

Assessing Electronic Health Record Use by Members of the American Osteopathic Association

<p>FINAL REPORT Executive Summary</p>

Prepared by
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Executive Summary

Project Objectives

The overall project objective was to assess the use of EHR technologies by the osteopathic physician members of the American Osteopathic Association (AOA). The AOA contracted with the Medical Group Management Association Center for Research (MGMA CFR) to conduct a survey to meet the project objectives. The specific objectives were as follows:

1. Assess current status of information technology adoption;
2. Estimate EHR system market penetration;
3. Evaluate economic impacts of EHR implementation;
4. Evaluate satisfaction levels;
5. Rate the barriers to EHR implementation;
6. Identify what the AOA can do to help members make decisions about EHR implementation;
7. Identify benefits of EHR utilization; and
8. Evaluate interest in AOA services related to EHR.

Methodology

In June 2006, the AOA sent an e-mail invitation to 14,078 members. The e-mail contained an embedded URL address for a Web survey. Following the Web electronic survey, a representative subset of 200 osteopathic physicians who did not respond was contacted by a professional telephone survey company to obtain answers to key questions from the survey.

Of the 14,078 e-mails, 11,138 were successfully transmitted. There were 907 responses to the electronic survey and 200 completed telephone surveys for 1,107 total responses. Using 11,138 successfully transmitted messages as the denominator, the response rate was 9.94%.

Demographic Profile of Respondents

Single specialty practices represented 38.1% of total responses. Solo practices constituted another 31.5% of the total responses. Family practice was the predominant single specialty, representing 41.6% of the single specialty practices. Internal medicine, at 6.2%, was a distant second. About 32% of the respondents to the survey worked in practices of less than 2 FTE physicians. These respondents were essentially the solo practices at 31.5%. Respondents in practices of 2 to 5 FTE represented another 36.2% of total respondents. Nearly 67% of respondents were practices owned by physicians. Another 15.4% of responses came from practices owned by hospitals or integrated delivery systems.

Summary of Findings

1. Information technology market penetration.

The survey questionnaire asked about the information technology status of different patient care areas. The areas investigated include:

- a. patient appointment system;
- b. referral authorization system;
- c. consult tracking system;

- d. clinical laboratory order entry system;
- e. clinical laboratory results system;
- f. radiology/imaging order entry system;
- g. radiology results system;
- h. prescription writing system;
- i. prescription refill system; and
- j. drug interaction warning system.

For the patient appointment system, 70.4% of practices used a computerized appointment calendar. 13.3% of practices used a computerized system for referral authorizations. Computerized systems represented 29.2% of the clinical laboratory order entry systems. Computerized clinical laboratory results systems were used in 30.3% of the responding practices. 22.6% of respondents reported using a completely computerized radiology/imaging order entry system. Completely computerized radiology/imaging results systems were used by 24.8% of respondents. Computerized prescription writing systems were used by 22.3% of respondents. Computerized prescription refill systems were used by 13.7% of respondents. Computerized systems to warn about drug interactions were used by 31.6% of respondents.

2. EHR system market penetration

When asked to describe their practice's current medical record system, 31.5% of all respondents used electronic health records. Although 36.5% of the Web respondents used EHRs, only 9.0% of the phone survey respondents used EHRs. The use of an e-mail invitation with a subject line of "American Osteopathic Association Electronic Health Records Survey" is possibly a biased method for collecting data about electronic health record market penetration. Practices without EHRs might very well have self-selected themselves out of the respondent pool by thinking that the survey was only intended for those who used EHRs. This is one possible explanation for the higher penetration rate for the Web modality.

The telephone survey, however, had a higher probability of getting responses from both EHR adopters and non-adopters. Thus, for this particular question about EHR market penetration, the telephone results might be more accurate than the Web results.

The size category of 51 or more FTE physicians shows the highest rate of EHR adoption at 55.1%. The solo practice rate of EHR adoption is about 25%. Larger medical groups tend to have more funds available for information technology investment and this tendency seems to be supported by the data.

