Survey of Texas Physicians Health Information and Technology

Selected Research Findings (Deployed August 2020)



Physicians Caring for Texans

Contents

Introduction
EHR status (Q1)
EHR system (Q2)
EHR functions (Q3)6
Patient portals (Q4)7
EHR satisfaction (Q5 and Q6)8
Switching EHR systems (Q7)10
Use of health information exchanges (Q8-Q10)10
EHR interfacing with prescription monitoring programs (Q11 and Q12)13
EHR effects on patient safety and care quality (Q13-Q16)13
Documentation in EHRs (Q17)15
EHR disruption and the data entry process (Q18)17
Data breaches and ransomware attacks (Q19 and Q20)17
E-prescribing and EPCS (Q21-Q24)
Additional Analysis by Demographics20
EHR functions (Q3) by specialty and geographic location20
EHR satisfaction (Q5) by age22
Use of health information exchanges (Q8) by specialty and geographic location
EHR interfacing with prescription monitoring programs (Q11) by specialty and geographic location25
EHR vendors who charged to integrate the PMP with an EHR (Q12)26
EHR effects on patient safety and care quality (Q13-Q16) by specialty and geographic location27
Documentation in EHRs (Q17) by specialty
E-prescribing and EPCS (Q22 and Q23) by specialty32
Survey Methodology
Demographics
Gender
Age
Specialty
Geographic Location
TMA Membership Status
Survey Instrument

Introduction

Every two years, the Texas Medical Association conducts a survey of Texas physicians to identify emerging issues, track the impact of practice and economic changes, assess physician priorities, and develop data to support TMA advocacy efforts. The biennial physician survey is broken up into segments of approximately 29 questions of a similar nature that are emailed to physicians, both members and nonmembers. Traditionally the survey period runs January through September. However, due to the COVID-19 pandemic, survey deployment was interrupted in March and restarted in July.

In August 2020, TMA emailed a survey to 36,889 Texas physicians asking about their experience with electronic health records (EHRs), e-prescribing, and health information exchanges. Access to the survey was closed in January 2021, and a total of 1,303 responses were received.

TMA's goal is to help ensure health information technology has a positive impact on patients and on physicians and their practices by enhancing and improving patient care quality and safety, and practice workflow. Following are the final results, which should be reviewed considering the ongoing pandemic. The results are important as TMA continues to tailor services and resources to help physicians use EHRs safely.

Various questions were analyzed by demographic variables and compared with the entire respondent population. Only results found to be statistically significant are included in this report and at the 90% confidence level.

EHR status (Q1)

Texas physicians were asked to describe their current usage of electronic health records (EHRs). Compared with 2018, there has been a four percentage point increase in practices that currently use an EHR (89%).



Questions two through 21 were directed only at respondents who currently use an EHR.

EHR system (Q2)

The percentage of physicians reporting usage of EPIC (25%) at their primary place of practice has decreased compared with 2018. Not shown in the graph is the "other" category, which was selected by 27% of respondents and contained a great variety of responses.



EHR systems used by Texas physicians

EHR functions (Q3)

Texas physicians were asked which functions within their EHR they use. The most-selected function was e-prescribing or electronic prescribing of controlled substances (EPCS) (79%), followed by imaging or lab orders (77%). The least-selected function was public health reporting (10%). While reasons for the low selection of some functions may be varied, one that should be considered is lack of availability in the EHR.





Patient portals (Q4)

Patient portals are secure websites that give patients access to their personal health information from anywhere. Of the 67% of Texas physicians who reported they used patient portals, 79% reported experiencing problems with the function. The most commonly reported issues were difficulty getting patients to engage (53%), followed by patient reports of a lack of computer or internet access (41%).





EHR satisfaction (Q5 and Q6)

When asked how satisfied they are with the EHR at their primary place of practice, two-thirds of respondents (after excluding neutral responses) reported being satisfied (66%). This percentage of physicians is unchanged compared with 2018.



Texas physicians' level of satisfaction with their EHR

Of the 33% of physicians who reported dissatisfaction with their EHR, reasons for their dissatisfaction included the EHR lacking needed functions (52%) and slowness of the EHR (52%).



