

Medicaid EHR Incentive Program Survey of Registrants *2015 Summary of Findings*

INTRODUCTION

Beginning in April 2012, providers that registered for the Michigan Department of Health and Human Services (MDHHS) Medicaid EHR Incentive Program were required to complete a survey about Michigan health professionals' use of electronic health records (EHR). This report presents analysis findings of survey responses received from providers that completed program registration online between April 2014 and March 2015. The goal of this study is to help the MDHHS better understand Medicaid EHR Incentive Program registrants' needs, concerns, and expectations regarding EHR systems in order to improve administration of the incentive program.

Providers may receive one incentive payment under the Medicaid EHR Incentive Program for adopting, implementing, or upgrading (AIU) their EHR system, after which they can receive up to five yearly incentive payments for attesting to meaningful use of their EHR. This analysis compares practices by their incentive payment year. The longer the practice is enrolled in the incentive program, the longer it has been using the EHR to achieve meaningful use. At the time of the survey, practices could be no further along than payment year four of the incentive program. Both individual and group practices were included in the survey. Group practices with multiple providers were asked to complete only one survey for the practice as a whole. The group practice administrator was asked to complete the survey or to be consulted during the completion of the survey.

This summary of findings presents differences between practices that have been enrolled in the incentive program for one to four years and practices that have begun using an EHR compared to those who have upgraded or expanded their EHR. The main conclusion of this study—the more time a practice has spent using an EHR, the more benefits and fewer concerns the practice experiences—is seen most consistently between practices that have been in the incentive program for only one year and those that have been in the incentive program for three years. This is true for implementation, EHR functionality, and the level of impact an EHR has on a practice. This trend is not as significant as might be hoped or expected, especially for practices in payment year four. There are far fewer practices in payment year four (27 individual practices and ten group practices); these small numbers are sensitive to the reported experiences of only a few practices.

Response frequency reports for individual practices and group practices—separated by payment year and by EHR status (beginning to use an EHR or upgraded or expanded their EHR)—as well as for those practices that used M-CEITA (The Michigan Center for Effective Information Technology Adoption) are available in the appendices to this report.

CHARACTERISTICS OF SURVEY RESPONDENTS

Between April 2014 and March 2015, a total of 667 practices—representing 498 individual practices and 169 group practices—registered for the incentive program and responded to the survey. Characteristics of these practices and the extent to which they have implemented an EHR are described below (see Exhibits 1–4).

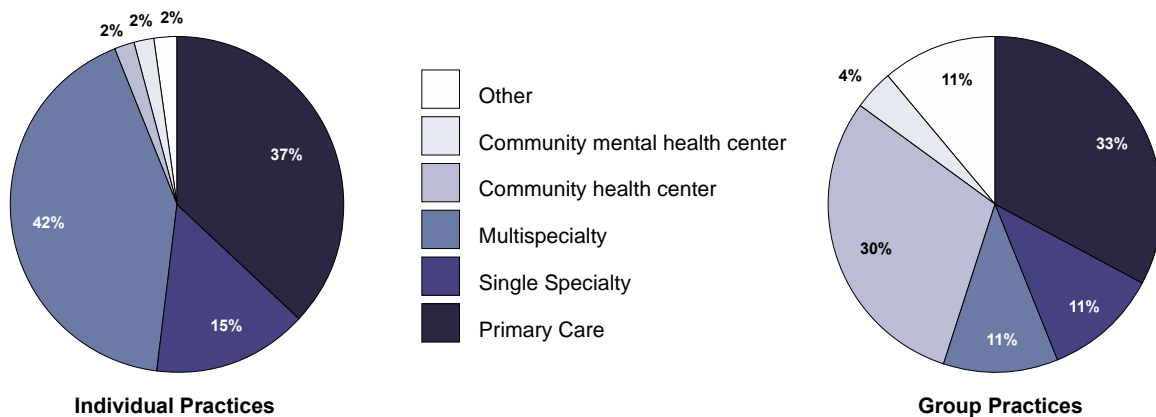
Type of Practice

- Of the individual practices, 42 percent are multispecialty practices, 37 percent are primary care practices, 15 percent are single-specialty practices other than primary care, 2 percent are community health centers, and almost 2 percent are community mental health centers.
- Among the group practices, 33 percent are primary care practices, 30 percent are community health centers, 11 percent are multispecialty practices, 11 percent are single-specialty practices other than primary care, and 4 percent are community mental health centers.¹

Extent of EHR System Implementation

- 85 percent (565) of all practices that registered for the incentive program from April 2014 to March 2015 either have just begun using an EHR, or have upgraded or expanded their EHR, and 15 percent have purchased or secured access to (i.e., adopted) certified EHR technology.
- 20 percent of the individual practices and 15 percent of group practices that registered for the program have just begun using an EHR.
- 66 percent of the individual practices and 66 percent of group practices that registered for the program have upgraded or expanded their EHR.

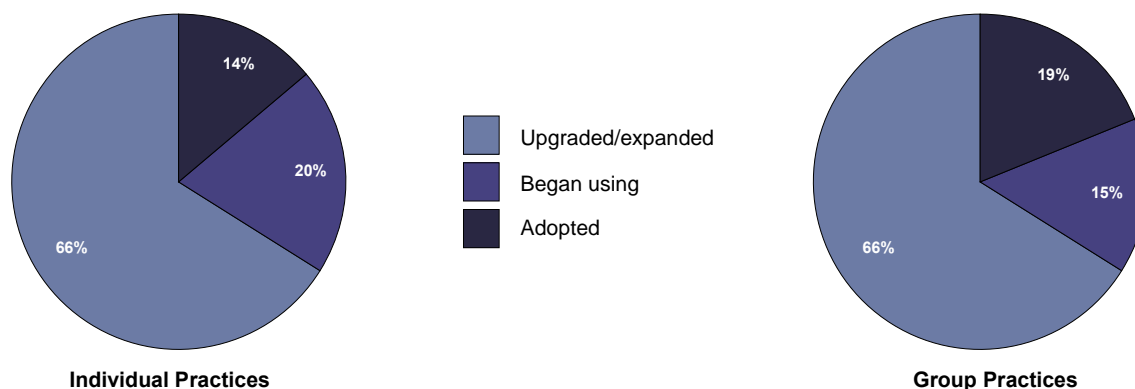
EXHIBIT 1. Type of Practice



NOTE: Numbers may not add to 100 percent due to rounding.

¹ The remaining 2 percent of individual practices and the remaining 12 percent of group practices selected “other” rather than one of the specific practice description response options.

EXHIBIT 2. EHR Planning and Implementation



NOTE: Numbers may not add to 100 percent due to rounding.

Number of Years in Incentive Program

The 667 practices responding to the survey have been enrolled in the incentive program for a different number of years. Most practices are within their first two years of participating in the incentive program. Only a small percentage of practices are in their fourth year of the incentive program (see Exhibit 3).

- 40 percent (197) of the individual practices and 52 percent (88) of the group practices completed their first year of attesting for meaningful use with the EHR.
- 32 percent (158) of the individual practices and 24 percent (41) of the group practices completed their second year of attesting for meaningful use with the EHR.
- 23 percent (116) of the individual practices and 18 percent (30) of the group practices completed their third year of attesting for meaningful use with the EHR.
- 5 percent (27) of the individual practices and 6 percent (10) of the group practices completed their fourth year of attesting for meaningful use with the EHR.

Length of Time Using an EHR System

Program registrants that have begun using an EHR were asked how many months it has been since their practice began entering patient data in an EHR (see Exhibit 4).

- 5 percent (21) of the individual practices and 9 percent (12) of the group practices reported entering patient data for 12 months or less.
- 47 percent (203) of the individual practices² and 19 percent (26) of the group practices reported entering patient data for 13 to 24 months.
- 48 percent (204) of the individual practices and 72 percent (98) of the group practices reported entering patient data for more than 24 months.

Although 48 percent of individual practices and 72 percent of group practices have been entering patient data for more than 24 months, most practices have *not* been in the incentive program for over two years.

² An exception was made by the Michigan Department of Health and Human Services to permit a large group of individual providers to submit the same survey response for each of the providers, rather than submit unique responses. These individual providers are not part of a group practice, but the large number of duplicated responses removes variation naturally present among individuals.

Only 28 percent of individual practices and 24 percent of group practices have been in the incentive program for three or more years. This suggests that many practices have been entering patient data into their EHR prior to joining the incentive program.

EXHIBIT 3. Number of Years in Incentive Program



NOTE: Numbers may not add to 100 percent due to rounding.

EXHIBIT 4. Number of Months Entering Patient Data



NOTE: Numbers may not add to 100 percent due to rounding.

PROVIDERS' EXPERIENCES USING AN EHR

Analysis of providers' experiences using an EHR focuses on the practices that have begun entering patient data into an EHR. The analysis of data shows that experiences using an EHR are different for practices that have been in the incentive program for a longer period of time.

Implementation Concerns

Program registrants were asked to what degree the following issues are a concern for implementation of an EHR system:

- Unsure which EHR system to purchase
- Worry that EHR choice will become obsolete
- Initial costs of implementation
- Recurring costs of EHR system
- Disruption to practice workflow
- Patient privacy
- Familiarity with computer technology
- Internet access availability and reliability

Areas of Major Concern

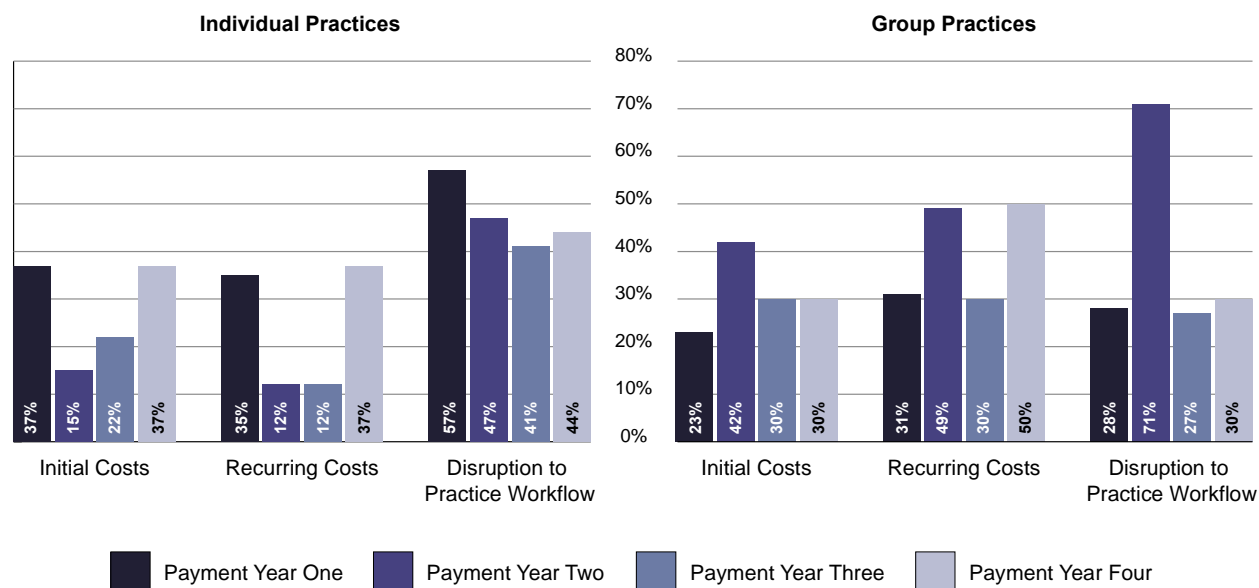
Similar concerns were reported by all practices, but the percentage of individual practices reporting an area as a major concern is lower for practices that have been in the incentive program longer. This decrease in the percentage of individual practices reporting areas of major concern is the largest between payment year *one* and payment year *three*. This trend is not as noticeable across group practices in different payment years.

The issues of greatest concern to all providers—both individual and group practices, regardless of how long they have been in the incentive program—are recurring costs of the EHR, initial costs of implementation, and disruption to practice workflow. Over 20 percent and as high as 71 percent of group practices reported these three areas as major concerns, depending on the area and how long they have been in the incentive program. Additionally, between 12 and 57 percent of individual practices reported a major concern with these areas, depending on how long they have been in the incentive program.

The percentage of individual practices that named any area as a major concern is lower for practices in payment years two and three when compared to practices in payment year one. And, in most areas, lower for practices in payment year three than payment year two. The percentage of individual practices naming areas as a major concern in payment year four is higher than the percentage in payment years two or three, but lower than in payment year one in half of the areas. For example, disruption to practice workflow is a major concern for 57 percent of individual practices in incentive payment year one, 47 percent in payment year two, and for 41 percent in payment year three, but it is a major concern for 44 percent of individual practices in incentive payment year four.

This is not always the case for group practices. The percentage of group practices reporting any area as a major concern increased between payment year one and payment year two, decreased between payment year two and payment year three, and then increased again between payment year three and four. The percentage either increased or decreased, depending on the area of concern, between payment year one and payment year three, but increased across all areas between payment year one and payment year four (see Exhibit 5).

EXHIBIT 5. Percentage of Practices Reporting an Area as a Major Concern



Areas of Least Concern

The areas of least concern to all practices—regardless of how long they have been participating in the incentive program—are uncertainty about which EHR system to purchase and worry that their EHR system will become obsolete. Internet access availability and reliability also were not concerns for many individual and group practices, but only about a third of group practices in payment years two and three reported this area as not a concern.

For all implementation issues, the percentage of individual practices reporting an issue as “not a concern” is higher for practices in payment year *three* than for individual practices in payment year *one*. For example, 12 percent of individual practices in payment year *one* reported that recurring costs is not a concern, whereas 40 percent of individual practices in payment year *three* reported that it is not a concern. For all except one implementation area (disruption to practice workflow), a larger percentage of individual practices in payment year *four* reported issues as “not a concern” than individual practices in payment year *one*. However, a smaller percentage of individual practices in payment year *four* than in payment year *three* reported all areas as “not a concern.” For example, 46 percent of individual practices in payment year three reported patient privacy as “not a concern,” but this drops to just under 30 percent of practices in payment year four.

For most implementation areas (except patient privacy and internet access availability and reliability), the percentage of group practices reporting an issue as “not a concern” is higher for practices in payment year *three* than for group practices in payment year *one*. For example, 19 percent of group practices in payment year *one* reported that recurring costs is not a concern, whereas 40 percent of group practices in payment year *three* reported that it is not a concern. Just as with individual practices, this is not always the case for group practices in payment year four compared to year one. There are far fewer group practices (10) in payment year four, however, so these findings are sensitive to the reported experiences of only a few practices.

A larger percentage of *group* practices in payment year one reported all implementation areas as “not a concern” than *individual* practices in payment year one. This, however, flips in payment year two where the percentage of *group* practices that reported any area as “not a concern” is lower than *individual* practices in that payment year, this trend continues for payment years three and four, although not as consistently.

Use of EHR Functions

Program registrants were asked to describe the extent to which they currently use or plan to use specific EHR system functions and how difficult it was to start using the function.

The EHR functions asked about were:

- Conducting drug-drug, drug-allergy, and drug-formulary checks
- Generating lists of patients by specific conditions
- Generating patient reminders for guideline-based interventions and/or screening tests
- Submitting data electronically to public health agencies, including the Michigan Care Improvement Registry (MCIR)
- Generating and transmitting permissible prescriptions electronically (e-prescribing)
- Computerized provider order entry (CPOE) for medications, labs, radiology/imaging, or referrals
- Generating a clinical summary of office visits for patients
- Maintaining up-to-date problem lists of active diagnoses
- Maintaining active medication allergy lists
- Maintaining active medication lists

Analysis of current use, difficulty in starting to use, and planned use show that experiences are different for those practices that have been participating in the incentive program for a longer period of time. In spite of these differences, the same functions are reported most often as being used regularly across all practices.

