

**MN E-HEALTH REPORT:
Chiropractic Offices' Adoption
and Use of EHRs and Exchange
of Health Information (2011)**



April 2012



Introduction

E-health is the adoption and effective use of electronic health records (EHRs) and other health information technology (HIT) to improve health care quality and accessibility, increase patient safety, reduce health care costs and improve public health. The Minnesota Department of Health, in partnership with the Minnesota e-health Initiative, is responsible for assessing e-health in a variety of settings. The assessment information is used to:

- MEASURE Minnesota’s status on achieving state and national goals to accelerate adoption and use of electronic health records and other HIT and to achieve interoperability of health information
- IDENTIFY gaps and barriers to enable effective strategies and efficient use of resources
- Help DEVELOP programs and INFORM decisions at the local, state and federal levels of government ; and
- SUPPORT community collaborative efforts

MN E-Health Report: Chiropractic Office

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Highlights

This report is the result of collaborative effort by numerous community partners to develop the first known report on chiropractic offices' adoption and use and exchange of health information. The following analysis are based on the response of 277 Minnesota chiropractic offices, a response rate of 34% (277/803), which describe the status of chiropractic offices in late 2011 and early 2012. Please note that because of the low response rate the survey may not be representative of all Minnesota chiropractic offices and the low response rate will limit the ability to draw inferences from the data.

HIGHLIGHTS OF THE FINDINGS INCLUDE:

- 25% of chiropractic offices had an EHR (pg. 7) with size (pg. 9) and affiliation with a health system (pg. 10) factors in EHR adoption
- 55% of chiropractic offices without an EHR plan to implement an EHR in the next 1 to 3 years (pg. 14)
- Common barriers to EHR implementation were cost to acquire (77%) and return on investment concerns (53%) (pg. 15)
- Documentation was the most common use of the EHR (pgs. 23-25)
- 23% indicated achieving electronic exchange of health information with 65% indicating a need to exchange with radiology providers and offices (pgs. 39-41)

MN E-Health Report: Chiropractic Offices

Although the response rate was low, findings suggest that about 25% of chiropractic offices adopt and use EHRs, with limited electronic exchange of health information occurring.

Barriers identified as preventing adoption, use, and electronic exchange included cost, training, and knowledge.

Chiropractic Offices by Number of Chiropractic Practitioners (N = 277)

Number of Chiropractic Practitioners	Percent & Number
1	71% (196)
2	20% (56)
3	5% (13)
4	3% (8)
No Response	1% (4)
Total	277

Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
 Response Rate: 34% (277/803)

MN E-Health Report: Chiropractic Offices Demographics

Ninety-one percent of chiropractic offices had two or fewer chiropractic practitioners.

No chiropractic offices reported more than four chiropractic practitioners.

Chiropractic Offices by Rural-Urban Commuting Areas (N = 277)

Number of Chiropractic Practitioners	Percent & Number
Urban	56% (154)
Large Rural	17% (46)
Small Rural	15% (42)
Isolated	13% (35)
Total	277

Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
Response Rate: 34% (277/803)

MN E-Health Report: Chiropractic Offices Demographics

Fifty-six percent of chiropractic offices were in urban areas.

The remaining 44% were in rural areas.

Chiropractic Offices by Affiliation with Health System or Hospitals (N = 277)

	Percent & Number
Independent chiropractic office	92% (256)
Chiropractic office practicing in or part of a health system or hospital	5% (14)
Did not respond	3% (7)
Total	277

MN E-Health Report:
Chiropractic Offices
Demographics

Most (92%) of chiropractic offices were independent.

Five percent of chiropractic offices were practicing in or part of a health system or hospital.

Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
Response Rate: 34% (277/803)

EHR Status of MN Chiropractic Offices (N = 277)

	Percent & Number
No EHR*	67% (185)
In process	8% (23)
EHR installed and in use*	25% (69)
Total	277

*11 chiropractic offices misidentified as having an “EHR installed and use” and were reclassified as “No EHR”, see methodology for more detail
 Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
 Response Rate: 34% (277/803)

MN E-Health Report: Chiropractic Offices Adoption

Two-thirds of chiropractic offices had no EHR (185).

Eight percent were in process, having purchased or started implementation, but were not using the EHR.

The remaining 25% had an EHR and were using it.

EHR Status of MN Chiropractic Offices by Rural-Urban Commuting Areas (N = 277)

MN E-Health Report: Chiropractic Offices Adoption

Chiropractic offices in large rural and small rural areas had higher EHR adoption rates than those in urban and isolated areas.

A high percent, 86%, of chiropractic offices in isolated areas had no EHR.

	Urban	Large Rural	Small Rural	Isolated
No EHR* (N = 185)	67% (103)	52% (24)	67% (28)	86% (30)
In process (N = 23)	8% (13)	13% (6)	5% (2)	6% (2)
EHR installed and in use* (N = 185)	25% (38)	35% (16)	29% (12)	9% (3)
Total (N = 277)	154	46	42	35

*11 chiropractic offices misidentified as having an “EHR installed and use” and were reclassified as “No EHR”, see methodology for more detail

Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
Response Rate: 34% (277/803)

EHR Status of MN Chiropractic Offices by Number of Chiropractic Practitioners (N = 277)

MN E-Health Report: Chiropractic Offices Adoption

Chiropractic offices with one chiropractic practitioner had lower EHR adoption rates (EHR installed and use) than offices with more than one practitioner.

Almost three-fourths of chiropractic offices with one provider had no EHR.

	Number of Chiropractic Practitioners			
	1	2	3	4
No EHR* (N = 185)	74% (145)	48% (27)	31% (4)	63% (5)
In process (N = 23)	6% (11)	16% (9)	15% (2)	13% (1)
EHR installed and in use* (N = 185)	20% (40)	36% (20)	54% (7)	25% (2)
Total (N = 277)	196	56	13	8

*11 chiropractic offices misidentified as having an “EHR installed and use” and were reclassified as “No EHR”, see methodology for more detail
Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
Response Rate: 34% (277/803)

EHR Status of MN Chiropractic Offices by Affiliation Status (N = 277)

	Non-Affiliated (Independent)	Affiliated (Part of Health System or Hospital)
No EHR* (N = 185)	68% (174)	36% (5)
In process (N = 23)	9% (22)	0% (0)
EHR installed and in use* (N = 185)	23% (60)	64% (9)
Total (N = 277)**	256	14

*11 chiropractic offices misidentified as having an “EHR installed and use” and were reclassified as “No EHR”, see methodology for more detail

**7 chiropractic offices did not indicate affiliation.

Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)

Response Rate: 34% (277/803)

MN E-Health Report: Chiropractic Offices Adoption

Of the 14 chiropractic offices indicating affiliation with a health system or hospital, 64% had an EHR installed and in use compared to 23% of non-affiliated chiropractic offices.

Common EHR Vendors Used by MN Chiropractic Offices (N = 69)

EHR Vendor	Percent & Number
e-Connect Future Health	20% (14)
Epic	9% (6)
Chart Talk	7% (5)
Write Pad	7% (5)
Chiro Quick Charts	6% (4)
Eclipse	6% (4)
RAPID/ACOM	6% (4)

Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
 Response Rate: 34% (277/803)

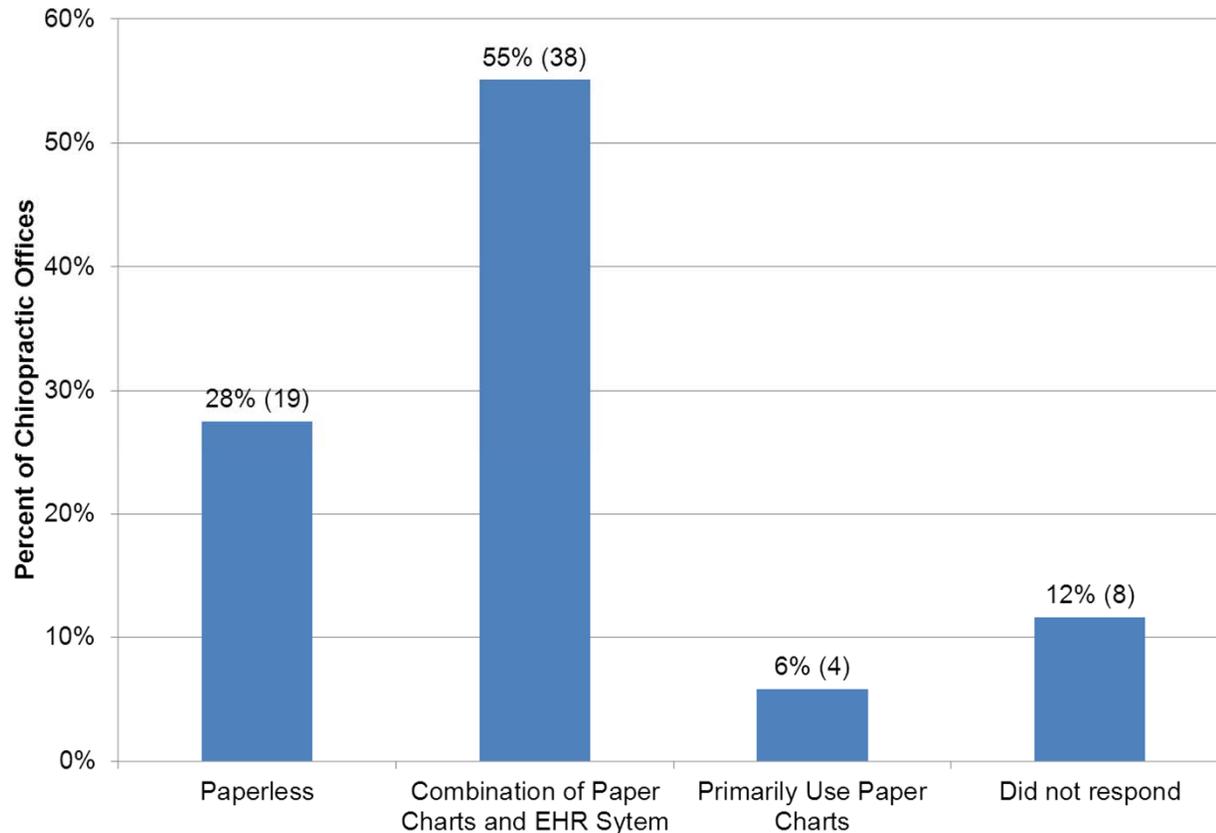
MN E-Health Report: Chiropractic Offices Adoption

The seven most common EHR systems accounted for 61% of all chiropractic offices with an EHR.