Reasons Texas physicians are dissatisfied with their EHR (Check all that apply.)

Switching EHR systems (Q7)

A strong majority of respondents (87%) said they have not switched EHRs in the past two year and less than a fifth (12%) said they had switched.

Use of health information exchanges (Q8-Q10)

Public/regional health information exchanges (HIEs) allow doctors, health care providers, and patients to appropriately access and securely share a patient's vital medical information electronically. Examples of HIEs are Greater Houston Healthconnect, Integrated Care Collaboration, and Healthcare Access San Antonio.

Physicians were asked if they can access all necessary data through an HIE while treating patients. Approximately a third (32%) of respondents said they cannot.



Ability to access all needed data via an HIE

Of the 32% of physicians who reported they cannot access necessary information through an HIE, the most-reported data missing were radiology results (46%) and lab results (43%)



Data missing from Texas physicians' HIEs (Check all that apply.)

Of the 35% of respondents who said they do not participate in an HIE, top reasons for not doing so included not knowing enough about the system (49%) and having an EHR system that is not enabled to participate in HIEs (15%).





EHR interfacing with prescription monitoring programs (Q11 and Q12)

Forty-six percent of respondents said their EHR seamlessly interfaces with the state Prescription Monitoring Program (PMP). Of these physicians, almost a fifth (16%) reported their EHR vendor charged them to integrate the PMP with their EHR.

EHR effects on patient safety and care quality (Q13-Q16)

Although EHRs have the potential to improve patient safety and care, they also can lead to increased errors. Sixty-four percent of respondents reported seeing patient safety and care quality improve with EHR use. This is an increase from 55% in 2018. However, still nearly a third of physicians reported seeing adverse patient outcomes associated with EHR use (30%).



Physicians observed ways in when patient safety or care quality have been affected by EHR usage

Of the 30% of respondents who said they saw adverse effects on care quality and safety associated with EHR use, 77% identified receiving too much data as a top cause.



Physician-identified causes that led to adverse effects on patient safety or care quality (Check all that apply.)

Of the 64% of respondents who observed improved effects, top causes identified included increased medical record legibility (75%) and medical records being accessible from anywhere (70%).

Physician-identified causes that led to improvments in patient safety or care quality (Check all that apply.)



Texas physicians were asked if the improvements in patient safety and care quality due to their EHR outweigh the risks to patient safety and care quality; an overwhelming majority of physicians said yes (70%). This is a nine percentage point increase compared with 2018, when 61% of physicians said the same.

Documentation in EHRs (Q17)

Eighty-three percent of Texas physicians who use an EHR said they do their own typing. Only 15% of respondents reported using a scribe.



How Texas physicians document in their primary place of practice (Check all that apply.)

EHR disruption and the data entry process (Q18)

A strong majority of respondents agree that using an EHR interferes with communication and attentiveness to the patient (68%). This is unchanged compared with 2018.



Texas physicians' level of agreement with EHR and data entry

*Neutral option excluded.

Data breaches and ransomware attacks (Q19 and Q20)

Thankfully, a very strong majority of physicians reported they had not experienced either a data breach (74%) or ransomware attack (data encrypted until ransom paid) (73%) in the past two years. A very small percentage of respondents reported having a data breach (5%), which is unchanged from 2018.

The percentage of Texas physicians who reported experiencing a ransomware attack (4%) has decreased since 2018 (6%). Of the same respondents, 7% reported paying a median ransom of \$10,000 for decryption.

E-prescribing and EPCS (Q21-Q24)

Electronic prescribing or e-prescribing allows for the electric transmission of a prescription to a pharmacy. E-prescribing is meant to reduce risk; however, physicians still encounter problems with the process. Over a third of Texas physicians reported they have encountered obstacles with e-prescribing (36%). Such obstacles include difficulty in finding desired drugs, formulations, or dosages (57%), and receiving too many alerts (54%).



e-prescribing (Check all that apply.)

Obstacles Texas physicians encounter with

More than half of respondents (52%) said they use EPCS. Electronic prescribing for controlled substances became a requirement under Texas state law on Jan. 1, 2021.



Texas physicians' usage of EPCS

Of the 28% of respondents who do not use EPCS, 24% of respondents said it is because the upgrade to EPCS is cost-prohibitive.