Current Use

Most EHR functions are being used regularly by most practices. To determine regular use, extensive use and moderate use percentages were combined from the survey responses. The EHR functions that are currently used regularly by 84 percent or more of program registrants—both individual and group practices—are maintaining an active medication allergy list and maintaining an active medication list. Maintaining up-to-date problem lists of active diagnoses; generating a clinical summary of office visits for patients; generating and transmitting permissible prescriptions electronically (e-prescribing); and conducting drug-drug, drug-allergy, and drug-formulary checks are reported by most practices (over 75 percent) as being used regularly.

Generating patient reminders for guideline-based interventions and/or screening tests and submitting data to public health agencies are the functions used with the least regularity among practices. A larger percentage of practices report regularly using all functions, especially those reported least used, the longer they have been in the incentive program (see Exhibits 6 and 7). For example:

- Submitting data electronically to public health agencies is used regularly by 69 percent of individual practices and 43 percent of group practices in payment year *one*. However, 93 percent of individual practices and 85 percent of group practices in payment year *three* use this function regularly.
- Only about 60 percent of individual practices and 51 percent of group practices in payment year *one* report regular use of their EHR for generating patient reminders for guideline-based interventions

and/or screening tests. For practices in payment year *three*, however, about 77 percent of individual practices and 73 percent of group practices report using this function regularly.

EXHIBIT 6. Current Regular Use of Functions for Individual Practices, by Payment Years One and Three

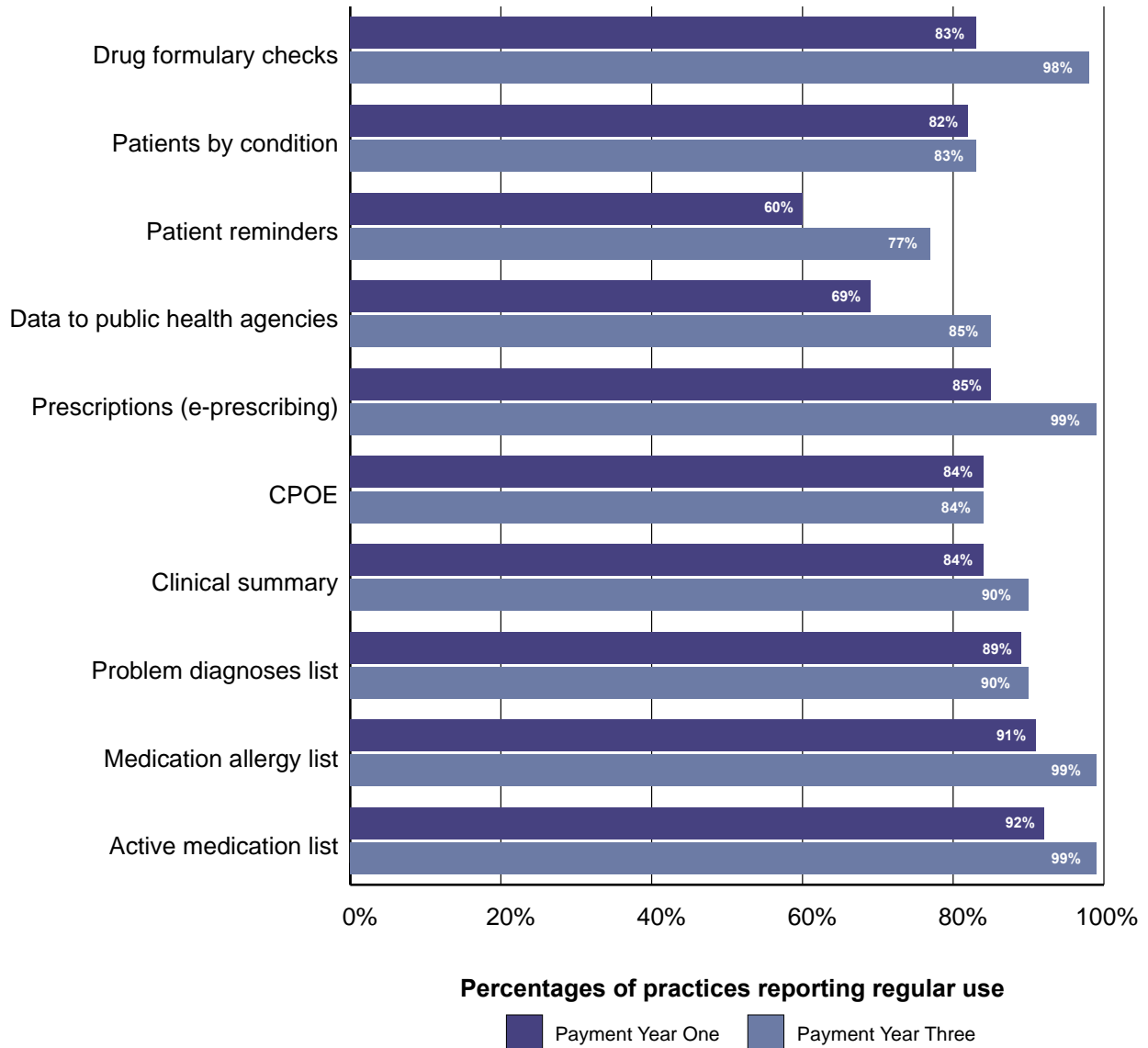
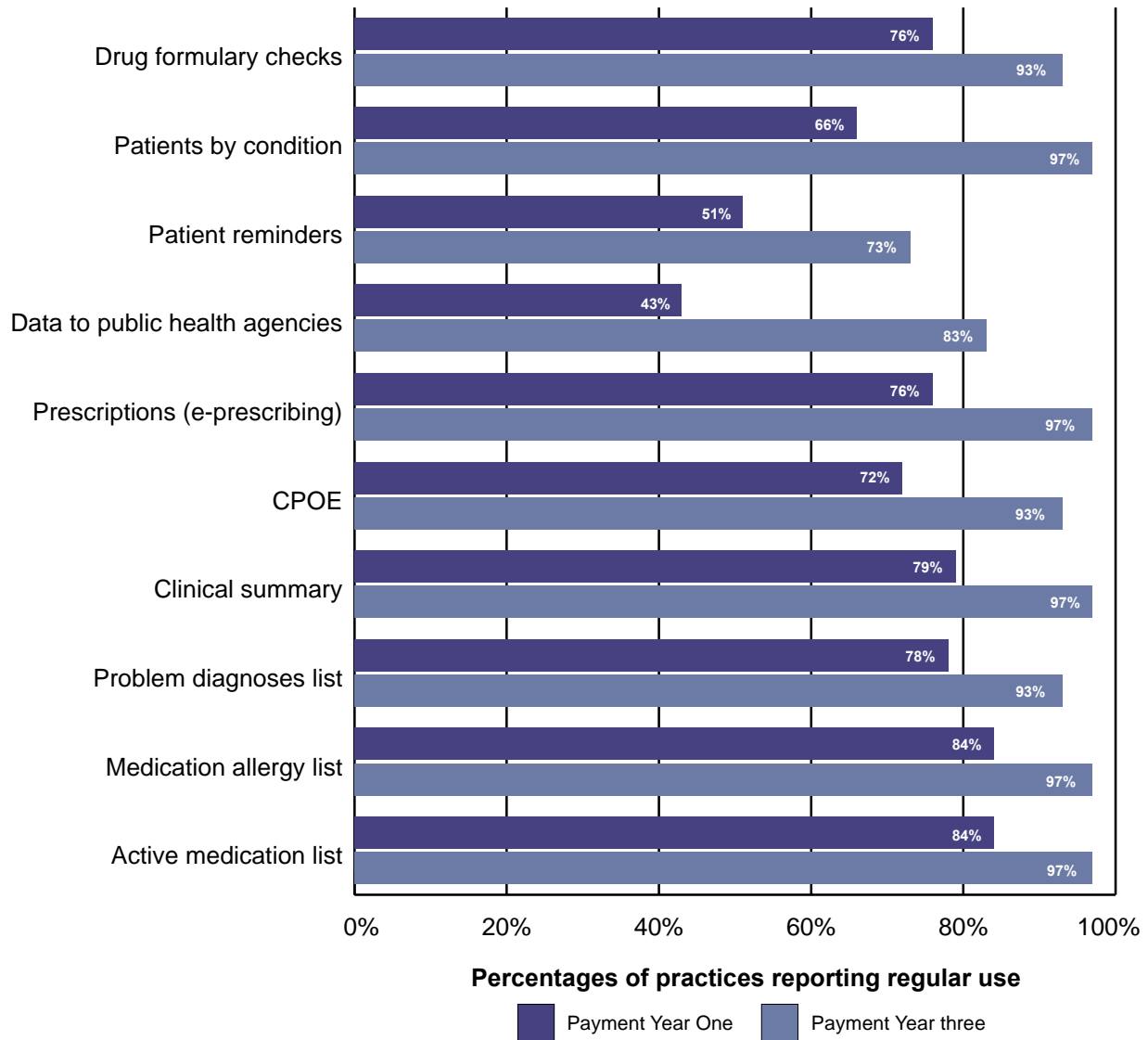


EXHIBIT 7. Current Regular Use of Functions for Group Practices, by Payment Years One and Three



Difficulty of Starting to Use Functions

For the most part, the functions that practices reported as being hard to start using correspond with the functions that practices use the least often. The function identified most often across all practices—both individual and group practices—as hard to start using is “generating patient reminders for guideline-based interventions and/or screening tests.” “Submitting data electronically to public health agencies,” “generating a clinical summary of office visits for patients,” and “computerized provider order entry for medications, labs, radiology/imaging, or referrals” were also identified as difficult to start using across group and individual practices in many payment years. (See Exhibits 8 and 9.) Group practices in

payment years one and two report areas as hard to start using more often than individual practices in the same payment years.

The EHR system functions identified most often as easy to start using varied between individual and group practices. Individual practices reported “conducting drug-drug, drug-allergy, and drug-formulary checks,” “generating a clinical summary of office visits for patients,” and “maintaining active medication allergy lists” as easy to start using. Group practices reported “generating and transmitting permissible prescriptions electronically,” “computerized provider order entry for medications, labs, radiology/imaging, or referrals,” “maintaining active medication allergy lists,” and “conducting drug-drug, drug-allergy, and drug-formulary checks” as easy functions to start using.

EXHIBIT 8. Percentage of Individual Practices Reporting a Function as Hard to Start Using, for Selected Functions by Payment Year

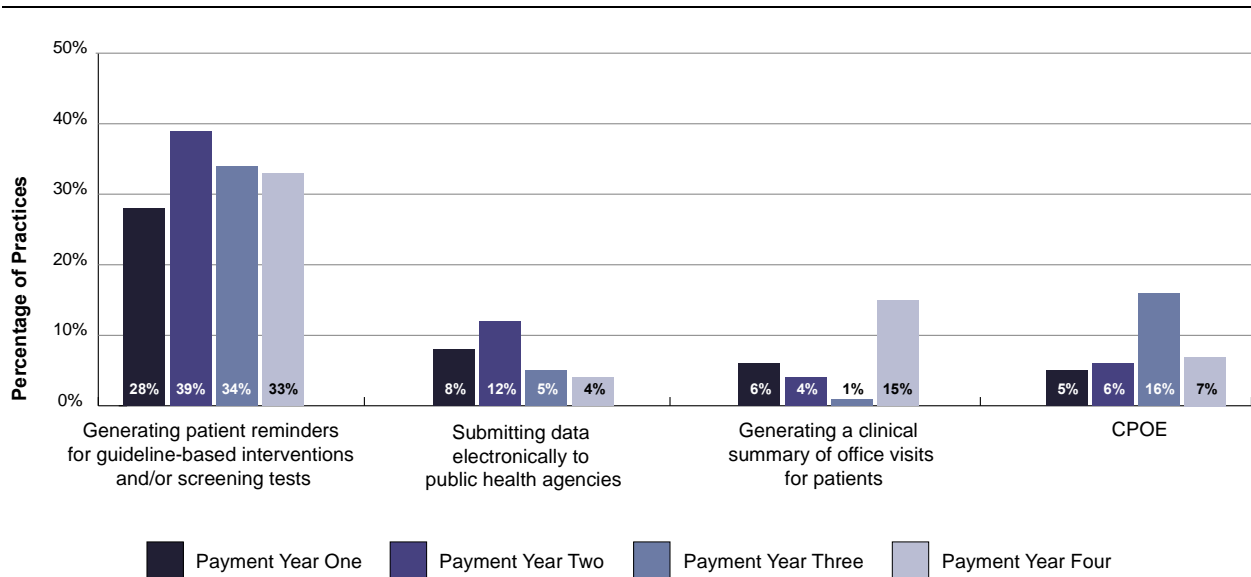
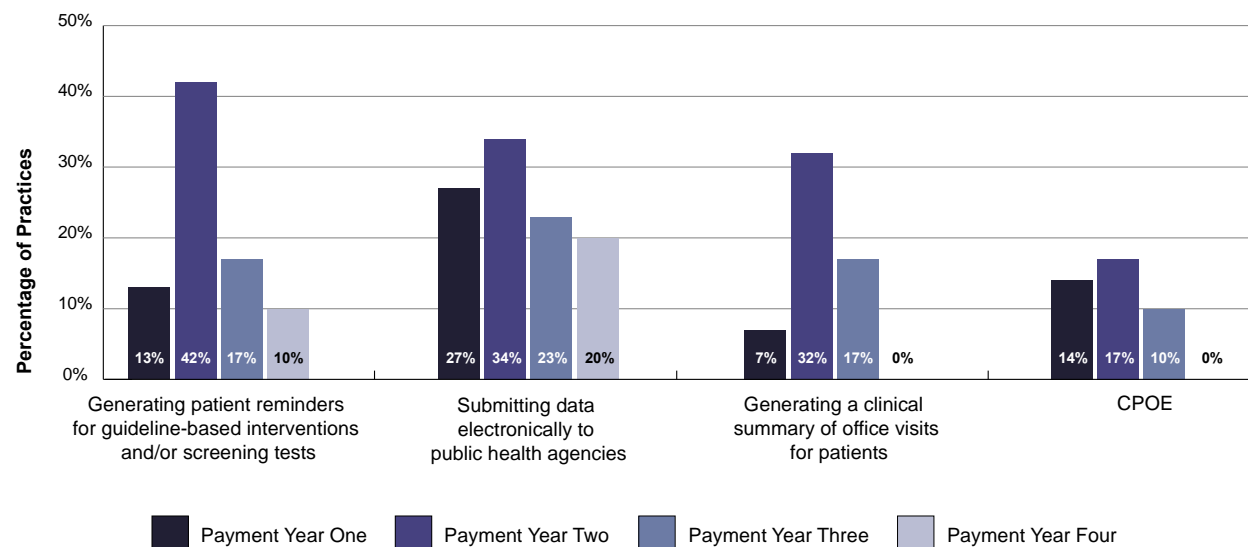


EXHIBIT 9. Percentage of Group Practices Reporting a Function as Hard to Start Using, for Selected Functions by Payment Year



Planned Use

Program registrants express optimism about using their EHR for more functions in the future. For nearly every function, the planned level of use among practices is the same or higher than the current use of the function—even where current regular use is reported by most practices. This is especially true for those functions with the lowest reported current use (submitting data electronically to public health agencies and generating patient reminders for guideline-based interventions).