E-Connect Future Health was the most common EHR system (20%).

All six of the offices with EPIC were part of a health system or hospital.

MN Chiropractic Offices Use of Paper Charts (N = 69)



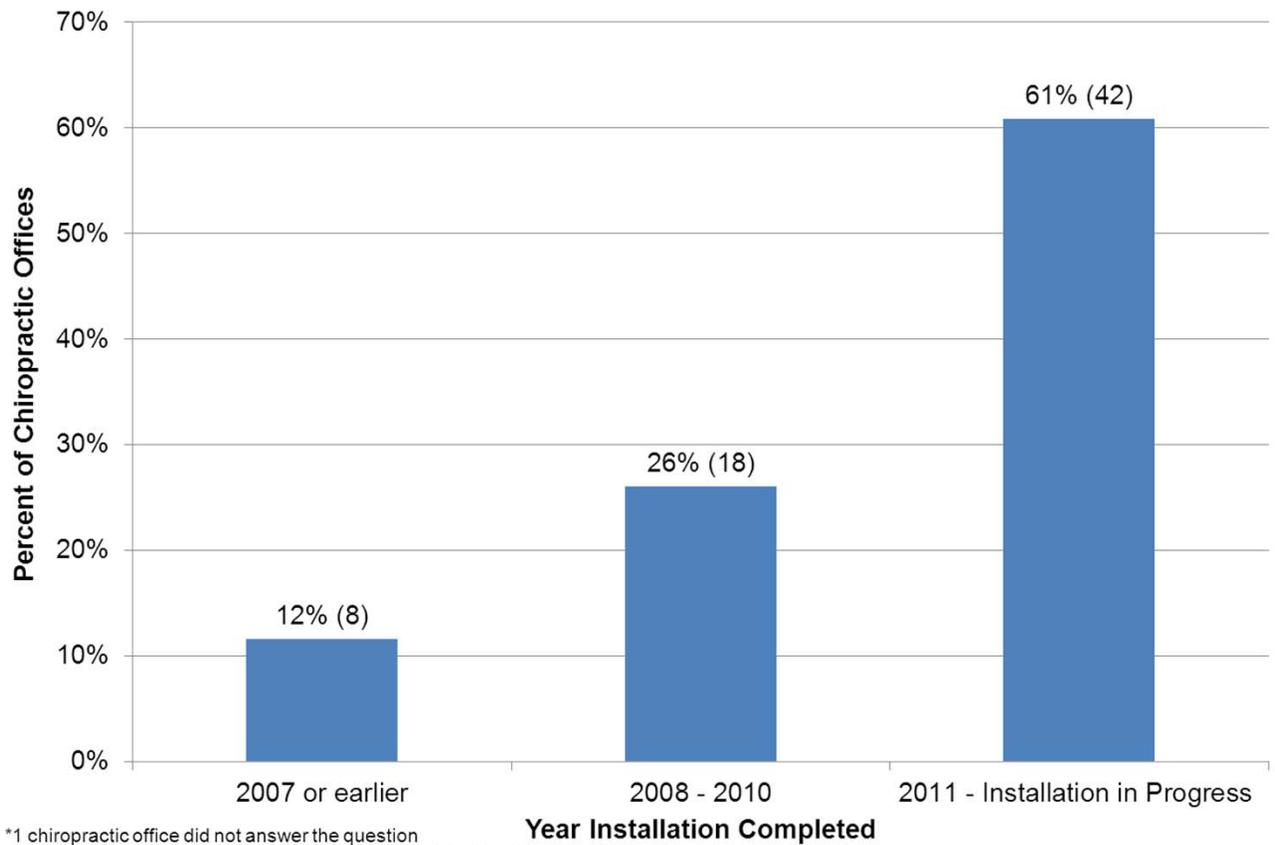
Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
Response Rate: 34% (277/803)

MN E-Health Report: Chiropractic Offices Adoption

Over half of chiropractic offices with EHRs (55%) used a combination of paper charts and EHR systems.

Twenty-eight percent reported being entirely paperless, not maintaining a paper chart.

The Year EHR Systems were Installed in MN Chiropractic Offices (N = 69)



*1 chiropractic office did not answer the question
Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
Response Rate: 34% (277/803)

MN E-Health Report: Chiropractic Offices Adoption

Most chiropractic offices with EHRs completed or were completing installation in 2011.

Twenty-six percent reported installation complete between 2008 -2010.

Plans to Acquire and Implement an EHR in MN Chiropractic Offices without an EHR (N = 208)

Plans to Acquire and Implement	Percent & Number
Are going to purchase and implement within the year	15% (32)
Planning/exploring with implementation within 1-3 years	23% (48)
Not planning/exploring but want to implement within 1-3 years	17% (35)
Planning/exploring with implementation within 4-5 years	3% (6)
Not planning/exploring but want to implement within 4-5 years	12% (25)
No plans to implement within next 1-5 years	23% (48)

Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
 Response Rate: 34% (277/803)

MN E-Health Report: Chiropractic Offices Adoption

Fifty-five percent of chiropractic offices (115) without an EHR plan to implement an EHR in the next 1 to 3 years.

Almost a quarter of offices without an EHR reported no plans to implement an EHR in the next 1-5 years.

Challenges to EHR Implementation by MN Chiropractic Offices Not Using an EHR (N = 208)

MN E-Health Report: Chiropractic Offices Adoption

Challenges to EHR Implementation	All (N = 208)	In Process (N = 23)	No EHR (N = 185)
Cost to acquire	77% (161)	52% (12)	81% (149)
Return-on-investment concerns	53% (110)	30% (7)	56% (103)
Staff education and training	49% (102)	74% (17)	46% (85)
Internal knowledge/technical resources	47% (98)	61% (14)	45% (84)
Chiropractic practitioner support	31% (65)	43% (10)	30% (55)
Security/privacy concerns	26% (54)	22% (5)	26% (49)
Staff support	25% (51)	26% (6)	24% (45)
Administration support	17% (36)	13% (3)	18% (33)
Vendor availability	17% (29)	0% (0)	16% (29)
Non-physician provider support	7% (14)	4% (1)	7% (13)

The cost to acquire was the most common challenge to EHR implementation by chiropractic offices with no EHR (81%).

For chiropractic offices in process of implementing an EHR the most common challenge was staff education and training (74%).

Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
Response Rate: 34% (277/803)

EHR-Related Workforce Needs of MN Chiropractic Offices (N = 277)

Workforce Needs	All (N =277)	EHR (N = 69)	In Process (N = 23)	No EHR (N=185)
People to help design, customize, and/or maintain EHR	45% (126)	19% (13)	43% (10)	56% (103)
A person to lead the implementation of the EHR	40% (112)	12% (8)	43% (10)	51% (94)
People to get the EHR ready for use (enter orders, patient information)	40% (111)	17% (12)	61% (14)	51% (85)
Computer/IT personnel	32% (90)	25% (17)	22% (5)	37% (68)
Chiropractic practitioners, office, or other staff	23% (65)	20% (14)	9% (2)	26% (49)
Trainers	12% (33)	10% (7)	43% (10)	9% (16)

MN E-Health Report: Chiropractic Offices Adoption

The EHR-related workforce needs varied across EHR adoption status.

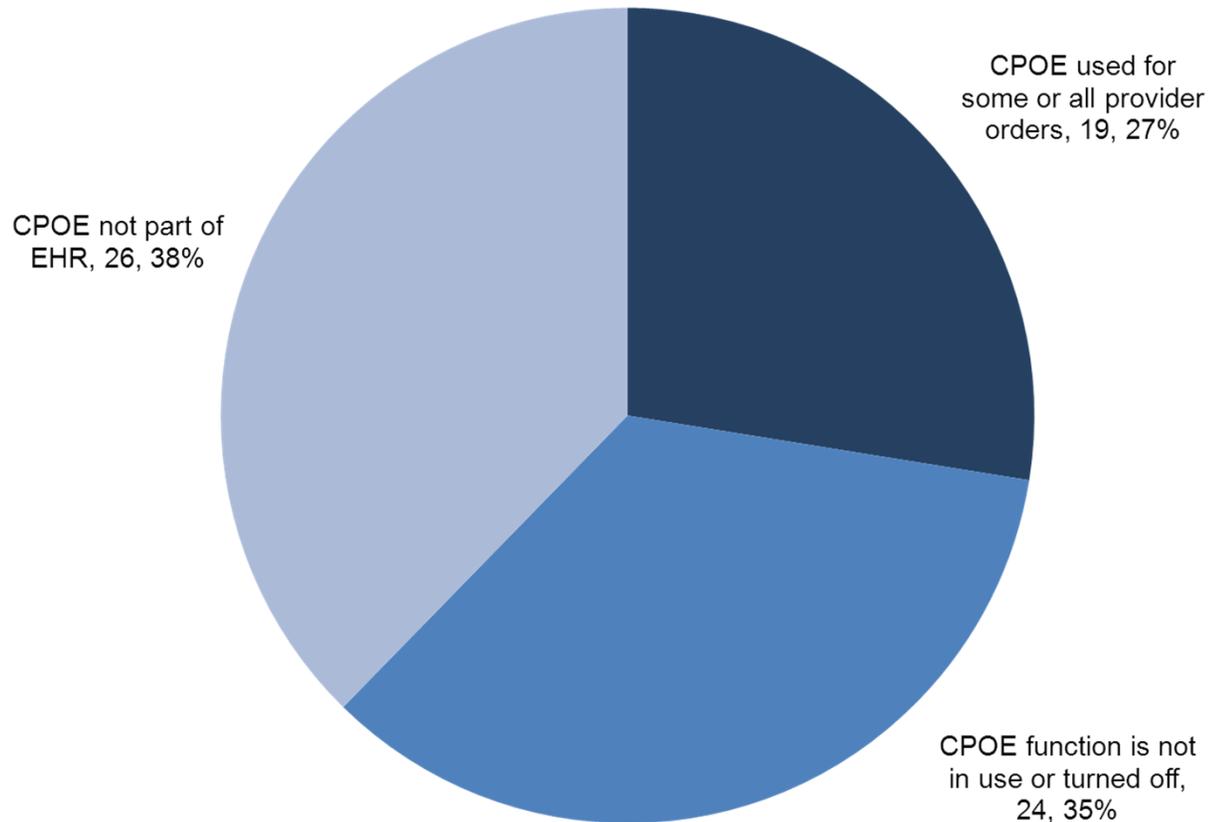
Chiropractic offices with no EHR needed people to help design, customize, or maintain the EHR (56%).