Reasons Texas physicians do not use EPCS (Check all that apply.)

Additional Analysis by Demographics

EHR functions (Q3) by specialty and geographic location

Question three was examined by specialty. E-prescribing or EPCS ranked as the most-selected function for all specialties except for indirect access specialists, among who the most selected function instead were imaging and lab orders (77%).



By specialty, EHR functions used by Texas physicians

*Only statistically significant relationships are shown.

An analysis of question three by geographic location found 84% of physicians practicing in rural locations said they use e-prescribing or EPCS as a function of their EHR. Use of the clinical decision support functions is highest among physicians practicing in Dallas (37%).



By geographic location, EHR functions used by Texas physicians (Check all that apply.)

*Only statistically significant relationships are shown.

EHR satisfaction (Q5) by age

When question five was analyzed by age, findings showed that respondent physicians 40 years old and younger reported the highest percentage of satisfaction (68%), while those 61 years and older reported the greatest percentage of dissatisfaction (39%).



By age, EHR satisfaction

The question (Q5) was analyzed by specialty and geographic location, and results were found not statistically significant.

Use of health information exchanges (Q8) by specialty and geographic location Analysis of question eight by specialty, after exclusion of those who said, "I don't know," found that across all specialties, less than a third of respondents said they can access needed data when necessary. Thirty-three percent of indirect access and 42% of nonsurgical specialists reported they do not participate in an HIE.



By specialty, Texas physicians' ability to access needed data via HIEs

Analysis of question eight by geographic location, after exclusion of those who said, "I don't know," found that Travis County (45%) and Tarrant County (46%) physicians reported the highest percentages for inability to access necessary information through an HIE. Physicians from Dallas County reported the greatest percentage for ability to access necessary information (30%). Physicians in rural counties reported the highest percentage for not participating in an HIE (46%).



By geographic location, Texas physicians' ability to access needed data via HIEs

The question (Q8) was analyzed by age, and the results were found not statistically significant.

EHR interfacing with prescription monitoring programs (Q11) by specialty and geographic location

Analysis of question 11 by specialty revealed that a strong majority of respondent primary care specialists (63%) reported their EHR seamlessly interfaced with the state PMP.



By specialty, EHRs that seamlessly interface with the state PMP

*I don't know option not shown.

Analysis of question 11 by geographic location showed just more than half of respondents practicing in Tarrant County (52%) reported their EHR seamlessly interfaced with the state PMP.



By geographic location, EHRs that seamlessly interface with the state PMP

EHR vendors who charged to integrate the PMP with an EHR (Q12)

Question 12 was analyzed by question 2. After exclusion of physicians who were uncertain, analyses found that among the physicians who use EPIC, 58% reported their vendor charged them to integrate the PMP.



By EHR vendor, percentage of physicians reporting their EHR vendor charged integrate the PMP

EHR effects on patient safety and care quality (Q13-Q16) by specialty and geographic location

Analysis of question 13 by specialty found 82% of pediatric specialists reported seeing improvement to patient safety or care quality associated with EHR use.

By specialty, Texas physicians' observance of patient safety or care quality improved by the use of an EHR in past two years



Regarding observed adverse effects, analysis showed more than a third of Texas indirect access specialists (38%) and obstetrician- gynecologists (37%) reported having seen adverse effects to patient safety or care quality associated with EHR use.

By specialty, Texas physicians' observance of patient safety or care quality adversely affected by the use of an EHR in past two years



Analysis of question 13 by geographic location showed that physicians in Travis County exhibited the highest percentage of those who observed adverse effects to patient safety or care quality associated with EHR use (44%).



By geographic location, Texas physicians' observance of patient safety or care quality adversely affected by use of an EHR in past two years

The question (Q13) pertaining to observed improvement to patient safety and care quality associated with EHR use was analyzed by geographic location, and results were found not statistically significant.

The question (Q14) pertaining to causes for observed adverse effects on patient safety and care quality with use of an EHR was analyzed by geographic location and specialty, and results of the analyses were found not statistically significant.

Analysis of question 15 by specialty showed a very strong majority of indirect access specialists (85%) and obstetrician-gynecologists (81%) identified increased legibility of a patient's medical record as a cause for observed improvement in patient safety and care quality.