Among individual practices:

- 60 percent of individual practices in payment year *one* report regular *current* use of an EHR to generating patient reminders for guideline-based interventions and/or screening tests, but 87 percent in payment year *one* report *planned* regular use.
- 69 percent of *individual* practices in payment year *one* report regular *current* use of an EHR to submit data electronically to public health agencies, but about 80 percent in payment year *one* report *planned* regular use.

Among group practices:

- 51 percent of practices in payment year *one* report regular *current* use of generating patient reminders for guideline-based interventions and/or screening tests, but 78 percent of practices in payment year *one* report *planned* regular use.
- 43 percent of practices in payment year *one* report regular *current* use of an EHR to submit data electronically to public health agencies, but 68 percent in payment year *one* report *planned* regular use.

For most functions, there is very little or no difference between *current use* and *planned use* for practices in payment years three and four. This suggests that most practices have successfully implemented the functions by payment year three and are planning to continue to use them. Among practices in payment year three or four, 95 percent or more are regularly using most functions.

Planned regular use of all functions is reported by 80 to 97 percent of all individual practices in payment year one and over 90 percent of practices in all other incentive payment years. Planned regular use of eight functions is reported by 80 percent or more of group practices in payment year one. The two functions that are exceptions are “submitting data electronically to public health agencies” and “generating patient reminders for guideline-based interventions and/or screening tests.” Planned regular use of all functions is reported by over 85 percent of practices for all other incentive years.

Impact of EHR Implementation

Program registrants were asked what impact implementation of an EHR has had in each of the following areas:

- Access to patient information
- Care coordination
- Decision support
- Patient outcomes
- Health care delivery process
- Communication with and provision of information to patients
- Practice workflow
- Privacy and security of patients’ personal health information
- Reduced need for staff or staff time
- Demonstrated business value
- Improved efficiency

Individual and group practices across payment years had different experiences with the impact of implementation of an EHR on their practice. In all areas, a higher percentage of group practices in payment years *three* and *four* report a major benefit or some benefit compared with practices in payment year *one*. There are a few areas where 20 percent or more of group practices report a negative impact, regardless of the payment year. In these areas, the percentage of group practices reporting a negative impact is lower among practices that have *expanded or upgraded* their EHR compared to practices that have just *begun to enter data* in the EHR.

The percentage of individual practices that report a major benefit or some benefit varies across the different payment years. The percentage of individual practices that report negative impacts decreases between payment year *one* and payment year *three*, but not between year *one* and year *four*. Likewise, a lower percentage of individual practices that have *expanded or upgraded* their EHR reported negative impacts compared to practices that have just *begun to enter data* in the EHR.

Major Benefits

Most practices report major benefits in the areas of access to patient information and care coordination, and individual practices report a major benefit in health care delivery process (see Exhibits 10, 11, 12, and 13). In several areas, the percentage of group practices reporting a major benefit is higher for those practices that have been in the incentive program for longer and for those that have upgraded or expanded their EHR. For example:

- About 11 percent of group practices in payment year *one* report a major benefit in reduced need for staff or staff time, but that percentage rises to 24 percent for group practices in payment year *three*.

- Only 4 percent of group practices that have *begun using* their EHR report a major benefit in demonstrated business value. For group practices that have *upgraded or expanded* their EHR, however, 22 percent found a major benefit in demonstrated business value.

EXHIBIT 10. Percentage of Individual Practices Reporting Major EHR Benefits in Specified Areas, by Payment Years One and Three

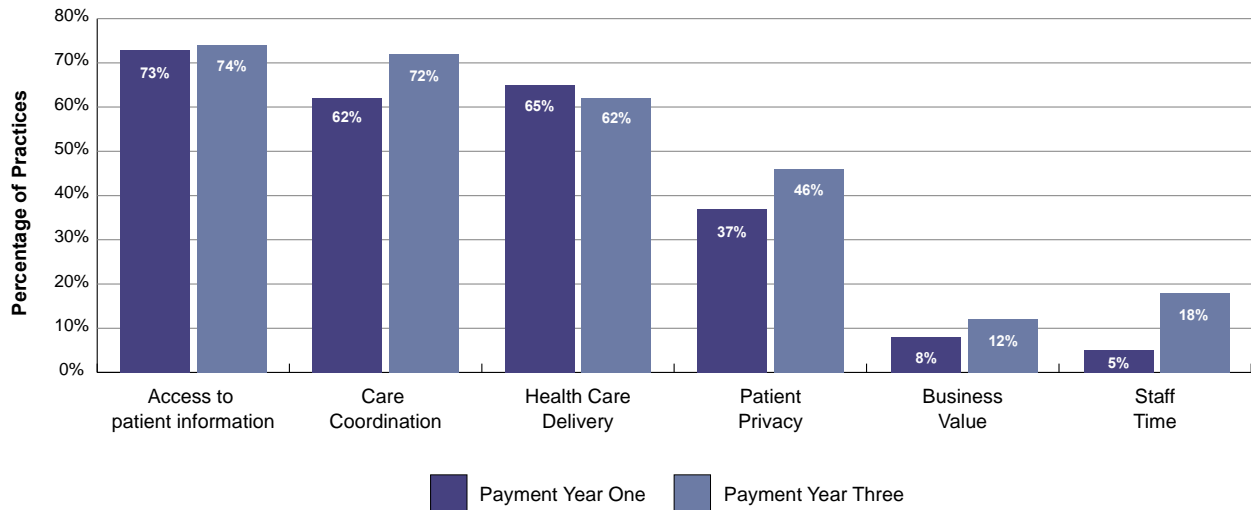


EXHIBIT 11. Percentage of Individual Practices Reporting Major EHR Benefits in Specified Areas, by EHR Implementation Stage

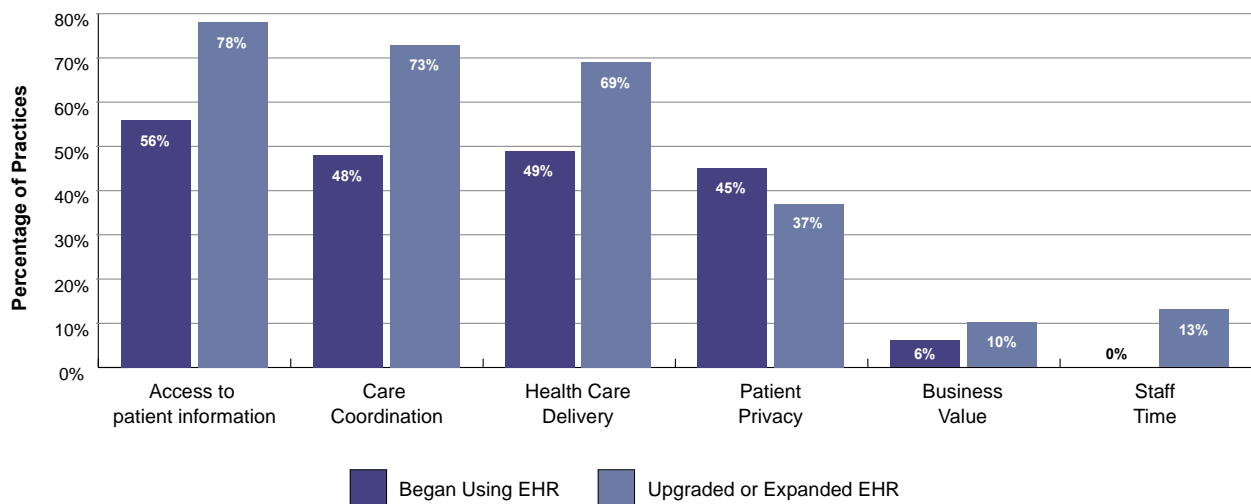


EXHIBIT 12. Percentage of Group Practices Reporting Major EHR Benefits in Specified Areas, by Payment Years One and Three

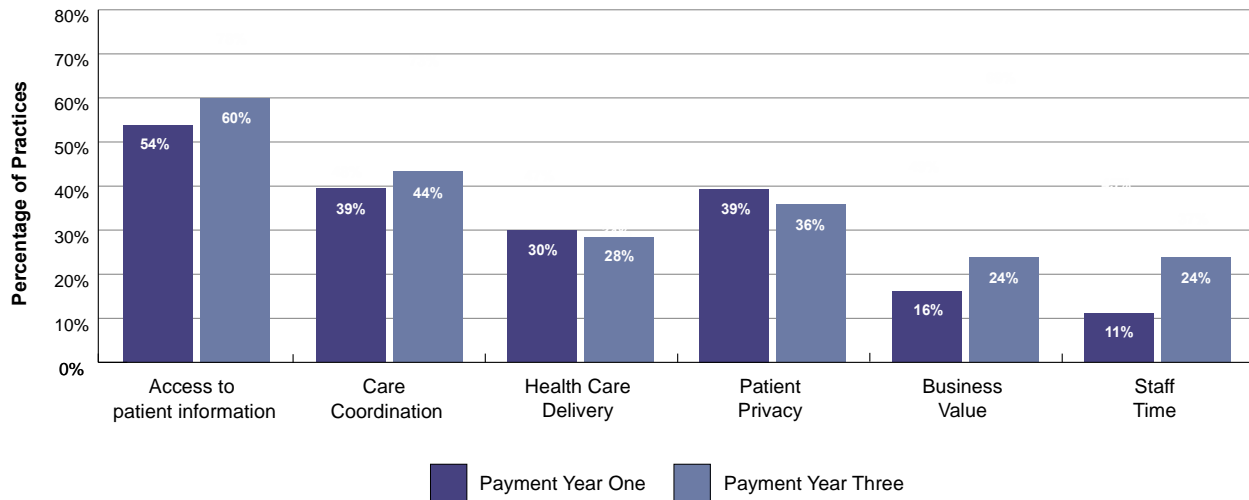
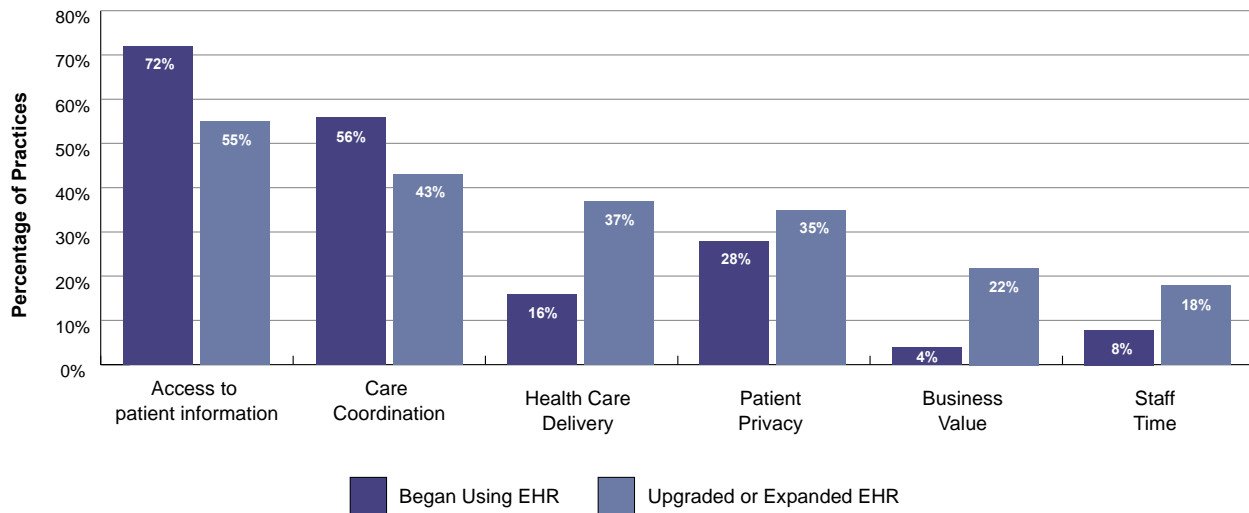


EXHIBIT 13. Percentage of Group Practices Reporting Major EHR Benefits in Specified Areas, by EHR Implementation Stage



Negative Impact

Both individual and group practices report a negative impact in the same four areas: “reduced need for staff or staff time,” “demonstrated business value,” “improved efficiency,” and “improved practice workflow.” But the percentage of practices reporting a negative impact in these areas is often less among

practices that have been in the incentive program longer or have expanded or upgraded their EHR (see Exhibits 14, 15, 16, and 17). For example:

- 40 percent of individual practices in payment year *one* report a negative impact on need for staff or staff time, but only 12 percent of individual practices in payment year *three* report this to be a negative impact. The percentage of individual practices in year *four* reporting a negative impact on staff or staff time is higher (39 percent), but there are far fewer individual practices in payment year four so findings are sensitive to the reported experiences of only a few practices.
- About 62 percent of individual practices that have just *begun using* an EHR report a negative impact on need for staff or staff time. Among practices that have upgraded or expanded their EHR, however, only 14 percent report a negative impact on staff time.
- 52 percent of group practices that have just *begun using* an EHR report a negative impact on practice workflow, but only 18 percent of group practices that have *upgraded or expanded* their EHR found a negative impact in this area.

No *individual* practices and only one *group* practice reported any negative impact on patient outcomes. Also, less than 5 percent of practices in any payment year (individual or group practices) reported a negative impact on access to patient information, care coordination, or decision support.