Chiropractic offices in process of getting an EHR needed people to get the EHR ready for use (61%).

Computer or IT personnel are needed in chiropractic offices currently using the EHR (25%).

Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
Response Rate: 34% (277/803)

Use of Computerized Provider Order Entry (CPOE) in MN Chiropractic Offices (N = 69)



Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
Response Rate: 34% (277/803)

MN E-Health Report: Chiropractic Offices Use

Twenty-seven percent of chiropractic offices with an EHR used CPOE for some or all provider orders.

Another 35% had the CPOE function but it was not in use or was turned off.

CPOE was not part of the EHR for 38% of chiropractic offices.

Challenges to Using CPOE by MN Chiropractic Offices (N = 69)

MN E-Health Report:
Chiropractic Offices
Use

The most common barriers to using CPOE were staff training (29%) and limited time during the patient encounter (23%).

Challenges	Percent & Number
Requires staff training	29% (20)
Time too limited during patient encounter to use	23% (16)
Building orders into system takes time	19% (13)
Requires maintenance	16% (11)
Some chiropractic practitioners use handwritten or paper orders	14% (10)
Hardware issues (computers not available in all exam rooms, etc.)	14% (10)
Requires a system upgrade	12% (8)

Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
Response Rate: 34% (277/803)

Use of Clinical Decision Support Tools in MN Chiropractic Offices (N = 69*)

MN E-Health Report:
Chiropractic Offices
Use

Clinical Decision Support Tools	Routinely Used	Occasionally Used	Not Used
Patient specific or condition specific reminders	33% (23)	22% (15)	36% (25)
Clinical guidelines based on patient problem list, gender, and age	30% (21)	22% (15)	41% (28)
Allergy/dietary interaction alerts	25% (17)	29% (20)	36% (25)
Preventive care services due (e.g. age appropriate screenings)	17% (12)	29% (20)	45% (31)
Automated reminders for missing labs and tests (e.g. diagnostic tests)	14% (10)	14% (10)	61% (42)
Chronic care plans and flow sheets	13% (9)	33% (23)	43% (30)
High tech diagnostic imaging decision support tools	10% (7)	23% (16)	58% (40)

Seventy-four percent of chiropractic offices with EHRs used decision support tools including routine use of:

- Patient specific or condition specific reminders (33%)
- Clinical guidelines (30%)
- Allergy/dietary interaction alerts (25%)

*Between 5 to 7 chiropractic offices did not respond
Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
Response Rate: 34% (277/803)

Barriers to Using Clinical Decision Support Tools by MN Chiropractic Offices (N = 69)

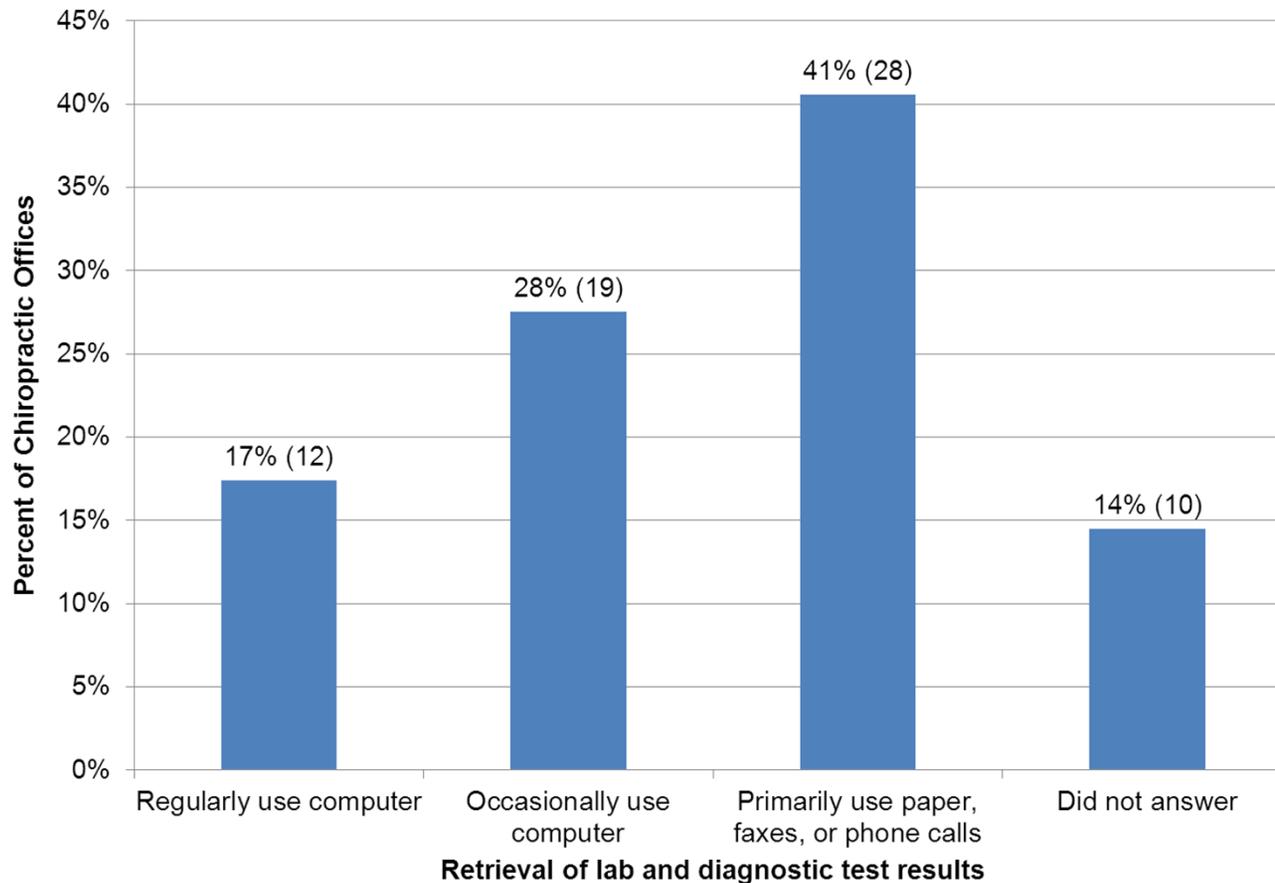
**MN E-Health Report:
Chiropractic Offices
Use**

The most common barriers to using clinical decision support tools were requires staff training (39%) and requires resources to build/implement (26%).

Barriers	Percent & Number
Requires staff and/or chiropractic practitioner training	39% (27)
Requires resources to build/implement	26% (18)
Too many false alarms/too disruptive	19% (13)
Requires a system upgrade	14% (10)
Hardware issues (computers not available in all exam rooms, etc.)	13% (9)
Software not available	12% (8)

Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
Response Rate: 34% (277/803)

Retrieval of Lab and Diagnostic Test Results by MN Chiropractic Offices (N = 69)