By specialty, causes for observed improvements in patient safety and care quality with use of an EHR

*Only statistically significant relationships are shown.

Analysis of question 16 by specialty revealed that 82% of pediatricians reported a belief that improvement in patient safety and care quality due to EHR use outweighed possible risks.



By specialty, Texas physicians' belief that improvements in patient safety and care quality due to EHR outweigh risks

This question (Q16) was analyzed by geographic location, and results were found not statistically significant.

Documentation in EHRs (Q17) by specialty

Analysis of question 17 by specialty found that almost all pediatric respondents reported either doing their own typing (92%) or using templates (91%). The greatest percentage of respondents who reported using scribes as a documentation method was among indirect access specialists (19%).



By specialty, how Texas physicians document in their EHR (Check all that apply.)

*Only statistically significant relationships are shown.

E-prescribing and EPCS (Q22 and Q23) by specialty

When question 22 was analyzed by specialty, the findings revealed that 61% of indirect access specialists reported having technical problems with e-prescribing, and 54% of nonsurgical specialists reported frequently having trouble entering Sig instructions.



By specialty, obstacles Texas physicians have encountered with e-prescribing

*Only statistically significant relationships are shown.

Analysis of question 23 found that 72% of primary care specialist reported using EPCS, with only 24% of indirect access specialist doing the same.



By specialty, Texas physicians' use of EPCS

Analysis of question 23 by geographic location showed physicians in rural (60%) and Travis (60%) counties exhibited the highest percentage of those who use EPCS.



By geographic location, Texas physicians' use of EPCS

Survey Methodology

Since 1990, TMA has conducted a biennial survey of Texas physicians – members and nonmembers – focusing primarily on health care practice, economic, and legislative issues. This installment is part of the biennial survey that is comprehensive, covering a broad range of physician opinions and experiences. It is not limited to specific issues. The findings provide a cross-sectional snapshot and a longitudinal tracking of physician opinions on key health care issues. Their experiences support the association's policy development, political focus, and strategic planning.

This Survey of Texas Physicians was conducted by TMA as one in a monthly email survey series for 2020. Traditionally the survey period runs January through September. However, due to the COVID-19 pandemic, survey deployment was interrupted in March and restarted in July. This survey installment contained a total of 24 questions, many with multiple response items. Not all questions were answered by all respondents due to the survey's design and skip patterns. The survey included a mix of closedended response items, Likert Scale, and open-ended response items. Many of the questions were structured for multiple choice or nominal scale responses.

Texas physicians and medical residents with email addresses in the TMA database were emailed a personalized link to the survey with an invitation to participate. An incentive was offered to answer the survey for the month along with a larger incentive for completing every monthly survey received between July and the end of 2020. There were no published links; this prevented uninvited responses. Each link was unique and carried with it respondent demographic information. Each respondent was allowed to respond only once to the survey. Physicians who did not answer the survey were emailed reminders one week after the survey was deployed and one week before access to the survey was closed in January 2021

Data was analyzed using SPSS statistical software. Open-ended responses were assigned to categories for analysis. Respondent data are analyzed by demographic variables and compared with the whole population. The findings were found to be statistically insignificant and thus are not included in this report. Results at the 90% confidence level are reported.

Demographics

Gender

	%	
Male	61	
Female	39	
Age		
	%	
40 and vounger	16	
41 to 50	24	
51 to 60	27	
61 and older	34	
Specialty		
specialty		
	%	
Obstetrics-Gynecology	5	
Pediatrics	11	
Surgical Specialty	11	
Indirect Patient Access/Care	14	
Primary Care	26	
Nonsurgical Specialty	33	
Geographic Location		
0		
	%	
Rural	5	
Tarrant	6	
Bexar	8	
Travis	10	
Dallas	13	
Harris	22	
Small Urban	36	
TMA Membership Status		
Manakan	% 02	
iviemper	83 14	
Nonmomber	14	
Nonmember	3	

Survey Instrument

Q1 Which statement best describes the current status of your practice?

• We currently use an EHR.

• We want to implement or plan to implement an EHR.

O We do not plan to implement an EHR.