EXHIBIT 14. Percentage of Individual Practices Reporting Negative EHR Impact in Specified Areas, by Payment Years One and Three

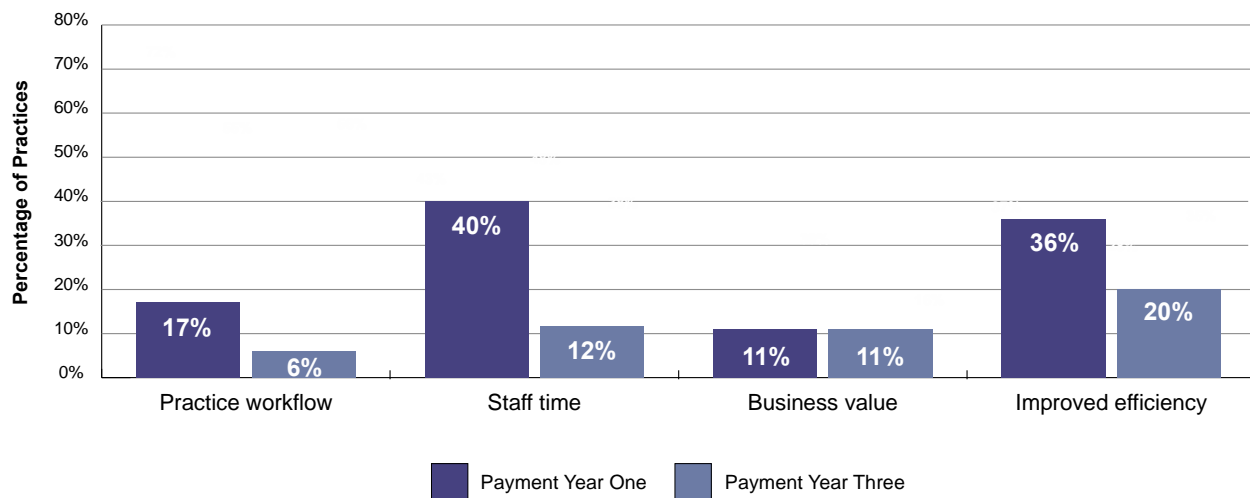


EXHIBIT 15. Percentage of Individual Practices Reporting Negative EHR Impact in Specified Areas, by EHR Implementation Stage

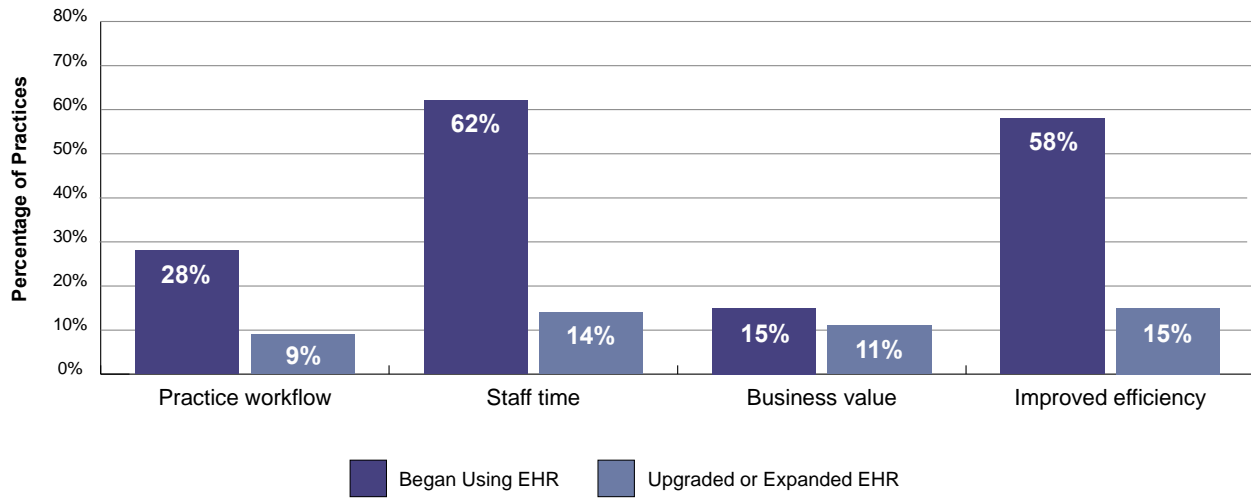


EXHIBIT 16. Percentage of Group Practices Reporting Negative EHR Impact in Specified Areas, by Payment Years One and Three

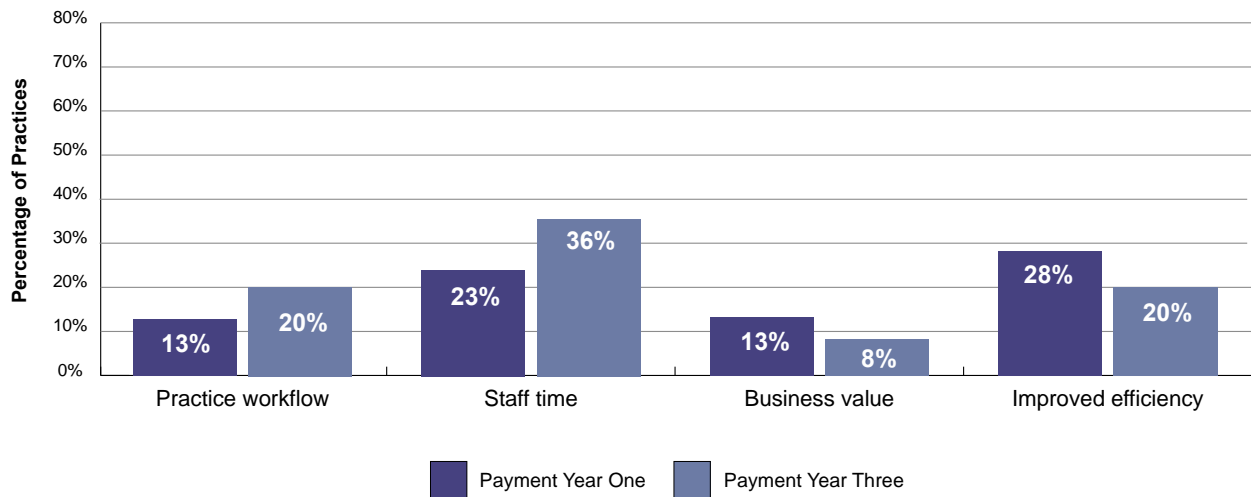
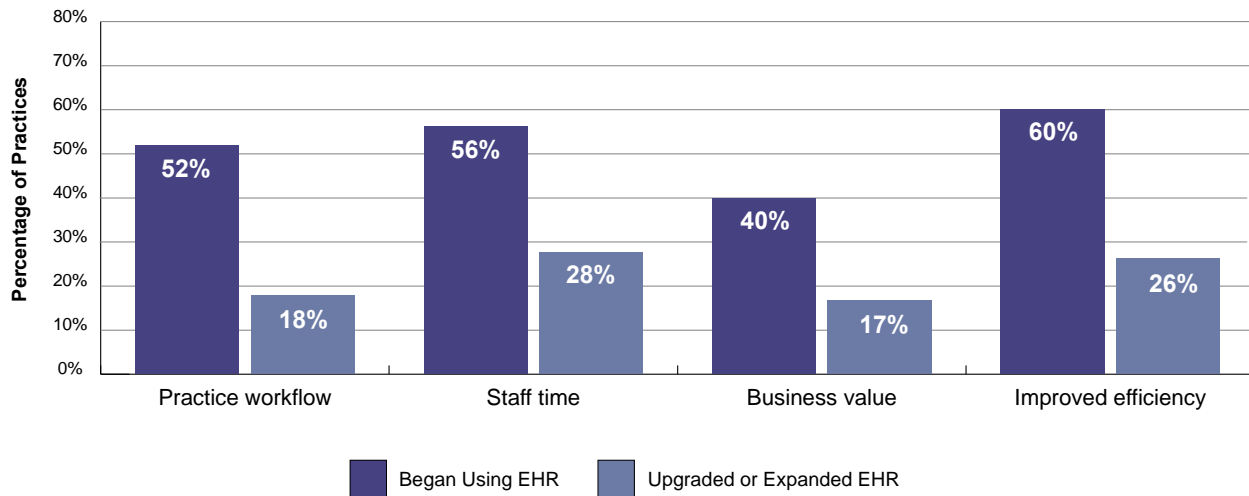


EXHIBIT 17. Percentage of Group Practices Reporting Negative EHR Impact in Specified Areas, by EHR Implementation Stage



Staff Adjustments

Program registrants were also asked what staffing changes were made in their practice as a result of implementing an EHR.

- The vast majority (more than 90 percent) of individual and group practices, regardless of their payment year or EHR stage, did not reduce staff.
- A larger percentage of practices (individual and group practices) in payment year *one* reassigned staff than in other payment years.
- A larger percentage of practices (individual and group practices) that had *begun using their EHR* reported adding staff than practices that had *upgraded or expanded their EHR*. And a larger percentage of group practices in payment years two, three, and four reported adding staff than group practices in payment year one.
- A larger percentage of *individual* practices in payment years two, three, and four reported no staffing changes than *group* practices in those same payment years. More *group* practices in payment year one, however, reported no staffing changes than *individual* practices in payment year one.
- For individual practices in payment year one, 42 percent added staff, 60 percent reassigned staff, and 25 percent reported no staffing changes.
- For group practices in payment year one, 31 percent added staff, 42 percent reassigned staff, and 39 percent reported no staffing changes.³

SUBSTATE HEALTH INFORMATION EXCHANGE PARTICIPATION

Program registrants were asked about their participation and interest in a substate health information exchange (HIE).

³ Percentages may equal more than 100 since program registrants were asked to mark all that apply.

- Many (46 percent) program registrants reported participating in Michigan Health Connect (305 practices) as their HIE, and about 12 percent of practices reported participating in Great Lakes Health Information Exchange (80 practices).
- A smaller number of registrants identified Upper Peninsula Health Care Network (22 practices), Jackson Community Medical Record (36), Southeast Michigan Beacon Community (3), Southeast Michigan HIE (6 practices), or My1HIE (2 practices) as their HIE.
- Some program registrants either are not participating (10 percent of individual practices, 29 percent of group practices) or are unsure if they are participating (15 percent of individual practices, 19 percent of group practices) in a substate health information exchange.

Program registrants were asked to rank the functions they want their practice to be able to do through an HIE.

- Among the individual practices, the highest priority functions for a health information exchange are to receive lab results electronically and send and receive referrals electronically.
- Among group practices, the highest priority functions are to update/receive data from MCIR electronically and receive lab results electronically.

M-CEITA SERVICES

Program registrants were asked about services they may have received from the Michigan Center for Effective IT Adoption.

- About 26 percent of the individual practices report receiving consulting services from M-CEITA, whereas about half of the group practice respondents received services.
- There is overwhelming satisfaction with the services received from among those that report receiving consulting services from M-CEITA. About 89 percent of the individual practices and 77 percent of group practices were “very satisfied,” and most of the remaining practices were “somewhat satisfied” with M-CEITA. Only one individual practice was “very dissatisfied,” and no group practices were “very dissatisfied.”
- Almost all program registrants in individual and group practices responded “no” when asked if they hired anyone trained by a Health Information Technology (HIT) Workforce Development Program; those who did not say “no” responded with “not sure.”
- Only one program registrant (an individual practice) reported sending staff for training in an HIT Workforce Development Program. That practice sent staff to Wayne County Community College.

Current use of functions, planned use, and how difficult a function was to start using were compared in this analysis for practices that used M-CEITA and those that did not use M-CEITA.

Overall, practices that *used* M-CEITA reported functions as hard to start using more often and reported current regular and planned regular use less often than practices that *did not use* M-CEITA. However, the differences in most functions are small; for example, 95 percent of practices that used M-CEITA reported regular use of conducting drug-drug, drug-allergy, and drug-formulary checks, but 98 percent of practices that did not use M-CEITA reported regular use of this function. In only one function (submitting data electronically to public health agencies) did a much larger percentage of practices that *did not use* M-CEITA (86 percent) report more regular use than those that *used* M-CEITA (69 percent). Also, in terms of functions that were hard to start using, generating patient reminders for guideline-based interventions and/or screening tests was the only function that practices that *did not use* M-CEITA reported more often as hard to start using than those that *did use* M-CEITA, and the difference between the percentage was significant. Sixteen percent of practices that used M-CEITA reported generating patient reminders as hard to start using, but 42 percent of practices that did not use M-CEITA found this function hard to start

using. This was also one of the two functions with the fewest practices reporting regular use (the other is submitting data electronically to public health agencies). In all other areas, a smaller percentage of practices that *did not use* M-CEITA reported these as hard to start using than practices that *did use* M-CEITA.

Some of the differences in difficulty and current use of functions—between practices that used M-CEITA and those that did not—might be because practices that struggle with implementing EHR functions are more likely to seek out assistance, while those that are able to more readily implement functions themselves may not seek out M-CEITA services.

Appendix A:

Medicaid EHR Incentive Program Survey of Registrants 2015 Frequency Report for Individual Practices

1. Are you completing this survey for a group practice as a whole? (Mark **one**.) (n=498)

a) Yes, this survey is being submitted on behalf of all providers in the group practice.	20.1%
b) No, I am completing this survey on behalf of one applicant.	79.9

2. Which best describes your practice? (Mark one.) (n=498)

a) Primary care practice	37.3%
b) Single-specialty practice (not primary care)	15.1
c) Multispecialty practice	41.8
d) Community health center (FQHC, FQHC look-alike, RHC)	2.0
e) Community mental health center	1.6
f) Other	2.2

NOTE: Numbers may not add to 100 percent due to rounding.

3. What is the extent of EHR planning and implementation in your practice? (Mark **one**.) (n=498)

a) We have adopted an EHR (e.g., purchased or secured access to certified EHR technology).	14.1%
b) We have begun using an EHR (e.g., staff training, data entry of patient demographic information on an EHR).	19.7
c) We have upgraded or expanded our EHR (e.g., upgraded to certified EHR technology or added new functionality for meaningful use).	66.3

NOTE: Numbers may not add to 100 percent due to rounding.

4. To what degree are/were the following issues a concern for implementation of an EHR system in your practice?

	Major concern	Medium concern	Minor concern	Not a concern
Payment Year One (n=197)				
a) Unsure which EHR system to purchase	23.4%	15.7%	9.6%	51.3%
b) Worry that EHR choice will become obsolete	21.8	17.8	13.2	47.2
c) Initial costs of implementation	37.1	44.7	5.6	12.7
d) Recurring costs of EHR system	34.5	47.2	6.6	11.7
e) Disruption to practice workflow	56.9	21.8	9.1	12.2
f) Patient privacy	24.4	13.2	41.6	20.8
g) Familiarity with computer technology	10.7	40.6	34.5	14.2
h) Internet access availability and reliability	6.6	34.0	17.3	42.1
Payment Year Two (n=158)				
a) Unsure which EHR system to purchase	5.1%	15.2%	7.0%	72.8%
b) Worry that EHR choice will become obsolete	5.7	15.2	9.5	69.6
c) Initial costs of implementation	14.6	50.6	2.5	32.3
d) Recurring costs of EHR system	12.0	53.2	5.1	29.7
e) 46.8	17.7	24.1	11.4	

	Major concern	Medium concern	Minor concern	Not a concern
f) Patient privacy	8.2	13.3	43.0	35.4
g) Familiarity with computer technology	8.2	20.3	41.8	29.8
h) Internet access availability and reliability	7.0	15.8	14.6	62.7
Payment Year Three (n=116)				
a) Unsure which EHR system to purchase	4.3%	16.4%	4.3%	75.0%
b) Worry that EHR choice will become obsolete	4.3	10.3	17.2	68.1
c) Initial costs of implementation	21.6	32.8	4.3	41.4
d) Recurring costs of EHR system	12.1	43.1	5.2	39.7
e) Disruption to practice workflow	41.4	13.8	27.6	17.2
f) Patient privacy	6.0	4.3	44.0	45.7
g) Familiarity with computer technology	3.4	13.8	41.4	41.4
h) Internet access availability and reliability	3.4	8.6	10.3	77.6
Payment Year Four (n=27)				
a) Unsure which EHR system to purchase	7.4%	29.6%	3.7%	59.3%
b) Worry that EHR choice will become obsolete	18.5	18.5	3.7	59.3
c) Initial costs of implementation	37.0	29.6	3.7	29.6
d) Recurring costs of EHR system	37.0	29.6	7.4	25.9
e) Disruption to practice workflow	44.4	25.9	25.9	3.7
f) Patient privacy	3.7	33.3	29.6	33.3
g) Familiarity with computer technology	11.1	29.6	29.6	29.6
h) Internet access availability and reliability	25.9	0.0	11.1	63.0

NOTE: Numbers may not add to 100 percent due to rounding.