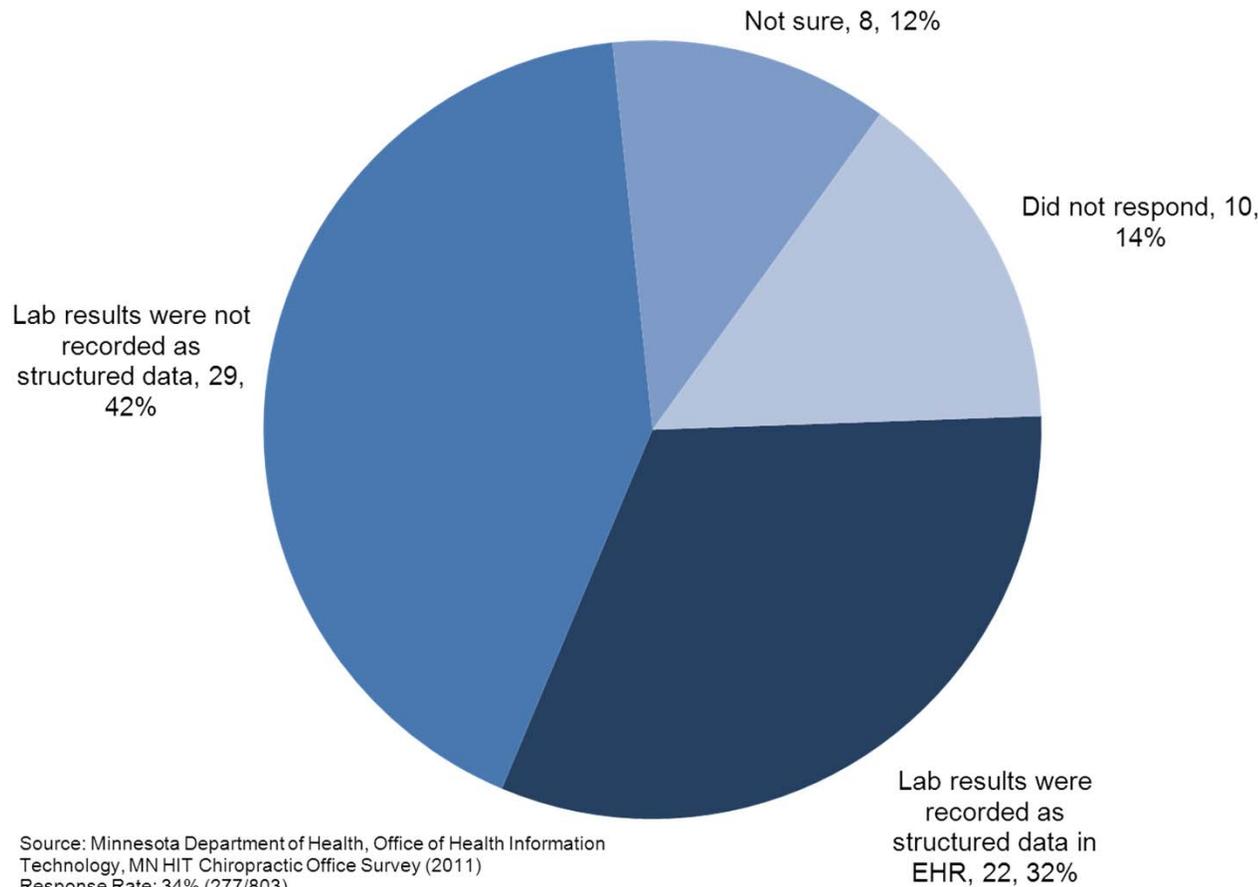
Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
Response Rate: 34% (277/803)

MN E-Health Report: Chiropractic Offices Use

Forty-one percent of chiropractic offices with EHRs used paper, faxes, or phone calls as the primary method to retrieve lab and diagnostic test results.

The remaining offices regularly (17%) or occasionally (28%) used the computer to retrieve the test results.

MN Chiropractic Offices Incorporating Lab Test Results in EHR (N = 69)



Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
Response Rate: 34% (277/803)

MN E-Health Report: Chiropractic Offices Adoption

Forty-two percent of chiropractic offices with an EHR were not recording lab results as structured data in the EHR.

Another 32% were recording lab results as structured data in the EHR.

MN Chiropractic Offices that Maintain an Up-To Date Problem List for Each Patient within the EHR (N = 69)

	Percent and Number
More than 80% of patients	68% (47)
Less than 80% of patients	10% (7)
Do not maintain problem lists	6% (4)
Not Sure	3% (2)
Did not respond	13% (9)

Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
 Response Rate: 34% (277/803)

MN E-Health Report: Chiropractic Offices Use

Sixty-eight percent of chiropractic offices with EHR systems maintained up-to-date problem lists for more than 80% of patients.

A problem list is a list of the patient’s diagnoses and conditions- including past conditions that may impact current health status.

MN Chiropractic Offices that Track and Record Vital Signs in the EHR for Patient Encounters (N = 69)

Vital Signs	> 80% of Encounters	< 80% of Encounters	Not collected or turned on/ Not Sure	Did Not Respond
Height	51% (35)	26% (18)	10% (7)	13% (9)
Weight	52% (36)	25% (17)	9% (7)	13% (9)
Blood Pressure	49% (34)	29% (20)	9% (6)	13% (9)
Body Mass Index (BMI)	43% (30)	26% (18)	16% (11)	14% (10)

Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
 Response Rate: 34% (277/803)

MN E-Health Report: Chiropractic Offices Use

About half of chiropractic offices with EHRs were able to track and record vital signs in the EHR for more than 80% of the patient encounters for weight, blood pressure, and height.

Slightly fewer offices were able to track and record body mass index.

MN Chiropractic Offices that Track Tobacco Smoking Status in the EHR (N = 69)

Status	Percent and Number
More than 80% of patients aged 13+	59% (41)
Less than 80% of patients aged 13+	9% (6)
Do not record in EHR	14% (10)
Not Sure	4% (3)
Did not respond	13% (9)

Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
Response Rate: 34% (277/803)

MN E-Health Report: Chiropractic Offices Use

Fifty-nine percent of chiropractic offices with EHR systems were able to track tobacco smoking in the EHR for 80% or more of patients.

Ability to Provide Patients with Clinical Summaries within Three Business Days by MN Chiropractic Offices (N = 69)

	Percent and Number
More than 80% of all encounters	39% (27)
Less than 80% of all encounters	14% (10)
Do not provide clinical summaries	23% (16)
Do not have function/function turned off	4% (3)
Not Sure	6% (4)
Did not respond	13% (9)

Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
 Response Rate: 34% (277/803)

MN E-Health Report: Chiropractic Offices Use

Thirty-nine percent of chiropractic office with EHR systems had the ability to provide patients with clinical summaries within three business days for more than 80% of patient encounters.

Almost a quarter of offices did not provide clinical summaries.

MN Chiropractic Offices' Ability to Provide Patients with Electronic Access to Health Information within Four Business Days (N = 69)

	Percent and Number
More than 80% of patients	30% (21)
Less than 80% of patients	9% (6)
Do not provide electronic access	4% (3)
Do not have function/function turned off	30% (21)
Not Sure	13% (9)
Did not respond	13% (9)

Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
 Response Rate: 34% (277/803)

MN E-Health Report: Chiropractic Offices Use

Slightly less than a third of chiropractic offices with EHRs were able to provide patients with electronic access to their health information within four business days for more than 80% of patients.

Another third did not have the function or it was turned off.

MN Chiropractic Offices' Ability to Provide Patients with an Electronic Copy of Health Information within Three Business Days (N = 69)

	Percent and Number
More than 80% of requests	43% (30)
Less than 80% of request	4% (3)
Provide electronic copies but more than 3 business days	1% (1)
Do not provide electronic copies	26% (18)
Do not have function/function turned off	4% (3)
Not Sure	7% (5)
Did not respond	13% (9)

Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
 Response Rate: 34% (277/803)

MN E-Health Report: Chiropractic Offices Use

Forty-three percent of chiropractic offices with EHRs were able to provide patients with electronic copies of their health information within three business days for more than 80% of requests.

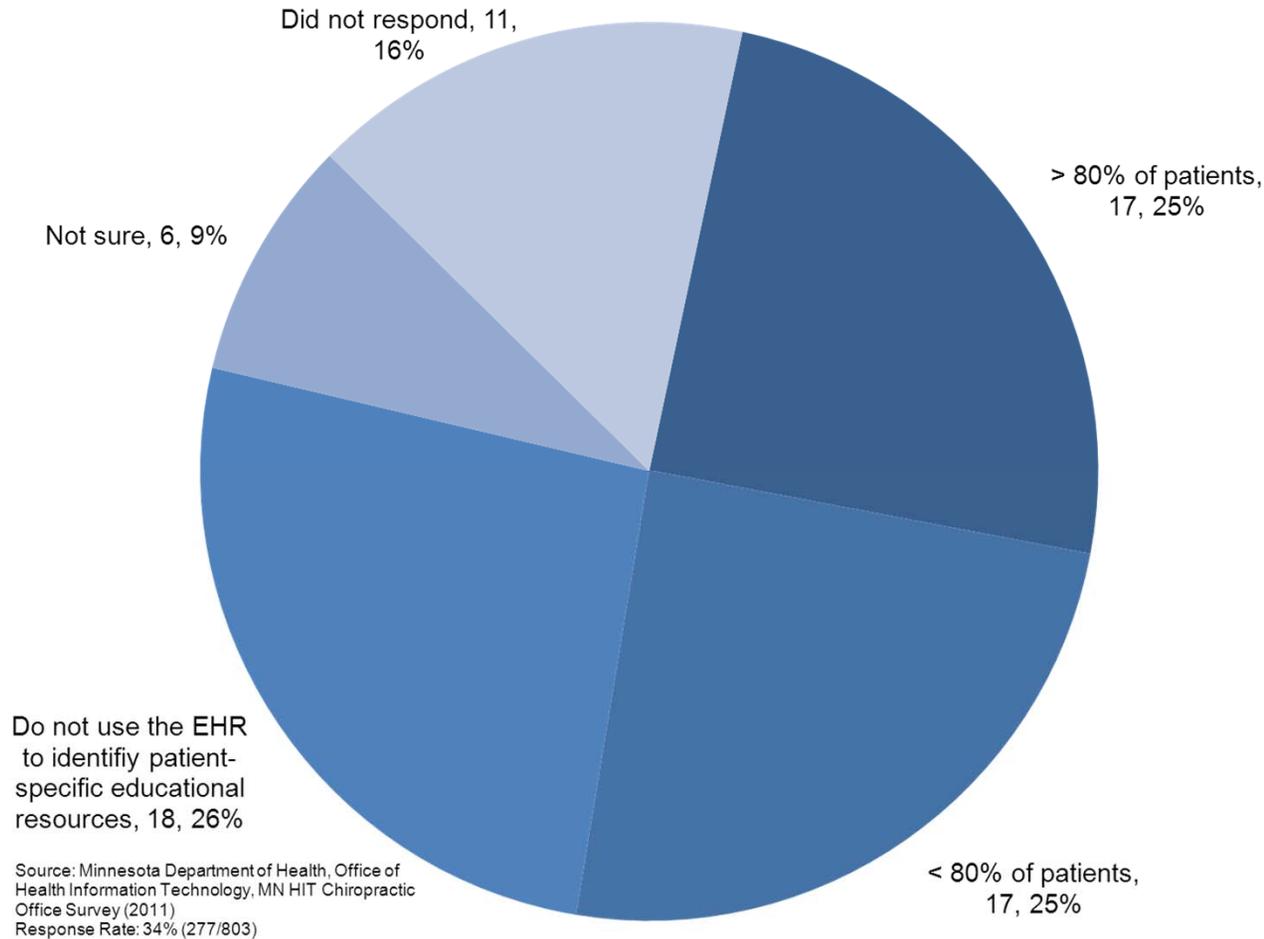
Common methods included:

- Personal health record or patient portal (20)
- Secure email (19)
- Flash or USB drive (16)

Use of EHR to Identify Patient-Specific Educational Resources by MN Chiropractic Offices (N = 69)

MN E-Health Report: Chiropractic Offices Adoption

Half of chiropractic offices with EHRs were using the EHR to identify patient-specific educational resources.