Skip To: Q21 If Which statement best describes the current status of your practice? = We do not plan to implement an EHR.

Skip To: Q21 If Which statement best describes the current status of your practice? = We want to implement or plan to implement an EHR.

Display This Question:

If Which statement best describes the current status of your practice? = We currently use an EHR.

X

Q2 Which EHR system are you using in your primary place of practice?

Q3 Which EHR functions do you use? (Check all that apply.)

Practice management
E-prescribing/electronic prescribing for controlled substances (EPCS)
Messaging using Direct protocol
Patient portals
Care coordination
Public health reporting
Clinical decision support
Imaging/lab orders
Telemedicine
Prescription Monitoring Program (PMP)
Other (please specify):

Display This Question:

If Which EHR functions do you use? (Check all that apply.) = Patient portals

X

Q4 Which problems, if any, have you or your practice experienced with patient portals? (Check all that apply.)

	Portal administration is too burdensome and difficult for me and my staff to use
	The portal doesn't provide enough value in my practice
	Patients report lack of computer or internet access
	We have difficulty engaging patients to use the portal
	Patients report the portal is difficult to use
	Other (please specify):
	⊗ None
Uchlay This Our	action:

Display This Question: If Which statement best describes the current status of your practice? = We currently use an EHR.

Q5 How satisfied are you with your EHR system in your primary place of practice?

Somewhat dissatisfied

O Neither dissatisfied nor satisfied

○ Somewhat satisfied

O Very satisfied

Display This Qu	estion:
If How sat	isfied are you with your EHR system in your primary place of practice? = Very dissatisfied
Or How sa	tisfied are you with your EHR system in your primary place of practice? = Somewhat dissatisfied
24	
Q6 What are	the reasons you are not satisfied with your EHR? (Check all that apply.)
\square	
	The EHR is too slow.
	The EHR lacks needed functions.
	The FHR does not work for my specialty
	The Enrices hot work for my specialty.
	The EHR lacks interoperability.
\frown	
\bigcup	Other (please specify):
Display This Qu	
Usplay This Qu	esuon:
	tatement best describes the current status of your practice? = we currently use an EHR.

Q7 In the past two years, have you switched EHRs in your current primary place of practice?

○ Yes

◯ No

🔘 I don't know.

Display This Question:

If Which statement best describes the current status of your practice? = We currently use an EHR.

Q8 Public/regional health information exchanges (HIEs) allow doctors, other health care providers and patients to appropriately access and securely share a patient's vital medical information electronically. Examples of HIEs are Greater Houston Healthconnect, Integrated Care Collaboration, and Healthcare Access San Antonio.

○ Yes
◯ I don't know.
O I don't participate in an HIE.
Display This Question:
If Public/regional health information exchanges (HIEs) allow doctors, other health care providers an = No

Q9 What data are you missing from your HIE? (Check all that apply.)

X)

Labs results
Radiology results
Medication history
Immunization registry (IMMTRAC2)
Patient chief complaints/diagnoses
🚫 I don't know.
Other (please specify):

Display This Question:

If Public/regional health information exchanges (HIEs) allow doctors, other health care providers an... = I don't participate in an HIE.

X

Q10 If you are not participating in a Texas public/regional (HIE), why not? (Check all that apply.)

Don't know enough about HIEs/ I didn't know it was an option
Security, privacy, and liability concerns
EHR system not enabled to participate
Difficult to obtain external data
Not sure it will improve patient care
Cost-prohibitive HIE fees
Cost-prohibitive EHR vendor interface fees
Not my decision
Other (please specify):

Display This Question:

If Which statement best describes the current status of your practice? = We currently use an EHR.

Q11 Does your EHR seamlessly interface with the state Prescription Monitoring Program (PMP)?

O Yes

O No

O I don't know.

Display This Question:

If Does your EHR seamlessly interface with the state Prescription Monitoring Program (PMP)? = Yes

Q12 Did your EHR vendor charge you to integrate the PMP with your EHR?

○ Yes	
◯ No	
O I don't know.	
Display This Question:	
If Which statemen	t best describes the current status of your practice? = We currently use an EHR.

