 Lines	Don't Know	Other
Health Clinics	23.0	31.1	24.3	4.1	16.2	25.7	6.8	8.1
Hospitals	13.3	31.1	22.2	15.6	6.7	48.9	18.0	4.4
Public Health Departments	12.0	20.0	32.0	8.0	16.0	52.0	12.0	0
Private Practices (<5)	12.5	50.0	8.3	12.5	12.5	0	4.2	12.5
Private Practices (>5)	0	100.0	0	0	0	0	0	0
Others	17.6	17.6	35.3	11.8	14.7	17.6	5.9	17.6
Total	16.9	30.3	24.6	9.7	13.8	29.2	8.2	7.2

Approximately how many full-time equivalents (FTEs) work in your organization?

Health Clinics	$4162 / 74 = 56.2$ FTEs per health clinic
Hospitals	$10896 / 45 = 242.1$ FTEs per hospital
Public Health Departments	$1922 / 25 = 76.9$ FTEs per public health department
Private Practice <5 providers	$122 / 24 = 5.1$ FTEs per private practice with <5 providers
Private Practice >5 providers	$4/1 = 4$ FTEs per private practice with >5 providers
Other	$1125 / 34 = 33.1$ FTEs
Total	$17812 / 195 = 91.3$ FTEs per organization

Approximately how many full-time equivalents (FTEs) work in your organization to support and maintain your information technology infrastructure?

Health Clinics	$124.1 / 74 = 1.67$ FTEs per health clinic
Hospitals	$324 / 45 = 7.2$ FTEs per hospital
Public Health Departments	$33.7 / 25 = 1.3$ FTEs per public health department
Private Practice <5 providers	$27.6 / 24 = 1.15$ FTEs per private practice with <5 providers
Private Practice >5 providers	N/A
Other	$24.5 / 34 = 0.7$ FTEs
Total	$519 / 195 = 2.7$ FTEs per organization

How can California State Rural Health Association better support your information technology needs?

	Provide information and resource specific to rural health	Support initiatives and funding at the state level	Provide information about how the use of technology can benefit rural health organizations	Provide trainings for provider continuing education	Other
Health Clinics	1.7	68.9	71.6	48.7	54.1
Hospitals	64.4	82.2	64.4	44.4	4.44
Public Health Departments	56.0	84.0	52.0	32.0	12.0
Private Practices (<5)	58.3	50.0	58.3	62.5	8.3
Private Practices (>5)	0	100.0	100.0	100.0	0
Others	61.8	76.5	52.9	47.1	8.8
Total	63.1	73.3	53.8	49.2	6.15