The next series of questions asks about your current use of EHR functions, how difficult the function was to implement, and your plans for use of the function in the future. The questions will ask about the following EHR functions:

- Conducting drug-drug, drug-allergy, and drug-formulary checks
- Generating lists of patients by specific conditions
- Generating patient reminders for guideline-based interventions and/or screening tests
- Submitting data electronically to public health agencies (including the Michigan Care Improvement Registry)
- Generating and transmitting permissible prescriptions electronically (e-prescribing)
- Computerized provider order entry (CPOE) for medications, labs, radiology/imaging, or referrals
- Generating a clinical summary of office visits for patients
- Maintaining up-to-date problem list of active diagnoses
- Maintaining active medication allergy list
- Maintaining active medication list

5. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Payment Year One (n=197)	Payment Year Two (n=158)	Payment Year Three (n=116)	Payment Year Four (n=27)
Conducting drug-drug, drug-allergy, and drug-formulary checks				
Current use:				
Extensive use	59.4%	82.3%	89.7%	92.6%

	Payment Year One (n=197)	Payment Year Two (n=158)	Payment Year Three (n=116)	Payment Year Four (n=27)
Conducting drug-drug, drug-allergy, and drug-formulary checks				
Moderate use	23.4	17.7	7.8	7.4
Minimal use	11.2	0.0	1.7	0.0
No use of this function, but it is applicable to my practice	5.1	0.0	0.9	0.0
This function is not applicable in my practice	1.0	0.0	0.0	0.0
Planned use:				
Extensive use	75.6%	88.0%	93.1%	92.6%
Moderate use	16.8	10.8	2.6	7.4
Minimal use	5.6	0.6	3.4	0.0
No use of this function, but it is applicable to my practice	0.5	0.0	0.9	0.0
This function is not applicable in my practice	1.5	0.6	0.0	0.0
Difficulty starting to use this function:				
Hard	4.6%	3.8%	0.9%	0.0%
Moderate	48.2	26.6	37.9	18.5
Easy	45.2	69.0	61.2	81.5
This function is not applicable in my practice	2.0	0.6	0.0	0.0

NOTE: Numbers may not add to 100 percent due to rounding.

6. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Payment Year One (n=197)	Payment Year Two (n=158)	Payment Year Three (n=116)	Payment Year Four (n=27)
Generating lists of patients by specific conditions				
Current use:				
Extensive use	53.8%	57.0%	44.0%	51.9%
Moderate use	28.4	36.1	38.8	44.4
Minimal use	11.7	5.7	17.2	3.7
No use of this function, but it is applicable to my practice	5.1	1.3	0.0	0.0
This function is not applicable in my practice	1.0	0.0	0.0	0.0
Planned use:				
Extensive use	69.5%	65.8%	55.2%	51.9%
Moderate use	22.3	27.8	42.2	48.1
Minimal use	6.1	5.1	2.6	0.0
No use of this function, but it is applicable to my practice	0.5	0.6	0.0	0.0
This function is not applicable in my practice	1.5	0.6	0.0	0.0
Difficulty starting to use this function:				
Hard	4.6%	7.6%	11.2%	3.7%
Moderate	71.6	75.3	78.4	74.1
Easy	22.3	16.5	9.5	22.2
This function is not applicable in my practice	1.5	0.6	0.9	0.0

NOTE: Numbers may not add to 100 percent due to rounding.

7. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Payment Year One (n=197)	Payment Year Two (n=158)	Payment Year Three (n=116)	Payment Year Four (n=27)
Generating patient reminders for guideline-based interventions and/or screening tests				
Current use:				
Extensive use	34.5%	51.9%	42.2%	40.7%
Moderate use	25.4	39.9	34.5	48.1
Minimal use	17.3	5.1	20.7	3.7
No use of this function, but it is applicable to my practice	20.3	1.9	1.7	7.4
This function is not applicable in my practice	2.5	1.3	0.9	0.0
Planned use:				
Extensive use	67.0%	61.4%	44.8%	59.3%
Moderate use	20.3	32.9	50.0	37.0
Minimal use	9.6	2.5	3.4	0.0
No use of this function, but it is applicable to my practice	0.5	0.6	0.9	3.7
This function is not applicable in my practice	2.5	2.5	0.9	0.0
Difficulty starting to use this function:				
Hard	28.4%	38.6%	33.6%	33.3%
Moderate	54.3	48.7	54.3	63.0
Easy	14.7	10.1	10.3	3.7
This function is not applicable in my practice	2.5	2.5	1.7	0.0

Note: Numbers may not add to 100 percent due to rounding.

8. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Payment Year One (n=197)	Payment Year Two (n=158)	Payment Year Three (n=116)	Payment Year Four (n=27)
Submitting data electronically to public health agencies (including the Michigan Care Improvement Registry)				
Current use:				
Extensive use	49.7%	50.6%	59.5%	63.0%
Moderate use	19.3	36.7	25.9	29.6
Minimal use	11.7	8.2	3.4	3.7
No use of this function, but it is applicable to my practice	11.2	3.2	9.5	3.7
This function is not applicable in my practice	8.1	1.3	1.7	0.0
Planned use:				
Extensive use	64.5%	58.2%	67.2%	63.0%
Moderate use	15.7	33.5	25.0	29.6
Minimal use	8.1	4.4	1.7	7.4
No use of this function, but it is applicable to my practice	3.6	1.9	4.3	0.0
This function is not applicable in my practice	8.1	1.9	1.7	0.0
Difficulty starting to use this function:				
Hard	7.6%	12.0%	5.2%	3.7%

	Payment Year One (n=197)	Payment Year Two (n=158)	Payment Year Three (n=116)	Payment Year Four (n=27)
Submitting data electronically to public health agencies (including the Michigan Care Improvement Registry)				
Moderate	72.6	74.7	74.1	81.5
Easy	9.1	9.5	18.1	14.8
This function is not applicable in my practice	10.7	3.8	2.6	0.0

NOTE: Numbers may not add to 100 percent due to rounding.

9. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Payment Year One (n=197)	Payment Year Two (n=158)	Payment Year Three (n=116)	Payment Year Four (n=27)
Generating and transmitting permissible prescriptions electronically (e-prescribing)				
Current use:				
Extensive use	64.5%	82.9%	84.5%	96.3%
Moderate use	20.3	14.6	14.7	3.7
Minimal use	8.1	2.5	0.9	0.0
No use of this function, but it is applicable to my practice	6.1	0.0	0.0	0.0
This function is not applicable in my practice	1.0	0.0	0.0	0.0
Planned use:				
Extensive use	81.2%	89.9%	94.8%	96.3%
Moderate use	14.2	7.6	4.3	3.7
Minimal use	2.0	1.9	0.0	0.0
No use of this function, but it is applicable to my practice	1.0	0.0	0.0	0.0
This function is not applicable in my practice	1.5	0.6	0.9	0.0
Difficulty starting to use this function:				
Hard	2.5%	3.2%	0.9%	0.0%
Moderate	67.5	57.0	56.9	40.7
Easy	28.4	39.2	42.2	59.3
This function is not applicable in my practice	1.5	0.6	0.0	0.0

NOTE: Numbers may not add to 100 percent due to rounding.

10. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Payment Year One (n=197)	Payment Year Two (n=158)	Payment Year Three (n=116)	Payment Year Four (n=27)
Computerized provider order entry (CPOE) for medications, labs, radiology/imaging, or referrals				
Current use:				
Extensive use	60.9%	81.6%	78.4%	92.6%
Moderate use	23.4	15.2	6.0	0.0
Minimal use	8.1	2.5	13.8	3.7
No use of this function, but it is applicable to my practice	4.6	0.0	1.7	0.0

	Payment Year One (n=197)	Payment Year Two (n=158)	Payment Year Three (n=116)	Payment Year Four (n=27)
Computerized provider order entry (CPOE) for medications, labs, radiology/imaging, or referrals				
This function is not applicable in my practice	3.0	0.6	0.0	3.7
Planned use:				
Extensive use	74.1%	87.3%	90.5%	92.6%
Moderate use	15.7	9.5	7.8	3.7
Minimal use	5.1	1.9	0.9	0.0
No use of this function, but it is applicable to my practice	1.5	0.0	0.0	0.0
This function is not applicable in my practice	3.6	1.3	0.9	3.7
Difficulty starting to use this function:				
Hard	4.6%	6.3%	15.5%	7.4%
Moderate	72.1	61.4	48.3	55.6
Easy	19.3	31.6	36.2	33.3
This function is not applicable in my practice	4.1	0.6	0.0	3.7

NOTE: Numbers may not add to 100 percent due to rounding.

11. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Payment Year One (n=197)	Payment Year Two (n=158)	Payment Year Three (n=116)	Payment Year Four (n=27)
Generating a clinical summary of office visits for patients				
Current use:				
Extensive use	55.8%	77.8%	81.0%	96.3%
Moderate use	28.4	15.8	8.6	3.7
Minimal use	10.2	5.7	10.3	0.0
No use of this function, but it is applicable to my practice	4.1	0.6	0.0	0.0
This function is not applicable in my practice	1.5	0.0	0.0	0.0
Planned use:				
Extensive use	71.1%	83.5%	81.0%	100.0%
Moderate use	22.8	11.4	8.6	0.0
Minimal use	4.1	3.8	10.3	0.0
No use of this function, but it is applicable to my practice	0.0	0.0	0.0	0.0
This function is not applicable in my practice	2.0	1.3	0.0	0.0
Difficulty starting to use this function:				
Hard	5.6%	4.4%	0.9%	14.8%
Moderate	47.7	25.9	33.6	18.5
Easy	45.2	69.0	65.5	66.7
This function is not applicable in my practice	1.5	0.6	0.0	0.0

NOTE: Numbers may not add to 100 percent due to rounding.

12. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Payment Year One (n=197)	Payment Year Two (n=158)	Payment Year Three (n=116)	Payment Year Four (n=27)
Maintaining up-to-date problem list of active diagnoses				
Current use:				
Extensive use	65.0%	81.6%	83.6%	100.0%
Moderate use	23.9	15.2	6.0	0.0
Minimal use	7.1	3.2	10.3	0.0
No use of this function, but it is applicable to my practice	2.5	0.0	0.0	0.0
This function is not applicable in my practice	1.5	0.0	0.0	0.0
Planned use:				
Extensive use	78.7%	88.6%	94.8%	100.0%
Moderate use	15.2	8.2	3.4	0.0
Minimal use	3.6	1.9	1.7	0.0
No use of this function, but it is applicable to my practice	0.5	0.0	0.0	0.0
This function is not applicable in my practice	2.0	1.3	0.0	0.0
Difficulty starting to use this function:				
Hard	3.0%	4.4%	0.9%	0.0%
Moderate	71.1	58.2	54.3	48.1
Easy	23.4	36.1	44.8	51.9
This function is not applicable in my practice	2.5	1.3	0.0	0.0

NOTE: Numbers may not add to 100 percent due to rounding.

13. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Payment Year One (n=197)	Payment Year Two (n=158)	Payment Year Three (n=116)	Payment Year Four (n=27)
Maintaining active medication allergy list				
Current use:				
Extensive use	63.5%	83.5%	86.2%	100.0%
Moderate use	27.4	14.6	12.9	0.0
Minimal use	6.6	1.9	0.9	0.0
No use of this function, but it is applicable to my practice	1.0	0.0	0.0	0.0
This function is not applicable in my practice	1.5	0.0	0.0	0.0
Planned use:				
Extensive use	77.2%	89.2%	94.8%	100.0%
Moderate use	19.3	7.6	5.2	0.0
Minimal use	2.0	1.9	0.0	0.0
No use of this function, but it is applicable to my practice	0.0	0.0	0.0	0.0
This function is not applicable in my practice	1.5	1.3	0.0	0.0
Difficulty starting to use this function:				
Hard	3.0%	2.5%	0.9%	0.0%
Moderate	45.7	29.7	33.6	11.1
Easy	49.7	67.1	65.5	88.9

	Payment Year One (n=197)	Payment Year Two (n=158)	Payment Year Three (n=116)	Payment Year Four (n=27)
Maintaining active medication allergy list				
This function is not applicable in my practice	1.5	0.6	0.0	0.0

Note: Numbers may not add to 100 percent due to rounding.

14. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Payment Year One (n=196)	Payment Year Two (n=158)	Payment Year Three (n=116)	Payment Year Four (n=27)
Maintaining active medication list				
Current use:				
Extensive use	66.3%	84.8%	85.3%	100.0%
Moderate use	25.5	13.9	13.8	0.0
Minimal use	5.6	1.3	0.9	0.0
No use of this function, but it is applicable to my practice	1.5	0.0	0.0	0.0
This function is not applicable in my practice	1.0	0.0	0.0	0.0
Planned use:				
Extensive use	81.6%	90.5%	95.7%	100.0%
Moderate use	14.3	7.0	4.3	0.0
Minimal use	2.0	1.3	0.0	0.0
No use of this function, but it is applicable to my practice	0.5	0.0	0.0	0.0
This function is not applicable in my practice	1.5	1.3	0.0	0.0
Difficulty starting to use this function:				
Hard	3.6%	4.4%	0.9%	0.0%
Moderate	51.0	58.2	56.0	44.4
Easy	43.9	36.7	43.1	55.6
This function is not applicable in my practice	1.5	0.6	0.0	0.0

Note: Numbers may not add to 100 percent due to rounding.

15. How many months has it been since your practice began entering patient data in an EHR? (Mark **one**.) (n=428)

a) 6 months or less	2.1%
b) 7 to 12 months	2.8
c) 13 to 18 months	9.6
d) 19 to 24 months	37.9
e) More than 24 months	47.7

16. What impact has implementation of your EHR had to date in each of the following areas?

	Major benefit	Some benefit	No impact	Negative impact
Payment Year One (n=150)				
a) Improved access to patient information	72.7%	24.0%	2.7%	0.7%
b) Improved care coordination	62.0	32.7	3.3	2.0
c) Improved decision support (e.g., diagnosis aids, drug-to-drug/drug-to-food interaction checks)	37.3	56.7	5.3	0.7
d) Improved patient outcomes (e.g., chronic disease management, surgical case management)	32.7	56.0	11.3	0.0
e) Improved health care delivery process (e.g., reduced time to review lab, radiology, and/or pathology orders)	65.3	26.0	5.3	3.3
f) Improved communication with and provision of information to patients (e.g., patient reminders and educational materials)	36.0	55.3	7.3	1.3
g) Improved practice workflow (e.g., less staff time spent compiling patient information, more information available to clinicians)	9.3	66.0	8.0	16.7
h) Improved privacy and security of patients' personal health information	37.3	50.7	10.7	1.3
i) Reduced need for staff or staff time	5.3	16.7	38.0	40.0
j) Demonstrated business value (e.g., saves time or money)	8.1	47.7	33.6	10.7
k) Improved efficiency (e.g., allows providers to see more patients per day)	8.7	16.7	38.7	36.0
Payment Year Two (n=146)				
a) Improved access to patient information	74.7%	21.2%	3.4%	0.7%
b) Improved care coordination	69.9	25.3	4.1	0.7
c) Improved decision support (e.g., diagnosis aids, drug-to-drug/drug-to-food interaction checks)	33.6	65.1	1.4	0.0
d) Improved patient outcomes (e.g., chronic disease management, surgical case management)	28.8	63.7	7.5	0.0
e) Improved health care delivery process (e.g., reduced time to review lab, radiology, and/or pathology orders)	67.8	23.3	4.1	4.8
f) Improved communication with and provision of information to patients (e.g., patient reminders and educational materials)	32.9	61.0	5.5	0.7
g) Improved practice workflow (e.g., less staff time spent compiling patient information, more information available to clinicians)	11.6	72.6	2.7	13.0
h) Improved privacy and security of patients' personal health information	36.3	51.4	12.3	0.0
i) Reduced need for staff or staff time	10.3	31.5	41.1	17.1
j) Demonstrated business value (e.g., saves time or money)	11.0	41.1	37.0	11.0
k) Improved efficiency (e.g., allows providers to see more patients per day)	10.3	30.1	40.4	19.2