Status of Care Plan Use by MN Chiropractic Offices (N = 69)

Status	Percent and Number
Use EHR to provide care plans	41% (28)
Use paper or manual system to provide care plans	17% (12)
Do not use care plans	13% (9)
Not sure	14% (10)
Did not respond	14% (10)

Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
 Response Rate: 34% (277/803)

**MN E-Health Report:
Chiropractic Offices**

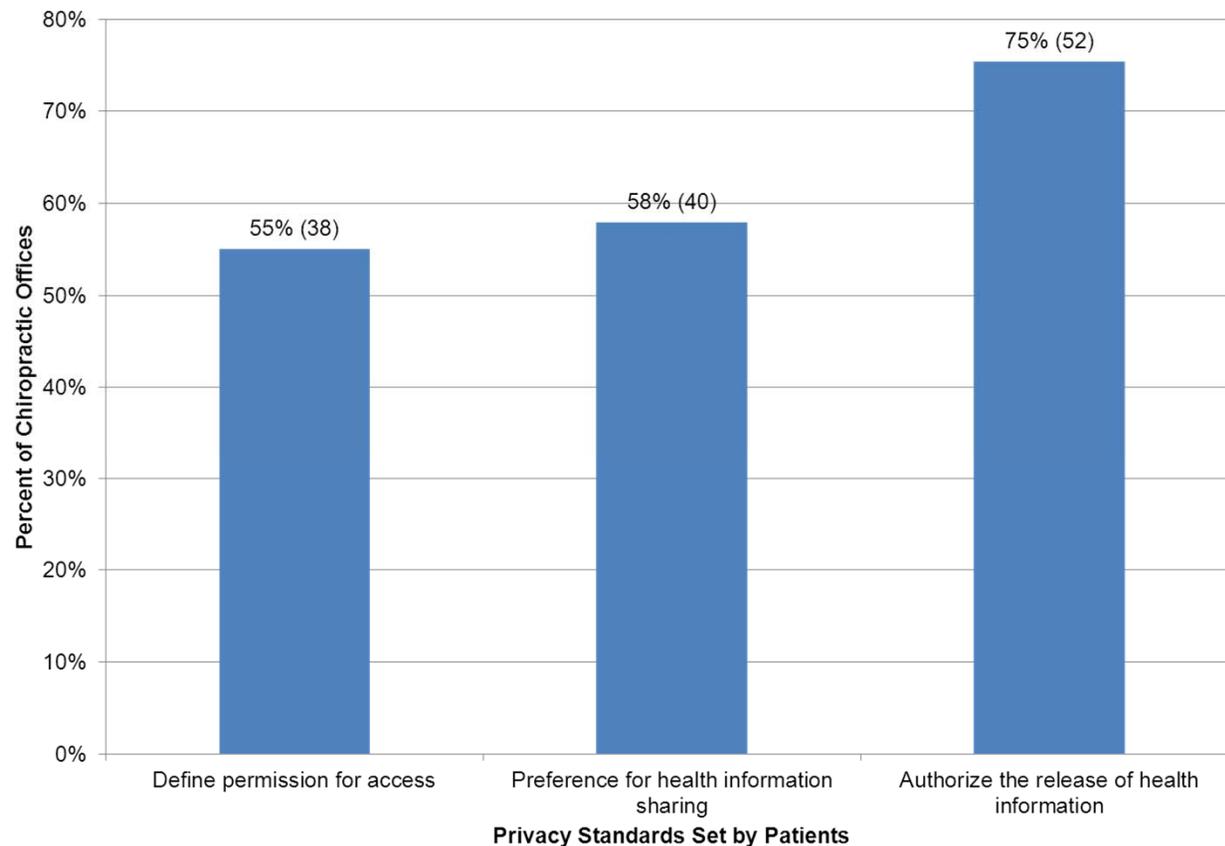
Use

Forty-one percent of chiropractic offices with EHRs were able to provide care plans using the EHR.

Common methods to share care plans included:

- Secure email (12)
- Flash or USB drive (12)
- Personal health record or patient portal (11)

MN Chiropractic Offices that Allow Patients to Set Privacy Standards (N = 69)



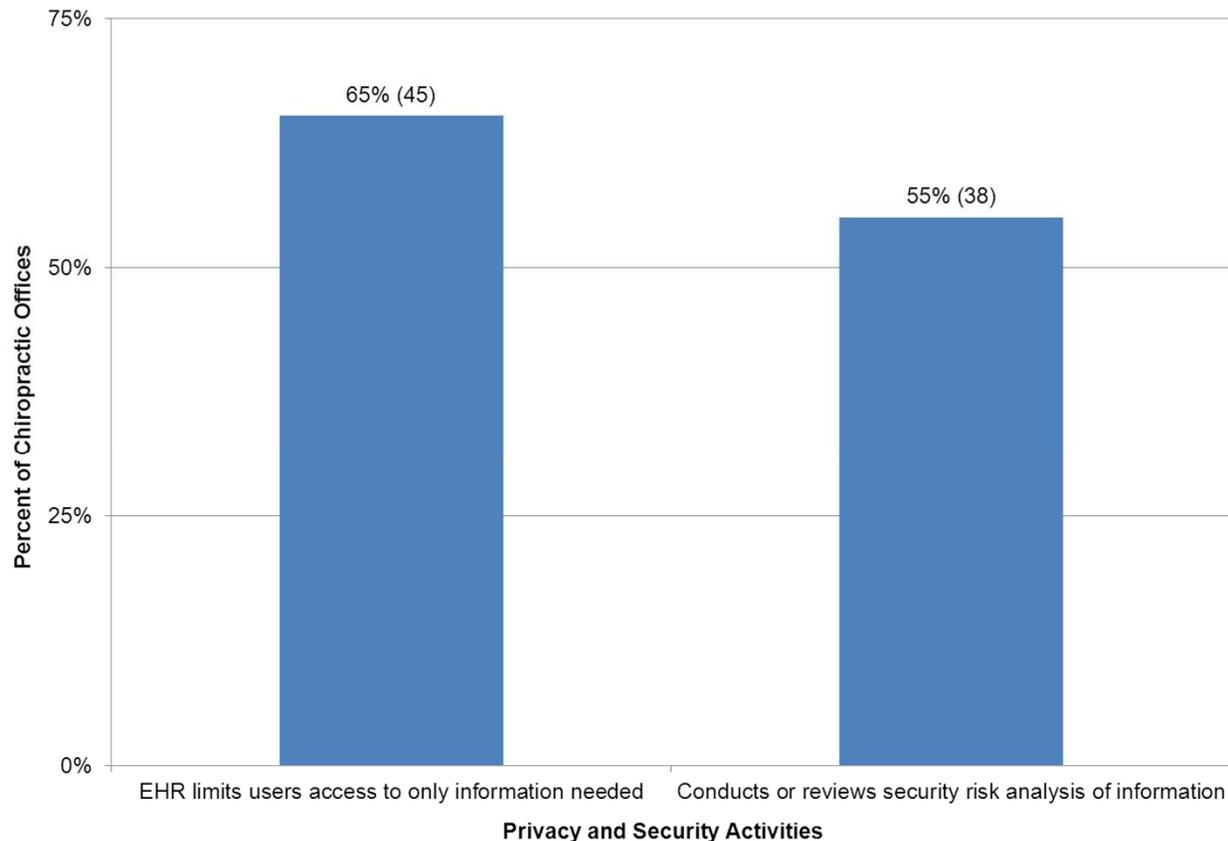
Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
Response Rate: 34% (277/803)

MN E-Health Report: Chiropractic Offices Use

Three-fourths of chiropractic offices with EHRs allow patients to authorize the release of health information.

More than half allow patients to define permission for access by staff (55%) and preference for health information sharing (58%).

Privacy and Security Activities of MN Chiropractic Offices (N = 69)