Q13 In the past two years, have you seen specific cases in which:

	No	Yes
The safety or quality of patient care was adversely affected by the use of an EHR?	0	0
The safety or quality of patient care was improved by the use of an EHR?	0	0

Display This Question:
If In the past two years, have you seen specific cases in which: = The safety or quality of patient care was adversely affected by the use of an EHR? [Yes]
24

Q14 If you saw specific cases in which the safety or quality of patient care was adversely affected, what were the causes? (Check all that apply.)

There were missing data.
There were inaccurate data.
Too much data obscured important or relevant information.
It interfered in the patient-physician relationship.
There were care delays/the EHR was unreliable.
There were security/privacy issues.
Other (please specify):

Display This Question:

If In the past two years, have you seen specific cases in which: = The safety or quality of patient care was improved by the use of an EHR? [Yes]

23

Q15 If you saw specific cases in which safety or the quality of patient care was improved by an EHR, what were the causes? (Check all that apply.)

The patient's medical record was more thorough.
The patient's medical record was more legible.
The patient's medical record was accessible from anywhere.
The patient's care was better coordinated.
There was an alert or a reminder.
There was improved prescription management.
Other (please specify):

Display This Question:

If Which statement best describes the current status of your practice? = We currently use an EHR.

Q16 Do the improvements in patient safety and care quality due to the EHR outweigh the risks to patient safety and care quality?

O Yes

🔘 No

Display This Question:	
If Which statement best describes the current status of your practice? = We currently use an EHR.	
X	

Q17 How do you document information in your EHR in your primary place of practice? (Check all that apply.)

	l use a scribe.	
	I use voice recognition.	
	l use macros.	
	I use templates.	
	l use check boxes.	
	I do my own typing.	
	Other (please specify):	
hisplay This Question:		
it wn	ich statement best describes the current status of vour bractice? = We currently use an EHR.	

X

Ľ

018 Indicate v	our level of	f agreement w	vith each of	the following:
Q10 maicate		agreeniene w	and cach of	the following.

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
Data entry at the point of care interferes with a physician's diagnostic thought process.	0	0	0	0	0
Data entry process interferes with formation of the differential diagnosis.	\bigcirc	\bigcirc	0	0	0
Use of the EHR interferes with communication and attentiveness to the patient.	\bigcirc	\bigcirc	0	\bigcirc	0
Using an EHR creates data retrieval problems in reviewing patients' history.	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
·					

Display This Question:

If Which statement best describes the current status of your practice? = We currently use an EHR.

Q19 In the past two years, has your practice experienced a data breach or ransomware attack (data encrypted until ransom paid)?

	Yes	No	I don't know.
Data breach	0	\bigcirc	\bigcirc
Ransomware	0	0	\bigcirc
Display This Question:			

If In the past two years, has your practice experienced a data breach or ransomware attack (data enc... = Ransomware [Yes]

Q20 How much was the ransom to have your data unencrypted? (If your practice experienced more than one ransomware attack, answer for the most recent one.)

○ \$
🔿 I did not pay.
◯ I don't know.
Q21 Have you encountered any obstacles with e-prescribing?
○ Yes
○ No
O Not applicable - I do not e-prescribe.

Display This Question:

If Have you encountered any obstacles with e-prescribing? = Yes

24

Q22 What obstacles have you encountered? (Check all that apply.)

Comments don't go through to the pharmacy, resulting in many clarification calls.
Cumbersome to find desired drug, formulation, or dosage
Doesn't support weight-based dosing
Frequent difficulty entering Sig instructions
Too many unhelpful alerts
Technical problems (e.g., internet connectivity)
Other (please specify):

Q23 Electronic prescribing for controlled substances (EPCS) will be required under Texas state law and for Medicare starting January 1, 2021. Do you use EPCS?

O Yes

🔘 No

○ Not applicable – I do not prescribe controlled substances.

Display This Question:

If Electronic prescribing for controlled substances (EPCS) will be required under Texas state law an... = No

Q24 Why do you not use EPCS? (Check all that apply.)

I am not interested in using it.
The upgrade to EPCS is cost-prohibitive.
My EHR does not support it.
It interferes with workflow.
Other (please specify):

Q25 May TMA staff contact you regarding any of your answers to the previous questions?

○ Yes

◯ No