		Major benefit	Some benefit	No impact	Negative impact
Payment Year Three (n=102)					
a)	Improved access to patient information	73.5%	24.5%	2.0%	0.0%
b)	Improved care coordination	71.6	25.5	2.9	0.0
c)	Improved decision support (e.g., diagnosis aids, drug-to-drug/drug-to-food interaction checks)	41.2	55.9	2.9	0.0
d)	Improved patient outcomes (e.g., chronic disease management, surgical case management)	33.3	59.8	6.9	0.0
e)	Improved health care delivery process (e.g., reduced time to review lab, radiology, and/or pathology orders)	61.8	31.4	2.9	3.9
f)	Improved communication with and provision of information to patients (e.g., patient reminders and educational materials)	24.5	71.6	3.9	0.0
g)	Improved practice workflow (e.g., less staff time spent compiling patient information, more information available to clinicians)	22.5	62.7	8.8	5.9
h)	Improved privacy and security of patients' personal health information	46.1	45.1	8.8	0.0
i)	Reduced need for staff or staff time	17.6	29.4	41.2	11.8
j)	Demonstrated business value (e.g., saves time or money)	11.8	43.1	34.3	10.8
k)	Improved efficiency (e.g., allows providers to see more patients per day)	7.8	31.4	41.2	19.6
Payment Year Four (n=26)					
a)	Improved access to patient information	65.4%	30.8%	0.0%	3.8%
b)	Improved care coordination	61.5	34.6	0.0	3.8
c)	Improved decision support (e.g., diagnosis aids, drug-to-drug/drug-to-food interaction checks)	38.5	61.5	0.0	0.0
d)	Improved patient outcomes (e.g., chronic disease management, surgical case management)	38.5	57.7	3.8	0.0
e)	Improved health care delivery process (e.g., reduced time to review lab, radiology, and/or pathology orders)	46.2	30.8	0.0	23.1
f)	Improved communication with and provision of information to patients (e.g., patient reminders and educational materials)	30.8	61.5	0.0	7.7
g)	Improved practice workflow (e.g., less staff time spent compiling patient information, more information available to clinicians)	11.5	61.5	0.0	26.9
h)	Improved privacy and security of patients' personal health information	38.5	34.6	7.7	19.2
i)	Reduced need for staff or staff time	0.0	30.8	30.8	38.5
j)	Demonstrated business value (e.g., saves time or money)	0.0	42.3	23.1	34.6
k)	Improved efficiency (e.g., allows providers to see more patients per day)	7.7	42.3	30.8	19.2

		Major benefit	Some benefit	No impact	Negative impact
Began Using an EHR (n=98)					
a)	Improved access to patient information	56.1%	39.8%	3.1%	1.0%
b)	Improved care coordination	48.0	44.9	6.1	1.0
c)	Improved decision support (e.g., diagnosis aids, drug-to-drug/drug-to-food interaction checks)	46.9	46.9	5.1	1.0
d)	Improved patient outcomes (e.g., chronic disease management, surgical case management)	42.9	42.9	14.3	0.0
e)	Improved health care delivery process (e.g., reduced time to review lab, radiology, and/or pathology orders)	49.0	37.8	8.2	5.1
f)	Improved communication with and provision of information to patients (e.g., patient reminders and educational materials)	42.9	48.0	9.2	0.0
g)	Improved practice workflow (e.g., less staff time spent compiling patient information, more information available to clinicians)	3.1	57.1	12.2	27.6
h)	Improved privacy and security of patients' personal health information	44.9	38.8	14.3	2.0
i)	Reduced need for staff or staff time	0.0	19.4	18.4	62.2
j)	Demonstrated business value (e.g., saves time or money)	6.1	67.3	11.2	15.3
k)	Improved efficiency (e.g., allows providers to see more patients per day)	2.0	21.4	18.4	58.2
Upgraded or expanded EHR (n=326)					
a)	Improved access to patient information	78.3%	18.7%	2.5%	0.6%
b)	Improved care coordination	72.7	23.6	2.5	1.2
c)	Improved decision support (e.g., diagnosis aids, drug-to-drug/drug-to-food interaction checks)	34.0	63.5	2.5	0.0
d)	Improved patient outcomes (e.g., chronic disease management, surgical case management)	28.5	64.7	6.7	0.0
e)	Improved health care delivery process (e.g., reduced time to review lab, radiology, and/or pathology orders)	68.7	23.3	2.8	5.2
f)	Improved communication with and provision of information to patients (e.g., patient reminders and educational materials)	28.5	65.6	4.3	1.5
g)	Improved practice workflow (e.g., less staff time spent compiling patient information, more information available to clinicians)	16.6	70.2	4.0	9.2
h)	Improved privacy and security of patients' personal health information	37.4	51.5	9.5	1.5
i)	Reduced need for staff or staff time	12.6	27.6	45.7	14.1
j)	Demonstrated business value (e.g., saves time or money) (n=325)	10.5	36.9	41.2	11.4
k)	Improved efficiency (e.g., allows providers to see more patients per day)	11.0	27.9	45.7	15.3

NOTE: Numbers may not add to 100 percent due to rounding.

17. As a result of implementing your EHR, what staffing changes were made in your practice? (Mark all that apply.)

	Payment Year One (n=150)	Payment Year Two (n=147)	Payment Year Three (n=102)	Payment Year Four (n=26)
a) Added staff	42.0%	12.8%	26.5%	30.8%
b) Reduced staff	0.7	0.7	2.0	0.0
c) Reassigned staff	60.0	41.2	36.3	26.9
d) No staffing changes have been made	25.3	48.6	44.1	42.3

	Began using an EHR (n=98)	Upgraded or expanded EHR (n=328)
a) Added staff	61.2%	17.4%
b) Reduced staff	0.0	1.2
c) Reassigned staff	46.9	45.4
d) No staffing changes have been made	35.7	39.9

Substate health information exchanges (substate HIEs) are designed to facilitate EHR and public health data exchange among providers in a region or community. The exchanges will be linked to each other through a statewide infrastructure backbone (called MiHIN, the Michigan Health Information Network) that will serve all of the exchanges. Currently, there are seven major substate HIEs in Michigan. To demonstrate meaningful use, you should be participating in a substate HIE.

18. In which substate HIE are you participating? (Mark one) (n=491)

a) Southeast Michigan Beacon Community	0.4%
b) Great Lakes Health Information Exchange (formerly Capital Area RHIO)	10.6
c) Jackson Community Medical Record	6.9
d) Michigan Health Connect	55.8
e) My1HIE	0.0
f) Southeast Michigan HIE	0.2
g) Upper Peninsula Health Care Network	1.0
h) None	9.6
i) Not sure	15.5

NOTE: Numbers may not add to 100 percent due to rounding.

19. Would you like someone associated with MiHIN and the substate HIEs to contact you to provide more information about participating in a substate HIE? (n=58)

a) Yes	15.5%
b) No	84.5

20. What do you want your practice to be able to do through a health information exchange? Please rank the following from highest priority to lowest priority (highest average number is highest priority).

	Average ranking
Update/receive data from MCIR electronically (immunizations)	4.2
Send and receive referrals electronically	5.0
Receive lab results electronically	5.2

Receive diagnostic imaging reports electronically (not including the images)	4.1
Receive diagnostic imaging reports AND images electronically (including the images)	3.8
Receive hospital discharge summaries electronically	3.9
Other	1.8

M-CEITA, the Michigan Center for Effective IT Adoption (www.MCEITA.org, 1-888-MICH-EHR), provides consulting services to help health care providers use EHRs in a way that meets "meaningful use" requirements. Services are tailored to meet the needs of providers. For those just starting the EHR acquisition process, M-CEITA can help them qualify for the EHR Incentive Program, navigate the EHR selection process, and plan for an EHR system. For those who have already acquired a system, M-CEITA can help with system optimization, adapting EHR-related workflows to achieve practice quality goals, and working with a health information exchange.

21. Did M-CEITA, the Michigan Center for Effective IT Adoption, provide consulting services to you for implementation of your EHR system? (n=498)

a) Yes	25.5%
b) No	74.5

22. How satisfied were you with the consultation services provided by M-CEITA? (n=105)

a) Very satisfied	88.6%
b) Somewhat satisfied	10.5
c) Somewhat dissatisfied	0.0
d) Very dissatisfied	1.0

Note: Numbers may not add to 100 percent because respondents were asked to "mark all that apply."

23. Do you want M-CEITA to contact you to provide more information about its services? (n=350)

a) Yes	2.9%
b) No	97.1

24. Did you hire anyone trained by a HIT (health information technology) Workforce Development program? (Mark **all** that apply.) (n=498)

a) Yes, Delta College (Saginaw)	0.0%
b) Yes, Lansing Community College	0.0
c) Yes, Macomb Community College	0.0
d) Yes, Wayne County Community College	0.0
e) No	96.4
f) Not sure	5.6

Note: Numbers may not add to 100 percent because respondents were asked to "mark all that apply."

25. Did you send any of your staff for training in a HIT Workforce Development program?
(Mark **all** that apply.)

(n= 498)

Yes, Delta College (Saginaw)	0.0%
Yes, Lansing Community College	0.0
Yes, Macomb Community College	0.0
Yes, Wayne County Community College	0.2
No	99.8

Appendix B:

Medicaid EHR Incentive Program Survey of Registrants 2015 Frequency Report for Group Practices

1. Are you completing this survey for a group practice as a whole? (Mark one .)	(n=169)
a) Yes, this survey is being submitted on behalf of all providers in the group practice.	100.0%
b) No, I am completing this survey on behalf of one applicant.	0.0

2. Which best describes your practice? (Mark one .)	(n=169)
a) Primary care practice	32.5%
b) Single-specialty practice (not primary care)	10.7
c) Multispecialty practice	10.7
d) Community health center (FQHC, FQHC look-alike, RHC)	29.6
e) Community mental health center	4.1
f) Other	12.4

3. What is the extent of EHR planning and implementation in your practice? (Mark one .)	(n=169)
a) We have adopted an EHR (e.g., purchased or secured access to certified EHR technology).	18.9%
b) We have begun using an EHR (e.g., staff training, data entry of patient demographic information on an EHR).	14.8
c) We have upgraded or expanded our EHR (e.g., upgraded to certified EHR technology or added new functionality for meaningful use).	66.3

4. To what degree are/were the following issues a concern for implementation of an EHR system in your practice?

	Major concern	Medium concern	Minor concern	Not a concern
Payment Year One (n=88)				
a) Unsure which EHR system to purchase	14.8%	8.0%	14.8%	62.5%
b) Worry that EHR choice will become obsolete	11.4	13.6	19.3	55.7
c) Initial costs of implementation	22.7	34.1	17.0	26.1
d) Recurring costs of EHR system	30.7	35.2	14.8	19.3
e) Disruption to practice workflow	28.4	27.3	25.0	19.3
f) Patient privacy	10.2	20.5	22.7	46.6
g) Familiarity with computer technology	10.2	29.5	30.7	29.5
h) Internet access availability and reliability	1.1	26.1	23.9	48.9
Payment Year Two (n=41)				
a) Unsure which EHR system to purchase	17.1%	7.3%	7.3%	68.3%
b) Worry that EHR choice will become obsolete	12.2	24.4	9.8	53.7
c) Initial costs of implementation	41.5	39.0	2.4	17.1
d) Recurring costs of EHR system	48.8	36.6	4.9	9.8
e) Disruption to practice workflow	70.7	14.6	4.9	9.8
f) Patient privacy	22.0	24.4	34.1	19.5
g) Familiarity with computer technology	34.1	19.5	31.7	14.6
h) Internet access availability and reliability	24.4	22.0	22.0	31.7

	Major concern	Medium concern	Minor concern	Not a concern
Payment Year Three (n=30)				
a) Unsure which EHR system to purchase	13.3%	13.3%	6.7%	66.7%
b) Worry that EHR choice will become obsolete	10.0	20.0	10.0	60.0
c) Initial costs of implementation	30.0	20.0	3.3	46.7
d) Recurring costs of EHR system	30.0	23.3	6.7	40.0
e) Disruption to practice workflow	26.7	30.0	6.7	36.7
f) Patient privacy	16.7	26.7	20.0	36.7
g) Familiarity with computer technology	10.0	36.7	13.3	40.0
h) Internet access availability and reliability	13.3	26.7	26.7	33.3
Payment Year Four (n=10)				
a) Unsure which EHR system to purchase	20.0%	0.0%	10.0%	70.0%
b) Worry that EHR choice will become obsolete	20.0	0.0	30.0	50.0
c) Initial costs of implementation	30.0	10.0	10.0	50.0
d) Recurring costs of EHR system	50.0	20.0	10.0	20.0
e) Disruption to practice workflow	30.0	30.0	10.0	30.0
f) Patient privacy	20.0	20.0	30.0	30.0
g) Familiarity with computer technology	20.0	30.0	30.0	20.0
h) Internet access availability and reliability	20.0	30.0	0.0	50.0

Note: Numbers may not add to 100 percent due to rounding.

The next series of questions asks about your current use of EHR functions, how difficult the function was to implement, and your plans for use of the function in the future. The questions will ask about the following EHR functions:

- Conducting drug-drug, drug-allergy, and drug-formulary checks
- Generating lists of patients by specific conditions
- Generating patient reminders for guideline-based interventions and/or screening tests
- Submitting data electronically to public health agencies (including the Michigan Care Improvement Registry)
- Generating and transmitting permissible prescriptions electronically (e-prescribing)
- Computerized provider order entry (CPOE) for medications, labs, radiology/imaging, or referrals
- Generating a clinical summary of office visits for patients
- Maintaining up-to-date problem list of active diagnoses
- Maintaining active medication allergy list
- Maintaining active medication list

5. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Payment Year One (n=88)	Payment Year Two (n=41)	Payment Year Three (n=30)	Payment Year Four (n=10)
Conducting drug-drug, drug-allergy, and drug-formulary checks				
Current use:				
Extensive use	48.9%	68.3%	73.3%	90.0%
Moderate use	27.3	29.3	20.0	10.0
Minimal use	8.0	2.4	6.7	0.0
No use of this function, but it is applicable to my practice	8.0	0.0	0.0	0.0
This function is not applicable in my practice	8.0	0.0	0.0	0.0
Planned use:				
Extensive use	65.9%	78.0%	73.3%	100.0%
Moderate use	21.6	19.5	20.0	0.0
Minimal use	3.4	2.4	6.7	0.0
No use of this function, but it is applicable to my practice	2.3	0.0	0.0	0.0
This function is not applicable in my practice	6.8	0.0	0.0	0.0
Difficulty starting to use this function:				
Hard	8.0%	22.0%	0.0%	0.0%
Moderate	39.8	39.0	56.7	40.0
Easy	44.3	39.0	43.3	60.0
This function is not applicable in my practice	8.0	0.0	0.0	0.0

NOTE: Numbers may not add to 100 percent due to rounding.

6. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Payment Year One (n=88)	Payment Year Two (n=41)	Payment Year Three (n=30)	Payment Year Four (n=10)
Generating lists of patients by specific conditions				
Current use:				
Extensive use	37.5%	41.5%	53.3%	50.0%
Moderate use	28.4	41.5	43.3	40.0
Minimal use	15.9	17.1	3.3	10.0
No use of this function, but it is applicable to my practice	8.0	0.0	0.0	0.0
This function is not applicable in my practice	10.2	0.0	0.0	0.0
Planned use:				
Extensive use	52.3%	61.0%	60.0%	70.0%
Moderate use	29.5	26.8	36.7	20.0
Minimal use	5.7	12.2	3.3	10.0
No use of this function, but it is applicable to my practice	2.3	0.0	0.0	0.0
This function is not applicable in my practice	10.2	0.0	0.0	0.0
Difficulty starting to use this function:				
Hard	6.8%	14.6%	3.3%	0.0%
Moderate	46.6	51.2	60.0	50.0

	Payment Year One (n=88)	Payment Year Two (n=41)	Payment Year Three (n=30)	Payment Year Four (n=10)
Generating lists of patients by specific conditions				
Easy	34.1	34.1	36.7	40.0
This function is not applicable in my practice	12.5	0.0	0.0	10.0

7. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Payment Year One (n=88)	Payment Year Two (n=41)	Payment Year Three (n=30)	Payment Year Four (n=10)
Generating patient reminders for guideline-based interventions and/or screening tests				
Current use:				
Extensive use	28.4%	31.7%	43.3%	40.0%
Moderate use	22.7	24.4	30.0	30.0
Minimal use	21.6	34.1	26.7	30.0
No use of this function, but it is applicable to my practice	14.8	9.8	0.0	0.0
This function is not applicable in my practice	12.5	0.0	0.0	0.0
Planned use:				
Extensive use	47.7%	48.8%	60.0%	60.0%
Moderate use	30.7	41.5	33.3	40.0
Minimal use	4.5	7.3	6.7	0.0
No use of this function, but it is applicable to my practice	4.5	2.4	0.0	0.0
This function is not applicable in my practice	12.5	0.0	0.0	0.0
Difficulty starting to use this function:				
Hard	12.5%	41.5%	16.7%	10.0%
Moderate	55.7	43.9	43.3	70.0
Easy	17.0	14.6	40.0	20.0
This function is not applicable in my practice	14.8	0.0	0.0	0.0

NOTE: Numbers may not add to 100 percent due to rounding.

8. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Payment Year One (n=88)	Payment Year Two (n=41)	Payment Year Three (n=30)	Payment Year Four (n=10)
Submitting data electronically to public health agencies (including the Michigan Care Improvement Registry)				
Current use:				
Extensive use	26.1%	48.8%	63.3%	70.0%
Moderate use	17.0	22.0	20.0	10.0
Minimal use	21.6	17.1	6.7	20.0
No use of this function, but it is applicable to my practice	18.2	7.3	6.7	0.0
This function is not applicable in my practice	17.0	4.9	3.3	0.0
Planned use:				
Extensive use	45.5%	61.0%	73.3%	80.0%
Moderate use	22.7	26.8	13.3	10.0

	Payment Year One (n=88)	Payment Year Two (n=41)	Payment Year Three (n=30)	Payment Year Four (n=10)
Submitting data electronically to public health agencies (including the Michigan Care Improvement Registry)				
Minimal use	14.8	2.4	6.7	10.0
No use of this function, but it is applicable to my practice	0.0	4.9	3.3	0.0
This function is not applicable in my practice	17.0	4.9	3.3	0.0
Difficulty starting to use this function:				
Hard	27.3%	34.1%	23.3%	20.0%
Moderate	38.6	48.8	43.3	70.0
Easy	15.9	7.3	30.0	10.0
This function is not applicable in my practice	18.2	9.8	3.3	0.0

9. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Payment Year One (n=88)	Payment Year Two (n=41)	Payment Year Three (n=30)	Payment Year Four (n=10)
Generating and transmitting permissible prescriptions electronically (e-prescribing)				
Current use:				
Extensive use	60.2%	78.0%	86.7%	90.0%
Moderate use	15.9	22.0	10.0	10.0
Minimal use	5.7	0.0	3.3	0.0
No use of this function, but it is applicable to my practice	12.5	0.0	0.0	0.0
This function is not applicable in my practice	5.7	0.0	0.0	0.0
Planned use:				
Extensive use	73.9%	80.5%	90.0%	100.0%
Moderate use	12.5	19.5	6.7	0.0
Minimal use	8.0	0.0	3.3	0.0
No use of this function, but it is applicable to my practice	2.3	0.0	0.0	0.0
This function is not applicable in my practice	3.4	0.0	0.0	0.0
Difficulty starting to use this function:				
Hard	8.0%	12.2%	10.0%	0.0%
Moderate	38.6	46.3	33.3	50.0
Easy	47.7	41.5	56.7	50.0
This function is not applicable in my practice	5.7	0.0	0.0	0.0

NOTE: Numbers may not add to 100 percent due to rounding.

10. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Payment Year One (n=88)	Payment Year Two (n=41)	Payment Year Three (n=30)	Payment Year Four (n=10)
Computerized provider order entry (CPOE) for medications, labs, radiology/imaging, or referrals				
Current use:				
Extensive use	52.3%	68.3%	80.0%	80.0%
Moderate use	19.3	29.3	13.3	20.0

	Payment Year One (n=88)	Payment Year Two (n=41)	Payment Year Three (n=30)	Payment Year Four (n=10)
Computerized provider order entry (CPOE) for medications, labs, radiology/imaging, or referrals				
Minimal use	9.1	2.4	3.3	0.0
No use of this function, but it is applicable to my practice	5.7	0.0	3.3	0.0
This function is not applicable in my practice	13.6	0.0	0.0	0.0
Planned use:				
Extensive use	63.6%	31.7%	83.3%	80.0%
Moderate use	18.2	19.5	10.0	20.0
Minimal use	4.5	2.4	3.3	0.0
No use of this function, but it is applicable to my practice	0.0	0.0	3.3	0.0
This function is not applicable in my practice	13.6	0.0	0.0	0.0
Difficulty starting to use this function:				
Hard	13.6%	17.1%	10.0%	0.0%
Moderate	45.5	73.2	46.7	50.0
Easy	27.3	9.8	43.3	50.0
This function is not applicable in my practice	13.6	0.0	0.0	0.0

NOTE: Numbers may not add to 100 percent due to rounding.

11. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Payment Year One (n=88)	Payment Year Two (n=41)	Payment Year Three (n=30)	Payment Year Four (n=10)
Generating a clinical summary of office visits for patients				
Current use:				
Extensive use	45.5%	75.6%	83.3%	80.0%
Moderate use	33.0	24.4	13.3	0.0
Minimal use	12.5	0.0	3.3	20.0
No use of this function, but it is applicable to my practice	4.5	0.0	0.0	0.0
This function is not applicable in my practice	4.5	0.0	0.0	0.0
Planned use:				
Extensive use	68.2%	82.9%	86.7%	80.0%
Moderate use	21.6	17.1	10.0	10.0
Minimal use	3.4	0.0	3.3	10.0
No use of this function, but it is applicable to my practice	2.3	0.0	0.0	0.0
This function is not applicable in my practice	4.5	0.0	0.0	0.0
Difficulty starting to use this function:				
Hard	6.8%	31.7%	16.7	0.0%
Moderate	51.1	36.6	36.7	60.0
Easy	34.1	31.7	46.7	40.0
This function is not applicable in my practice	8.0	0.0	0.0	0.0

NOTE: Numbers may not add to 100 percent due to rounding.

12. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Payment Year One (n=88)	Payment Year Two (n=41)	Payment Year Three (n=30)	Payment Year Four (n=10)
Maintaining up-to-date problem list of active diagnoses				
Current use:				
Extensive use	55.7%	78.0%	83.3%	80.0%
Moderate use	22.7	22.0	10.0	20.0
Minimal use	6.8	0.0	6.7	0.0
No use of this function, but it is applicable to my practice	5.7	0.0	0.0	0.0
This function is not applicable in my practice	9.1	0.0	0.0	0.0
Planned use:				
Extensive use	68.2%	85.4%	86.7%	80.0%
Moderate use	17.0	14.6	6.7	20.0
Minimal use	3.4	0.0	6.7	0.0
No use of this function, but it is applicable to my practice	2.3	0.0	0.0	0.0
This function is not applicable in my practice	9.1	0.0	0.0	0.0
Difficulty starting to use this function:				
Hard	5.7%	7.3%	0.0%	0.0%
Moderate	46.6	73.2	50.0	50.0
Easy	36.4	19.5	50.0	50.0
This function is not applicable in my practice	11.4	0.0	0.0	0.0

NOTE: Numbers may not add to 100 percent due to rounding.

13. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Payment Year One (n=88)	Payment Year Two (n=41)	Payment Year Three (n=30)	Payment Year Four (n=10)
Maintaining active medication allergy list				
Current use:				
Extensive use	63.6%	82.9%	83.3%	100.0%
Moderate use	20.5	17.1	13.3	0.0
Minimal use	4.5	0.0	3.3	0.0
No use of this function, but it is applicable to my practice	4.5	0.0	0.0	0.0
This function is not applicable in my practice	6.8	0.0	0.0	0.0
Planned use:				
Extensive use	76.1%	82.9%	90.0%	100.0%
Moderate use	12.5	17.1	6.7	0.0
Minimal use	3.4	0.0	3.3	0.0
No use of this function, but it is applicable to my practice	1.1	0.0	0.0	0.0
This function is not applicable in my practice	6.8	0.0	0.0	0.0
Difficulty starting to use this function:				
Hard	8.0%	17.1%	0.0%	0.0%
Moderate	43.2	43.9	36.7	50.0

	Payment Year One (n=88)	Payment Year Two (n=41)	Payment Year Three (n=30)	Payment Year Four (n=10)
Maintaining active medication allergy list				
Easy	40.9	39.0	63.3	50.0
This function is not applicable in my practice	8.0	0.0	0.0	0.0

NOTE: Numbers may not add to 100 percent due to rounding.

14. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Payment Year One (n=88)	Payment Year Two (n=41)	Payment Year Three (n=29)	Payment Year Four (n=10)
Maintaining active medication list				
Current use:				
Extensive use	61.4%	82.9%	79.3%	100.0%
Moderate use	22.7	17.1	17.2	0.0
Minimal use	5.7	0.0	3.4	0.0
No use of this function, but it is applicable to my practice	3.4	0.0	0.0	0.0
This function is not applicable in my practice	6.8	0.0	0.0	0.0
Planned use:				
Extensive use	73.9%	85.4%	86.2%	100.0%
Moderate use	15.9	14.6	10.3	0.0
Minimal use	2.3	0.0	3.4	0.0
No use of this function, but it is applicable to my practice	1.1	0.0	0.0	0.0
This function is not applicable in my practice	6.8	0.0	0.0	0.0
Difficulty starting to use this function:				
Hard	8.0%	22.0%	0.0%	0.0%
Moderate	46.6	51.2	48.3	50.0
Easy	36.4	26.8	51.7	50.0
This function is not applicable in my practice	9.1	0.0	0.0	0.0

NOTE: Numbers may not add to 100 percent due to rounding.

15. How many months has it been since your practice began entering patient data in an EHR? (Mark **one**). (n=136)

a) 6 months or less	7.4%
b) 7 to 12 months	1.5
c) 13 to 18 months	3.7
d) 19 to 24 months	15.4
e) More than 24 months	72.1

16. What impact has implementation of your EHR had to date in each of the following areas?

	Major benefit	Some benefit	No impact	Negative impact
Payment Year One (n=61)				
a) Improved access to patient information	54.1%	39.3%	4.9%	1.6%

		Major benefit	Some benefit	No impact	Negative impact
b)	Improved care coordination	39.3	49.2	9.8	1.6
c)	Improved decision support (e.g., diagnosis aids, drug-to-drug/drug-to-food interaction checks)	42.6	47.5	8.2	1.6
d)	Improved patient outcomes (e.g., chronic disease management, surgical case management)	26.2	62.3	11.5	0.0
e)	Improved health care delivery process (e.g., reduced time to review lab, radiology, and/or pathology orders)	29.5	54.1	13.1	3.3
f)	Improved communication with and provision of information to patients (e.g., patient reminders and educational materials)	31.1	57.4	9.8	1.6
g)	Improved practice workflow (e.g., less staff time spent compiling patient information, more information available to clinicians)	29.5	49.2	8.2	13.1
h)	Improved privacy and security of patients' personal health information	39.3	47.5	13.1	0.0
i)	Reduced need for staff or staff time	11.5	42.6	23.0	23.0
j)	Demonstrated business value (e.g., saves time or money)	16.4	52.5	18.0	13.1
k)	Improved efficiency (e.g., allows providers to see more patients per day)	14.8	34.4	23.0	27.9
Payment Year Two (n=38)					
a)	Improved access to patient information	57.9%	34.2%	7.9%	0.0%
b)	Improved care coordination	50.0	36.8	10.5	2.6
c)	Improved decision support (e.g., diagnosis aids, drug-to-drug/drug-to-food interaction checks)	31.6	55.3	10.5	2.6
d)	Improved patient outcomes (e.g., chronic disease management, surgical case management)	15.8	63.2	18.4	2.6
e)	Improved health care delivery process (e.g., reduced time to review lab, radiology, and/or pathology orders)	31.6	44.7	7.9	15.8
f)	Improved communication with and provision of information to patients (e.g., patient reminders and educational materials)	23.7	60.5	13.2	2.6
g)	Improved practice workflow (e.g., less staff time spent compiling patient information, more information available to clinicians)	13.2	39.5	0.0	47.4
h)	Improved privacy and security of patients' personal health information	18.4	57.9	21.1	2.6
i)	Reduced need for staff or staff time	13.2	18.4	18.4	50.0
j)	Demonstrated business value (e.g., saves time or money)	13.2	23.7	23.7	39.5
k)	Improved efficiency (e.g., allows providers to see more patients per day)	10.5	23.7	18.4	47.4
Payment Year Three (n=25)					
a)	Improved access to patient information	60.0%	36.0%	4.0%	0.0%
b)	Improved care coordination	44.0	52.0	4.0	0.0
c)	Improved decision support (e.g., diagnosis aids, drug-to-drug/drug-to-food interaction checks)	32.0	64.0	4.0	0.0

		Major benefit	Some benefit	No impact	Negative impact
d)	Improved patient outcomes (e.g., chronic disease management, surgical case management)	28.0	68.0	4.0	0.0
e)	Improved health care delivery process (e.g., reduced time to review lab, radiology, and/or pathology orders)	28.0	60.0	4.0	8.0
f)	Improved communication with and provision of information to patients (e.g., patient reminders and educational materials)	44.0	56.0	0.0	0.0
g)	Improved practice workflow (e.g., less staff time spent compiling patient information, more information available to clinicians)	28.0	44.0	8.0	20.0
h)	Improved privacy and security of patients' personal health information	36.0	40.0	24.0	0.0
i)	Reduced need for staff or staff time	24.0	24.0	16.0	36.0
j)	Demonstrated business value (e.g., saves time or money)	24.0	44.0	24.0	8.0
k)	Improved efficiency (e.g., allows providers to see more patients per day)	28.0	24.0	28.0	20.0
Payment Year Four (n=10)					
a)	Improved access to patient information	80.0%	20.0%	0.0%	0.0%
b)	Improved care coordination	70.0	30.0	0.0	0.0
c)	Improved decision support (e.g., diagnosis aids, drug-to-drug/drug-to-food interaction checks)	70.0	30.0	0.0	0.0
d)	Improved patient outcomes (e.g., chronic disease management, surgical case management)	60.0	40.0	0.0	0.0
e)	Improved health care delivery process (e.g., reduced time to review lab, radiology, and/or pathology orders)	70.0	10.0	20.0	0.0
f)	Improved communication with and provision of information to patients (e.g., patient reminders and educational materials)	40.0	40.0	20.0	0.0
g)	Improved practice workflow (e.g., less staff time spent compiling patient information, more information available to clinicians)	50.0	30.0	0.0	20.0
h)	Improved privacy and security of patients' personal health information	50.0	30.0	20.0	0.0
i)	Reduced need for staff or staff time	40.0	10.0	20.0	30.0
j)	Demonstrated business value (e.g., saves time or money)	40.0	10.0	20.0	30.0
k)	Improved efficiency (e.g., allows providers to see more patients per day)	40.0	20.0	10.0	30.0
Began Using an EHR (n=25)					
a)	Improved access to patient information	72.0%	28.0%	0.0%	0.0%
b)	Improved care coordination	56.0	40.0	4.0	0.0
c)	Improved decision support (e.g., diagnosis aids, drug-to-drug/drug-to-food interaction checks)	48.0	48.0	4.0	0.0
d)	Improved patient outcomes (e.g., chronic disease management, surgical case management)	8.0	80.0	12.0	0.0