For practices that do not currently have an EHR that serves a majority of the practice's patients, 6.6% have signed a contract to install an EHR in the next 12 months. Another 14.4% plan to adopt an EHR in the next 12 month. But 45.4% of respondents had no plans to adopt an EHR in the foreseeable future.

The EHR market share is very fragmented. Respondents reported using 113 different EHR companies. No EHR company had more than 5.6% market share.

3. Economic impacts of EHR implementation

The median EHR purchase and implementation cost was \$20,000 per FTE physician. The median EHR monthly software and hardware maintenance cost was \$250 per FTE physician.

Many EHR proponents argue that EHR utilization has the potential to reduce practice costs. This survey indicates that 22.3% of respondents did experience a decrease in practice costs. But an almost identical 22.0% report that practice costs increased. Perhaps most interesting of all is that 35.3% of respondents did not know the impact of EHR utilization on their practice costs.

4. Satisfaction levels

Most respondents were satisfied with their EHR system. This research shows that 68.2% of respondents were either “extremely satisfied” or “satisfied” with their EHR. When examining satisfaction with EHR vendor service and support, respondents were somewhat less satisfied than they were with the EHR hardware and software system. 56.0% of respondents were either “extremely satisfied” or “satisfied” with their EHR service and support. One useful indicator of a physician’s satisfaction with an EHR system concerns the physician’s willingness to recommend the EHR to another physician. 76.2% of respondents would recommend their EHR to another physician. Another indicator of EHR system satisfaction is whether the physician would go back to paper medical records if there were no financial penalties in doing so. Only 11.2% of respondents would go back to paper medical records if given the opportunity.

5. Barriers to EHR implementation

The major barriers to EHR implementation were identified by asking respondents to rank potential barriers on a 5 point scale where 1 means that the potential barrier is “not a problem” and 5 means that the potential barrier makes implementation “extremely difficult.” The primary barrier to EHR implementation was the “lack of capital resources to invest in an EHR”, with a mean score of 3.2 on the 5 point scale. The “inability to easily input historical medical record data into the EHR system” came in second with a mean score of 3.0. The “concern about loss of productivity during transition to the EHR system” and “insufficient return on investment (ROI) from an EHR” were tied for third place with a mean score of 2.9.

6. Solutions to simplify EHR selection process

One of the primary objectives for this research study was for the AOA to identify solutions that could help simplify the EHR selection process for AOA members. Respondents were asked to rank potential solutions on a 5 point scale, where 1 means that the potential solution is of “no value” and 5 means that the potential solution is of “extreme value.” The solution labeled “List the EHR product integration capabilities with various practice management billing systems” was the most highly ranked solution with a mean score of 4.1. In second place was “Educational programming on selection and implementation of EHR systems” with a mean score of 4.0. The third highest ranked solution was “Use of standardized terminology, e.g., SNOMED” with a mean score of 3.8.

7. Benefits of EHR utilization

The AOA members were asked to rate various EHR features on their potential benefits to their medical practices. A 5 point scale was used where 1 means that the feature would be of “no value” and 5 means that the feature would be of “extreme value”. The highest rated feature was “improved access to medical record information” with a mean score of 4.3. Next came “improved accuracy for coding evaluation and management procedures” with a mean score of 4.1. Tied for third place were “improved charge capture” and “improved claim submission process” with a mean score of 4.0.

8. Interest in AOA services related to EHR

Another primary objective of this research study was for the AOA to determine how interested the AOA members would be if the AOA offered various services related to EHR. A list of potential services was presented to the AOA members who were then asked to rate the services on a scale of 1 to 5 where 1 means that the member is “not at all interested” in the service and 5 means that the member is “extremely interested” in the service.

The most highly rated service was “member discounts” with a mean score of 3.60. Tied for second place was “online programs for physicians” and “printed educational program materials for physicians” with a mean score of 3.25.

Conclusion

This project has provided an opportunity to understand the EHR technology systems used by AOA members. Understanding the benefits of the technologies and the problems experienced by doctors who use the technologies can help others make a better decision for their practice. Research has demonstrated that improvement in the use of information technology systems can lead to improvements in the quality of care. The dissemination of these survey results will help AOA members in this most important decision.