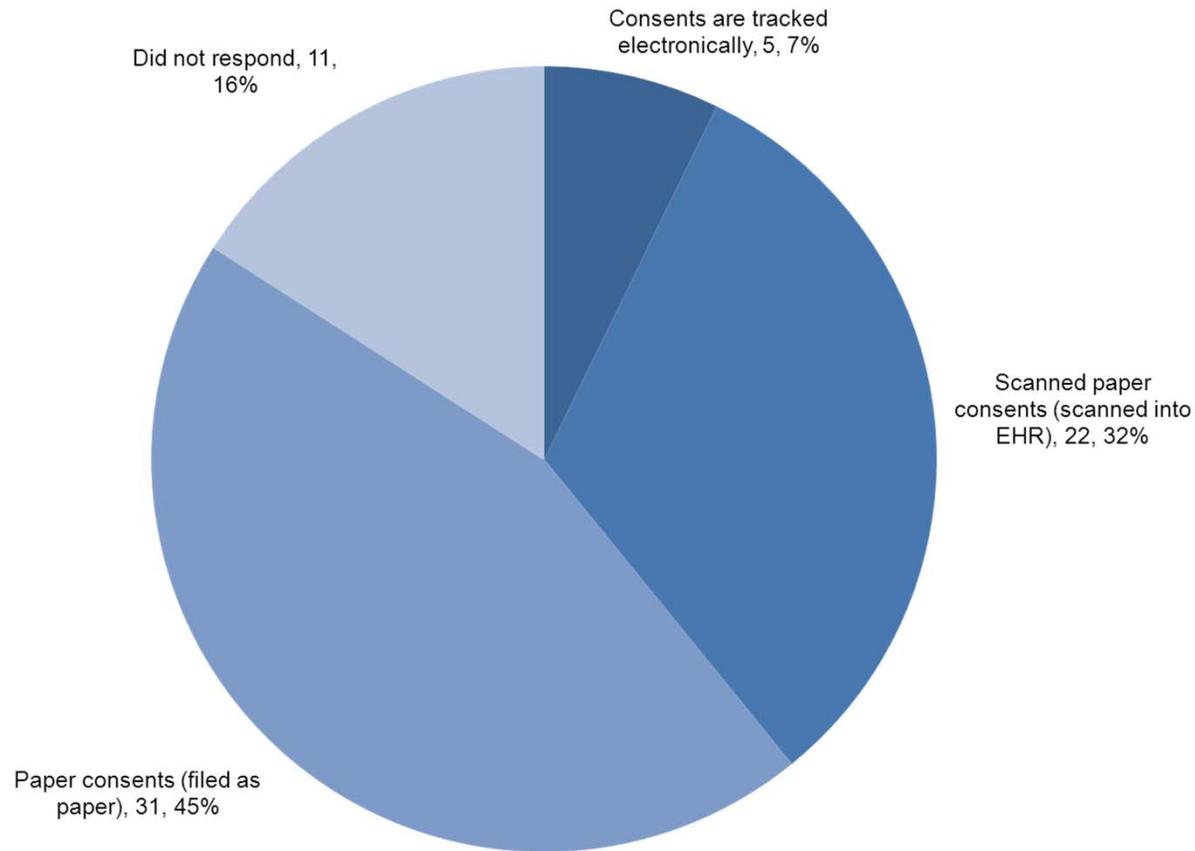
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Response Rate: 34% (277/803)

MN E-Health Report: Chiropractic Offices Use

Sixty-five percent of chiropractic offices with EHRs used the EHR to limit users' access to only information needed.

Fifty-five percent of offices conducted or reviewed security risk analysis information.

MN Chiropractic Offices' Methods for Tracking Patient Consent (N = 69)

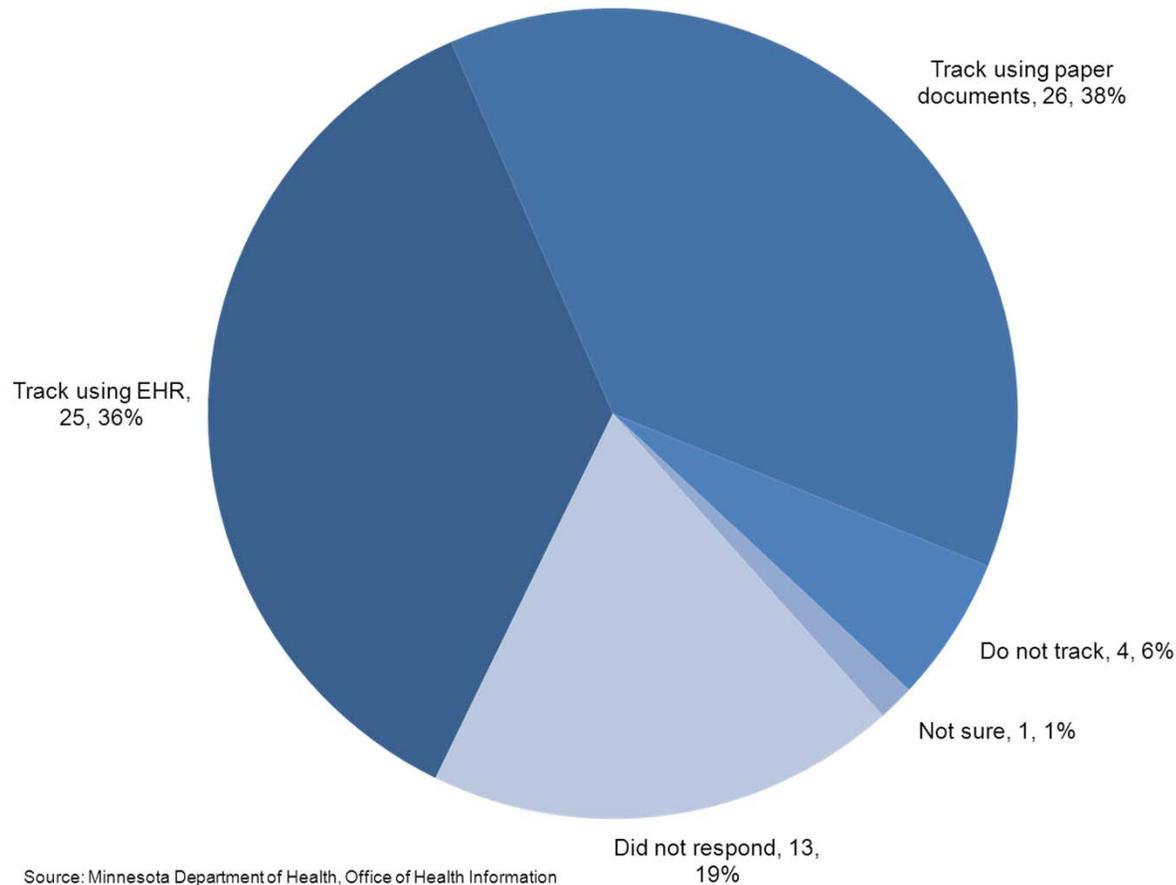


Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
Response Rate: 34% (277/803)

MN E-Health Report: Chiropractic Offices Use

Chiropractic offices with EHRs identified the most common method for tracking patient consent as paper consents, filed as paper (45%).

MN Chiropractic Offices Methods for Tracking Advanced Directives/Patient Preferences (N = 69)

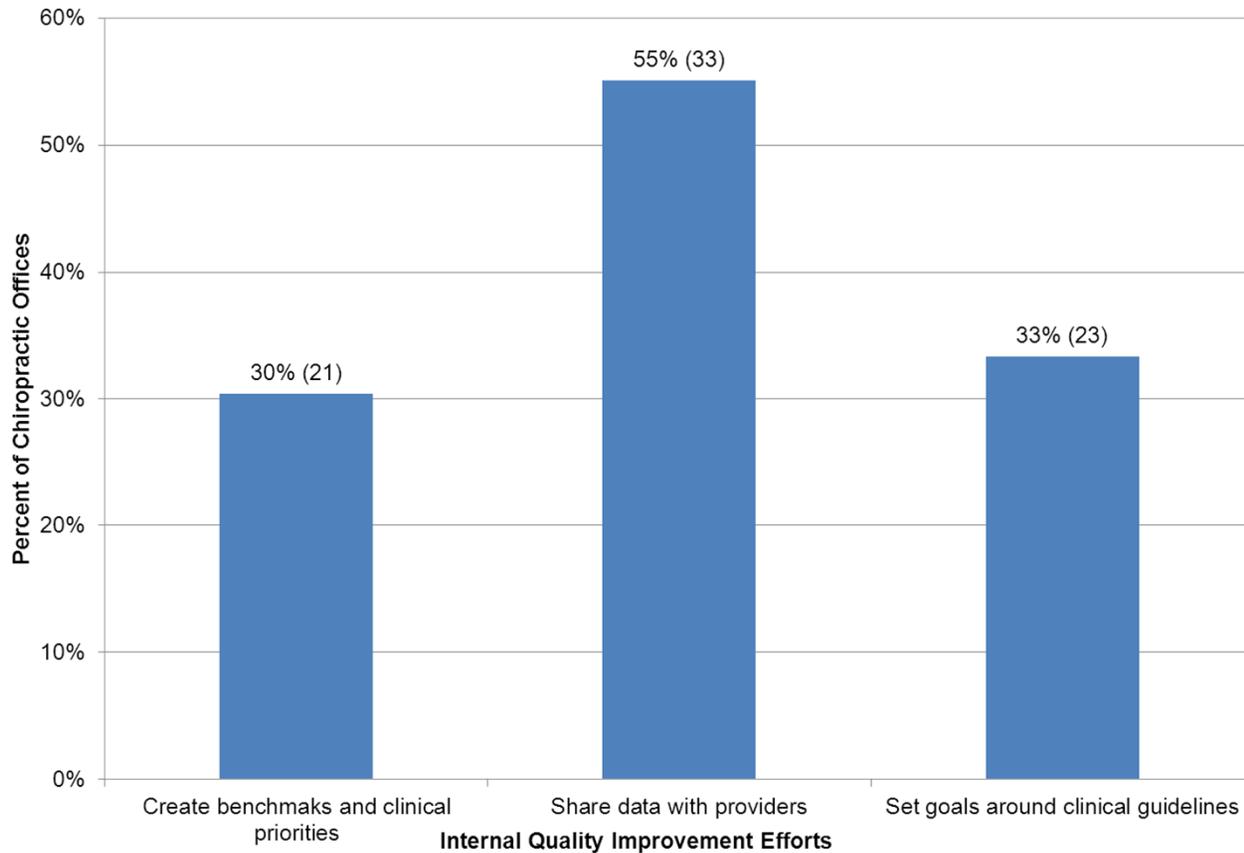


Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
Response Rate: 34% (277/803)

MN E-Health Report: Chiropractic Offices Use

Thirty-eight percent of chiropractic offices with EHRs used paper documents to track advance directives/patient preferences while 36% used the EHR.