	Major benefit	Some benefit	No impact	Negative impact
e) Improved health care delivery process (e.g., reduced time to review lab, radiology, and/or pathology orders)	16.0	48.0	12.0	24.0
f) Improved communication with and provision of information to patients (e.g., patient reminders and educational materials)	40.0	48.0	12.0	0.0
g) Improved practice workflow (e.g., less staff time spent compiling patient information, more information available to clinicians)	20.0	20.0	8.0	52.0
h) Improved privacy and security of patients' personal health information	28.0	44.0	28.0	0.0
i) Reduced need for staff or staff time	8.0	12.0	24.0	56.0
j) Demonstrated business value (e.g., saves time or money)	4.0	40.0	16.0	40.0
k) Improved efficiency (e.g., allows providers to see more patients per day)	4.0	8.0	28.0	60.0
Upgraded or expanded EHR (n=109)				
a) Improved access to patient information	55.0%	37.6%	6.4%	0.9%
b) Improved care coordination	43.1	45.9	9.2	1.8
c) Improved decision support (e.g., diagnosis aids, drug-to-drug/drug-to-food interaction checks)	37.6	52.3	8.3	1.8
d) Improved patient outcomes (e.g., chronic disease management, surgical case management)	30.3	57.8	11.0	0.9
e) Improved health care delivery process (e.g., reduced time to review lab, radiology, and/or pathology orders)	36.7	49.5	10.1	3.7
f) Improved communication with and provision of information to patients (e.g., patient reminders and educational materials)	30.3	58.7	9.2	1.8
g) Improved practice workflow (e.g., less staff time spent compiling patient information, more information available to clinicians)	27.5	49.5	4.6	18.3
h) Improved privacy and security of patients' personal health information	34.9	48.6	15.6	0.9
i) Reduced need for staff or staff time	18.3	33.9	19.3	28.4
j) Demonstrated business value (e.g., saves time or money)	22.0	39.4	22.0	16.5
k) Improved efficiency (e.g., allows providers to see more patients per day)	21.1	33.0	20.2	25.7

NOTE: Numbers may not add to 100 percent due to rounding.

17. As a result of implementing your EHR, what staffing changes were made in your practice? (Mark **all** that apply.)

	Payment Year One (n=62)	Payment Year Two (n=38)	Payment Year Three (n=26)	Payment Year Four (n=10)
a) Added staff	30.6%	47.4%	42.3%	70.0%
b) Reduced staff	6.5	0.0	0.0	10.0
c) Reassigned staff	41.9	39.5	38.5	20.0
d) No staffing changes have been made	38.7	18.4	30.8	20.0

	Begun using EHR (n=25)	Upgraded or expanded EHR (n=111)
a) Added staff	60.0%	36.0%
b) Reduced staff	4.0	3.6
c) Reassigned staff	20.0	43.2
d) No staffing changes have been made	24.0	31.5

Substate health information exchanges (substate HIEs) are designed to facilitate EHR and public health data exchange among providers in a region or community. The exchanges will be linked to each other through a statewide infrastructure backbone (called MiHIN, the Michigan Health Information Network) that will serve all of the exchanges. Currently, there are seven major substate HIEs in Michigan. To demonstrate meaningful use, you should be participating in a substate HIE.

18. In which substate HIE are you participating? (Mark one.) (n=166)

a) Southeast Michigan Beacon Community	0.6%
b) Great Lakes Health Information Exchange (formerly Capital Area RHIO)	16.9
c) Jackson Community Medical Record	1.2
d) Michigan Health Connect	18.7
e) My1HIE	1.2
f) Southeast Michigan HIE	3.0
g) Upper Peninsula Health Care Network	10.2
h) None	28.9
i) Not sure	19.3

19. Would you like someone associated with MiHIN and the substate HIEs to contact you to provide more information about participating in a substate HIE? (n=73)

a) Yes	11.0%
b) No	89.0

20. What do you want your practice to be able to do through a health information exchange? Please rank the following from highest priority to lowest priority (highest average number is highest priority).

	Average ranking
Update/receive data from MCIR electronically (immunizations)	5.1
Send and receive referrals electronically	4.7
Receive lab results electronically	5.0
Receive diagnostic imaging reports electronically (not including the images)	4.1
Receive diagnostic imaging reports AND images electronically (including the images)	3.5
Receive hospital discharge summaries electronically	3.8
Other (fill in below)	1.7

M-CEITA, the Michigan Center for Effective IT Adoption (www.MCEITA.org, 1-888-MICH-EHR), provides consulting services to help health care providers use EHRs in a way that meets “meaningful use” requirements. Services are tailored to meet the needs of providers. For those just starting the EHR acquisition process, M-CEITA can help them qualify for the EHR Incentive Program, navigate the EHR selection process, and plan for an EHR system. For those who have already acquired a system, M-CEITA

can help with system optimization, adapting EHR-related workflows to achieve practice quality goals, and working with a health information exchange.

21. Did M-CEITA, the Michigan Center for Effective IT Adoption, provide consulting services to you for implementation of your EHR system? (n=169)

a) Yes	50.9%
b) No	49.1

22. How satisfied were you with the consultation services provided by M-CEITA? (n=66)

a) Very satisfied	77.3%
b) Somewhat satisfied	22.7
c) Somewhat dissatisfied	0.0
d) Very dissatisfied	0.0

23. Do you want M-CEITA to contact you to provide more information about its services? (n=73)

a) Yes	6.8%
b) No	93.2

24. Did you hire anyone trained by a HIT (health information technology) Workforce Development program? (Mark **all** that apply.) (n=169)

a) Yes, Delta College (Saginaw)	0.0%
b) Yes, Lansing Community College	0.0
c) Yes, Macomb Community College	0.0
d) Yes, Wayne County Community College	0.0
e) No	91.1
f) Not sure	8.9

25. Did you send any of your staff for training in a HIT Workforce Development program? (Mark **all** that apply.) (n=169)

a) Yes, Delta College (Saginaw)	0.0%
b) Yes, Lansing Community College	0.0
c) Yes, Macomb Community College	0.0
d) Yes, Wayne County Community College	0.0
e) No	100.0

Appendix C:

Medicaid EHR Incentive Program Survey of Registrants 2015 Frequency Report for Practices Using M-CEITA

5. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Did use M-CEITA (n=181)	Did not use M-CEITA (n=384)
Conducting drug-drug, drug-allergy, and drug-formulary checks		
Current use:		
Extensive use	75.7%	79.9%
Moderate use	18.8	17.7
Minimal use	3.3	2.3
No use of this function, but it is applicable to my practice	1.1	0.0
This function is not applicable in my practice	1.1	0.0
Planned use:		
Extensive use	81.8%	89.1%
Moderate use	14.4	8.9
Minimal use	2.8	1.6
No use of this function, but it is applicable to my practice	0.0	0.0
This function is not applicable in my practice	1.1	0.5
Difficulty starting to use this function:		
Hard	7.7%	1.8%
Moderate	53.6	30.2
Easy	37.6	67.7
This function is not applicable in my practice	1.1	0.3

NOTE: Numbers may not add to 100 percent due to rounding.

6. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Did use M-CEITA (n=181)	Did not use M-CEITA (n=384)
Generating lists of patients by specific conditions		
Current use:		
Extensive use	49.7%	53.1%
Moderate use	33.1	37.0
Minimal use	12.7	8.9
No use of this function, but it is applicable to my practice	2.8	1.0
This function is not applicable in my practice	1.7	0.0
Planned use:		
Extensive use	61.3%	66.7%
Moderate use	30.9	28.9
Minimal use	5.5	3.9
No use of this function, but it is applicable to my practice	0.6	0.0
This function is not applicable in my practice	1.7	0.5

	Did use M-CEITA (n=181)	Did not use M-CEITA (n=384)
Generating lists of patients by specific conditions		
Difficulty starting to use this function:		
Hard	6.6%	6.8%
Moderate	59.1	78.6
Easy	32.6	13.8
This function is not applicable in my practice	1.7	0.8

NOTE: Numbers may not add to 100 percent due to rounding.

7. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Did use M-CEITA (n=181)	Did not use M-CEITA (n=384)
Generating patient reminders for guideline-based interventions and/or screening tests		
Current use:		
Extensive use	45.3%	40.6%
Moderate use	23.8	35.9
Minimal use	19.3	12.8
No use of this function, but it is applicable to my practice	8.8	9.6
This function is not applicable in my practice	2.8	1.0
Planned use:		
Extensive use	60.2%	60.7%
Moderate use	30.4	33.9
Minimal use	5.0	3.6
No use of this function, but it is applicable to my practice	1.7	0.3
his function is not applicable in my practice	2.8	1.6
Difficulty starting to use this function:		
Hard	15.5%	41.7%
Moderate	64.1	48.7
Easy	17.7	7.8
This function is not applicable in my practice	2.8	1.8

NOTE: Numbers may not add to 100 percent due to rounding.

8. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Did use M-CEITA (n=181)	Did not use M-CEITA (n=384)
Submitting data electronically to public health agencies (including the Michigan Care Improvement Registry)		
Current use:		
Extensive use	52.5%	55.2%
Moderate use	16.0	31.0
Minimal use	14.9	6.5
No use of this function, but it is applicable to my practice	9.9	6.0
This function is not applicable in my practice	6.6	1.3

	Did use M-CEITA (n=181)	Did not use M-CEITA (n=384)
Submitting data electronically to public health agencies (including the Michigan Care Improvement Registry)		
Planned use:		
Extensive use	66.3%	65.9%
Moderate use	17.1	26.0
Minimal use	8.8	3.4
No use of this function, but it is applicable to my practice	1.1	3.1
This function is not applicable in my practice	6.6	1.6
Difficulty starting to use this function:		
Hard	19.3%	9.1%
Moderate	59.7	77.1
Easy	13.3	10.9
This function is not applicable in my practice	7.7	2.9

NOTE: Numbers may not add to 100 percent due to rounding.

9. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Did use M-CEITA (n=181)	Did not use M-CEITA (n=384)
Generating and transmitting permissible prescriptions electronically (e-prescribing)		
Current use:		
Extensive use	84.0%	80.5%
Moderate use	12.2	16.9
Minimal use	2.8	1.8
No use of this function, but it is applicable to my practice	1.1	0.5
This function is not applicable in my practice	0.0	0.3
Planned use:		
Extensive use	89.0%	92.2%
Moderate use	8.3	6.0
Minimal use	2.8	1.0
No use of this function, but it is applicable to my practice	0.0	0.3
This function is not applicable in my practice	0.0	0.5
Difficulty starting to use this function:		
Hard	5.0%	2.3%
Moderate	51.4	62.0
Easy	43.6	35.2
This function is not applicable in my practice	0.0	0.5

NOTE: Numbers may not add to 100 percent due to rounding.

10. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Did use M-CEITA (n=181)	Did not use M-CEITA (n=384)
Computerized provider order entry (CPOE) for medications, labs, radiology/imaging, or referrals		
Current use:		
Extensive use	73.5%	77.6%
Moderate use	18.2	14.3
Minimal use	2.8	6.5
No use of this function, but it is applicable to my practice	2.8	0.8
This function is not applicable in my practice	2.8	0.8
Planned use:		
Extensive use	80.1%	88.0%
Moderate use	15.5	8.3
Minimal use	1.7	2.1
No use of this function, but it is applicable to my practice	0.0	0.3
This function is not applicable in my practice	2.8	1.3
Difficulty starting to use this function:		
Hard	11.0%	8.6%
Moderate	61.3	62.5
Easy	24.9	28.1
This function is not applicable in my practice	2.8	0.8

NOTE: Numbers may not add to 100 percent due to rounding.

11. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Did use M-CEITA (n=181)	Did not use M-CEITA (n=384)
Generating a clinical summary of office visits for patients		
Current use:		
Extensive use	72.9%	75.5%
Moderate use	19.3	16.9
Minimal use	6.1	6.5
No use of this function, but it is applicable to my practice	1.1	1.0
This function is not applicable in my practice	0.6	0.0
Planned use:		
Extensive use	84.0%	83.6%
Moderate use	14.4	10.9
Minimal use	1.1	4.7
No use of this function, but it is applicable to my practice	0.0	0.0
This function is not applicable in my practice	0.6	0.8
Difficulty starting to use this function:		
Hard	11.6%	4.7%
Moderate	53.0	30.7
Easy	34.8	64.3
This function is not applicable in my practice	0.6	0.3

NOTE: Numbers may not add to 100 percent due to rounding.

12. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Did use M-CEITA (n=181)	Did not use M-CEITA (n=384)
Maintaining up-to-date problem list of active diagnoses		
Current use:		
Extensive use	79.0%	79.4%
Moderate use	15.5	14.8
Minimal use	3.3	4.9
No use of this function, but it is applicable to my practice	0.6	0.5
This function is not applicable in my practice	1.7	0.3
Planned use:		
Extensive use	86.2%	90.1%
Moderate use	9.4	8.1
Minimal use	2.8	0.8
No use of this function, but it is applicable to my practice	0.0	0.0
This function is not applicable in my practice	1.7	1.0
Difficulty starting to use this function:		
Hard	3.9%	1.8%
Moderate	60.2	63.8
Easy	33.7	33.6
This function is not applicable in my practice	2.2	0.8

NOTE: Numbers may not add to 100 percent due to rounding.

13. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Did use M-CEITA (n=181)	Did not use M-CEITA (n=384)
Maintaining active medication allergy list		
Current use:		
Extensive use	84.0%	80.7%
Moderate use	12.2	17.7
Minimal use	2.2	0.8
No use of this function, but it is applicable to my practice	0.6	0.3
This function is not applicable in my practice	1.1	0.5
Planned use:		
Extensive use	87.3%	91.9%
Moderate use	9.4	6.8
Minimal use	2.2	0.3
No use of this function, but it is applicable to my practice	0.0	0.0
This function is not applicable in my practice	1.1	1.0
Difficulty starting to use this function:		
Hard	6.6%	1.8%
Moderate	51.4	29.7
Easy	40.9	68.0
This function is not applicable in my practice	1.1	0.5

NOTE: Numbers may not add to 100 percent due to rounding.

14. Please tell us to what extent you **currently use** and **plan to use** the following EHR system function, and how **difficult it was** to start using this function:

	Did use M-CEITA (n=181)	Did not use M-CEITA (n=383)
Maintaining active medication list		
Current use:		
Extensive use	82.3%	81.2%
Moderate use	13.8	17.5
Minimal use	2.2	1.0
No use of this function, but it is applicable to my practice	0.6	0.3
This function is not applicable in my practice	1.1	0.0
Planned use:		
Extensive use	87.3%	92.2%
Moderate use	9.9	6.5
Minimal use	1.7	0.5
No use of this function, but it is applicable to my practice	0.0	0.0
This function is not applicable in my practice	1.1	0.8
Difficulty starting to use this function:		
Hard	7.7%	2.3%
Moderate	54.1	54.8
Easy	37.0	42.6
This function is not applicable in my practice	1.1	0.3

NOTE: Numbers may not add to 100 percent due to rounding.