MN Chiropractic Offices' Use of Data from the EHR for Internal Quality Improvement Efforts (N = 69)

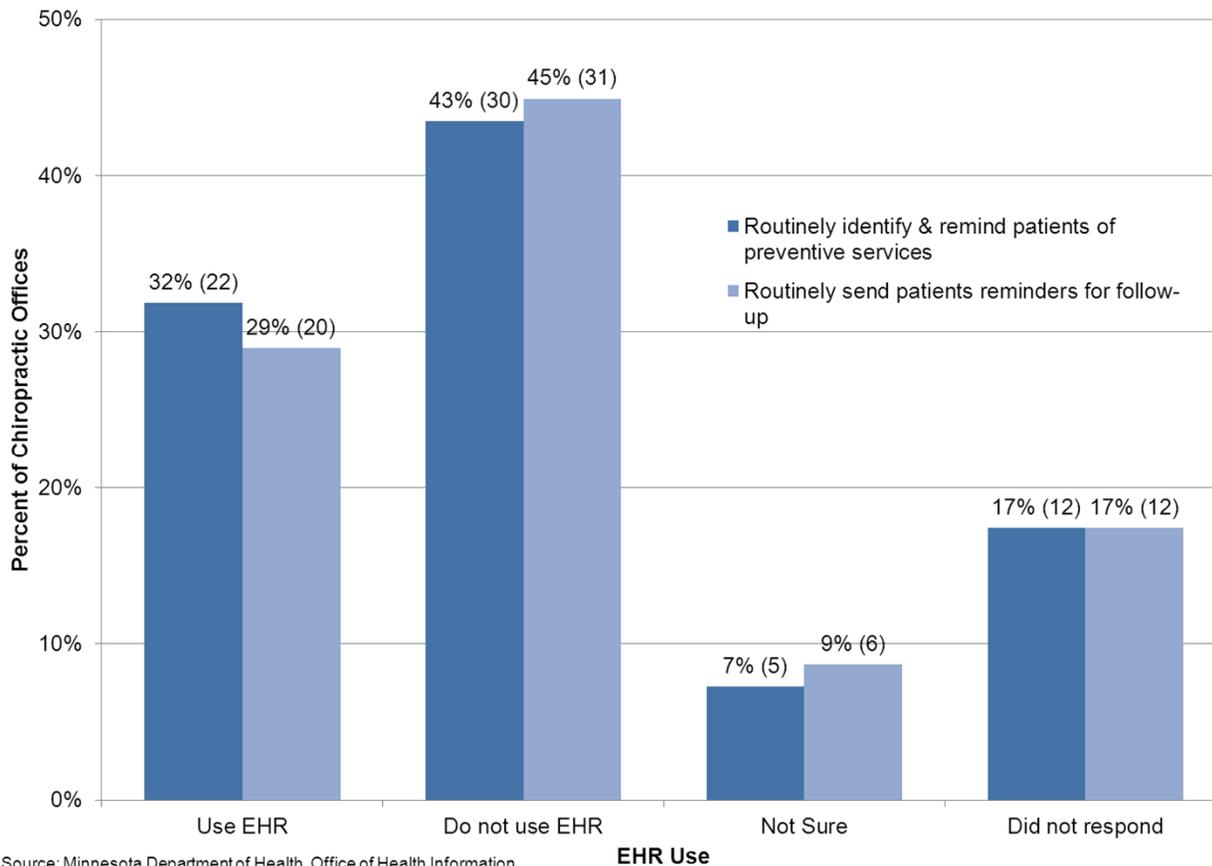


MN E-Health Report: Chiropractic Offices Use

The most common use of data from the EHR for quality improvement efforts was to share data with providers (55%).

Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
Response Rate: 34% (277/803)

Routine Use of EHRs for Preventive and Follow-up Reminders by MN Chiropractic Offices (N = 69)



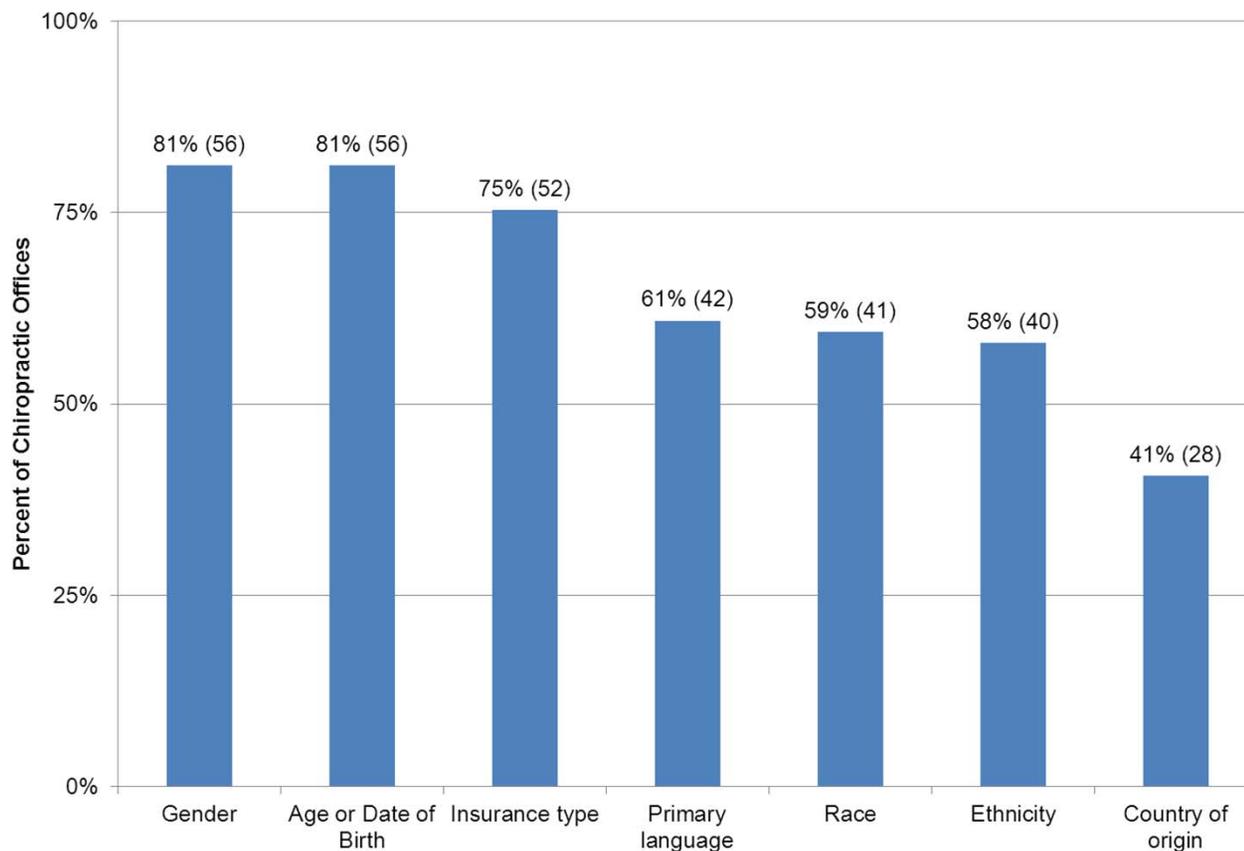
Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
Response Rate: 34% (277/803)

MN E-Health Report: Chiropractic Offices Use

Chiropractic offices with an EHR used the EHR routinely to:

- Identify and remind patients of preventive services (32%)
- Send patient reminders for follow-ups (29%)

Demographic Information Captured in EHRs by MN Chiropractic Offices (N = 69)



Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
Response Rate: 34% (277/803)

MN E-Health Report: Chiropractic Offices Use

Gender, age and insurance type were captured in EHRs by at least 75% of chiropractic offices.

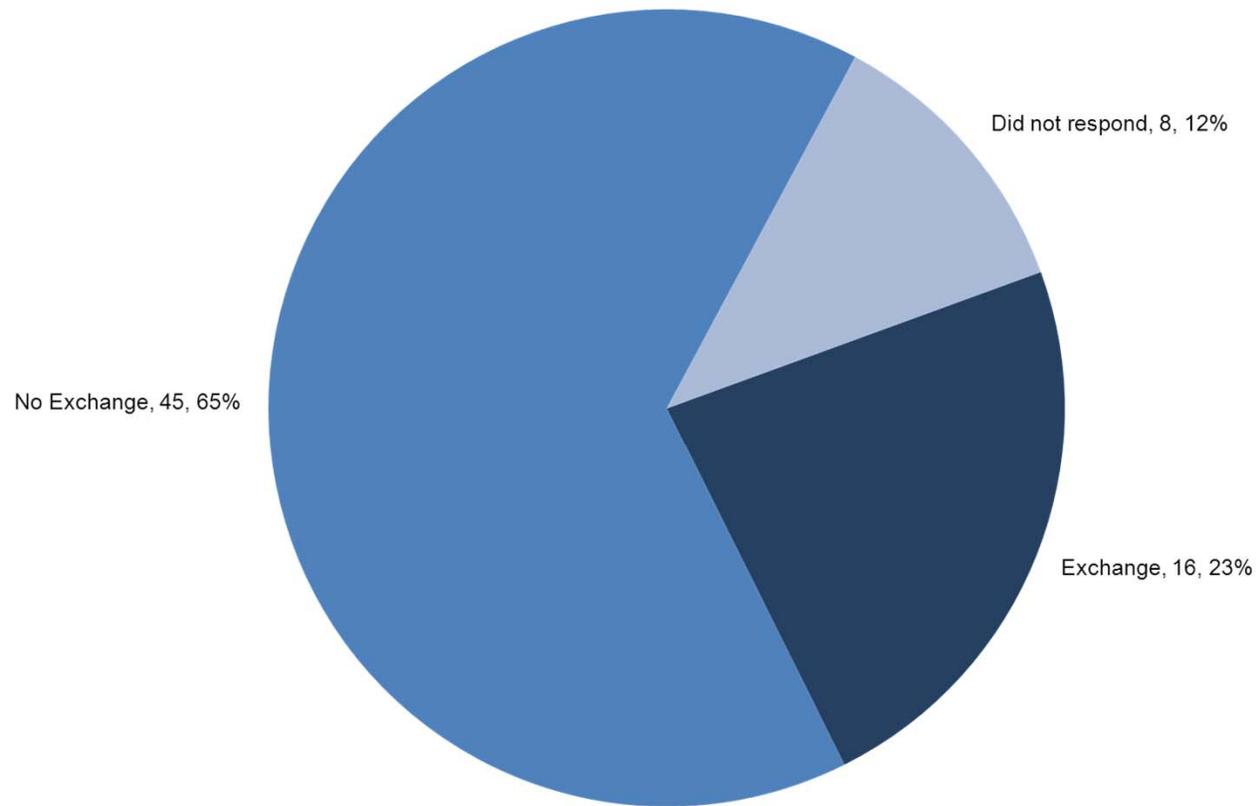
Less than 60% of offices captured race, ethnicity or country of origin.

Electronic Exchange of Health Information by MN Chiropractic Offices (N = 69)

MN E-Health Report: Chiropractic Offices Exchange

Twenty-three percent of chiropractic offices with EHRs reported electronic exchange of health information.

Electronic exchange excludes exchange with patients



Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
Response Rate: 34% (277/803)

Electronic Exchange of MN Chiropractic Offices by Partner (N = 69)

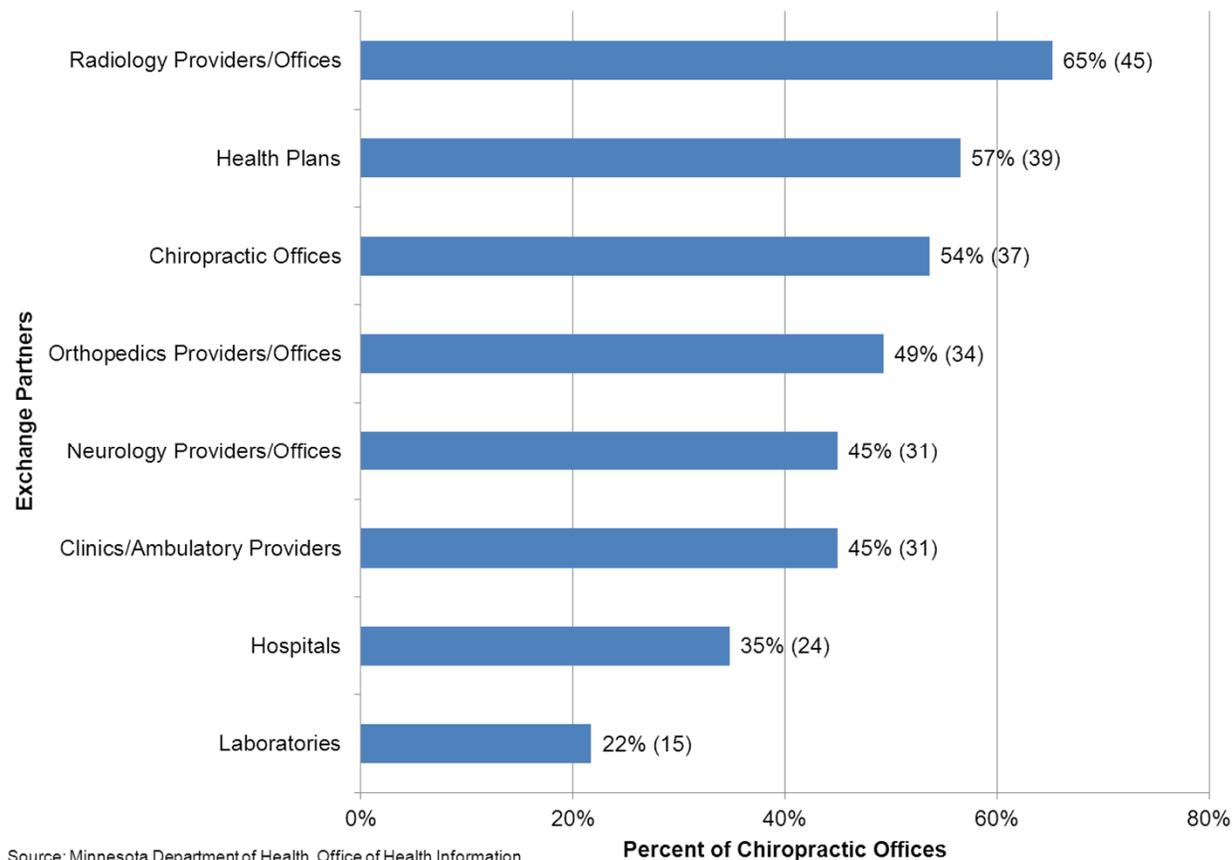
Exchange Partner	Send	Receive
Hospitals	3 (4%)	8 (12%)
Neurology providers/offices	2 (3%)	3 (4%)
Orthopedics providers/offices	3 (4%)	1 (1%)
Other care setting	0 (0%)	1 (1%)
Providers (outside of system)	6 (9%)	3 (4%)
Radiology providers/offices	6 (9%)	11 (16%)

Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
 Response Rate: 34% (277/803)

MN E-Health Report: Chiropractic Offices Exchange

The most common exchange partners for chiropractic offices with EHRs were radiology providers/offices, hospitals, and providers (outside of system).

Needed Exchange Partners Identified by MN Chiropractic Offices with EHRs (N = 69)



MN E-Health Report: Chiropractic Offices Exchange

Sixty-five percent of chiropractic offices with EHRs indicated a need to electronically exchange with radiology providers/offices.

Health plans (57%) and other chiropractic offices (54%) were also identified as needed exchange partners.

Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
Response Rate: 34% (277/803)

Challenges to Electronic Information Exchange with Outside Organizations Identified by MN Chiropractic Offices (N = 69)

Challenges	Percent and Number
Unclear value on return on investment	35% (24)
HIPAA, privacy or legal concerns	28% (19)
Lack of or access to technical support or expertise	22% (15)
Insufficient information on exchange options available	19% (13)
Capabilities of others to receive electronic data unknown or not as proficient as our organization	19% (13)
Subscription rates for exchange services are too high	12% (8)
Competing priorities	12% (8)
Inability of system to generate/receive electronic messages/transactions in standardized format	10% (7)
Clinical data is not available to access from partners	7% (5)

Source: Minnesota Department of Health, Office of Health Information Technology, MN HIT Chiropractic Office Survey (2011)
Response Rate: 34% (277/803)

MN E-Health Report: Chiropractic Offices Exchange

Chiropractic offices with EHRs identified the most common barriers to electronic exchange of information with outside organizations as the unclear value on return on investment (35%) and HIPPA, privacy or legal concerns (28%).

Conclusion

A quarter of respondents had an EHR (69/277). The results suggest that factors which increase EHR adoption include having more than one chiropractic practitioner (size of practice) and affiliated with a health system.

The barriers to adoption, use, and exchange indicated by chiropractic offices were similar to those identified by ambulatory clinics¹. Therefore tools developed for the ambulatory clinics may be applicable for chiropractic offices, making addressing the barriers easier. These tools will be of particular interest to the 55% of chiropractic offices without EHRs that indicated plans to adopt an EHR in the next three year.

The most common use of the EHR occurred around documentation including vital signs, smoking status, and problem lists. For use to increase beyond documentation, more chiropractic-specific functions need to be developed by EHR vendors.

The exchange of health information was limited to a few of chiropractic offices with EHRs with exchange happening most frequently with radiology offices and providers. These providers were also the most commonly identified partner need for electronic exchange. This indicates an area to leverage and show the benefits of exchange between these two communities.

The low response rate of 34% (277/803), discussed in the methods, not only affects the results but may indicate a lack of understanding or interest by the chiropractic community in EHR adoption and use, electronic health information exchange, and meaningful use. This indicates a need to provide education and training to chiropractors throughout the state.

For future surveys, the age of practitioners and years of retirement should be included. With so many offices having only 1 or 2 practitioners, this characteristic could greatly affect plans and barriers to EHR adoption and use and health information exchange.

Minnesota chiropractic offices are joining the movement to adopt and use EHRs and achieve health information exchange. to help chiropractic offices address the barriers and gaps from the survey, it is necessary to identify and implement strategies, resources, and collaboration.

1. www.health.state.mn.us/e-health/assessment.html#clinics).

Appendix | Methods

The data in this summary contains the most up-to-date information on the adoption and use of EHRs and other HIT and exchange of health information in Minnesota chiropractic offices. The primary source of the data is the MN Health Information Technology (HIT) Chiropractic Offices Survey (Chiropractic Offices Survey).

The Chiropractic Office Survey was adapted from the 2011 MN Health Information Technology (HIT) Ambulatory Clinic Survey with approval from the Minnesota Department of Health and Minnesota Community Measurement.

The Chiropractic Office Survey was sent out in November 2011 to January 2012, to identified chiropractic offices through email with a link to both the paper and online survey. Multiple contacts, both email and telephone, were made to the chiropractic offices to increase the number of respondents. The survey was voluntary with a response rate of 34%, with 277 of 803 Minnesota chiropractic offices responding.

To validate the EHR adoption rate, those with an EHR installed and in use, the list of software vendors selected by respondents was reviewed and those indicating a practice management system were reclassified as having no EHR. This occurred with 11 chiropractic offices.

Analysis on the EHR use and health information exchange included only the 69 chiropractic offices with EHRs installed and in use.

Please note that because of the low response rate the survey may not be representative of all Minnesota chiropractic offices and the low response rate will limit the ability to draw inferences from the data.

Appendix | Acknowledgements, Definitions, Resources

The authors wishes to acknowledge:

- Minnesota Community Measurement
- Health Economics Program, Minnesota Department of Health
- Office of Health Information Technology, Minnesota Department of Health
- Stratis Health
- Chiropractic Care of Minnesota, Inc

Terms used in the report are defined in the e-Health glossary found at:

www.health.state.mn.us/e-health/glossary.html

More information on e-health assessment activities in Minnesota can be found at:

www.health.state.mn.us/e-health/assessment.html

