Dental Electronic Health Record Adoption

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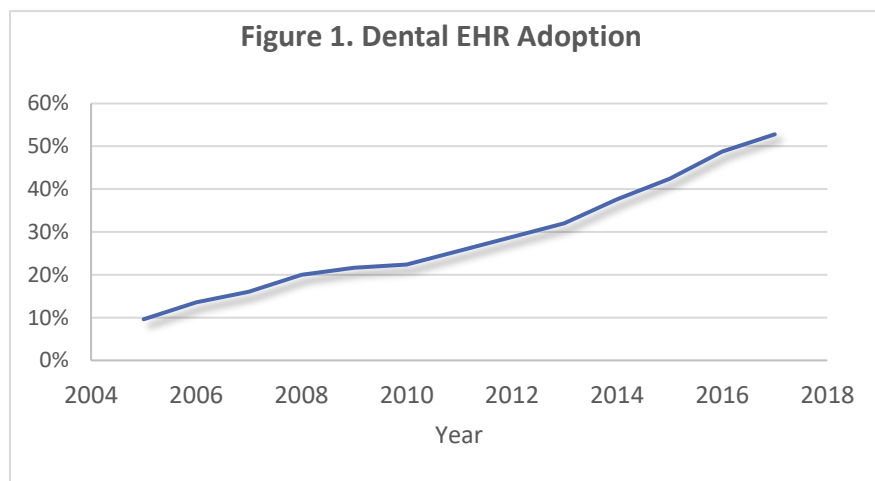
Overview

Dental EHR adoption trails medical EHR adoption by nearly 20 percent.[1] In general, dentists adopt EHRs to improve practice efficiency. EHRs provide an electronic version of a paper medical record, and include patient demographics, progress notes, problems, medications past medical history and diagnostic information. Federal EHR adoption incentives have had minimal impact on EHR adoption among dentists in Maryland. In 2016, just over a quarter (28 percent) of dentists participated in Medicaid[2] and few met the minimum 30 percent Medicaid patient volume threshold for eligibility.[3] In comparison, financial incentives spurred significant EHR growth among physicians.[4, 5] This information brief provides an overview of dental EHR adoption.

Approach and Limitations

The Maryland Health Care Commission (MHCC) collaborated with the Maryland State Dental Association and its component dental societies in October 2017 to conduct an EHR environmental scan. Approximately 141 dentists completed an online survey. While the findings provide some useful information, the results may not accurately reflect statewide adoption. Responses were not audited by MHCC for accuracy and might have been influenced by respondent interpretation of the questions. The Maryland Board of Dental Examiners licensing data was used in the analysis.

Findings

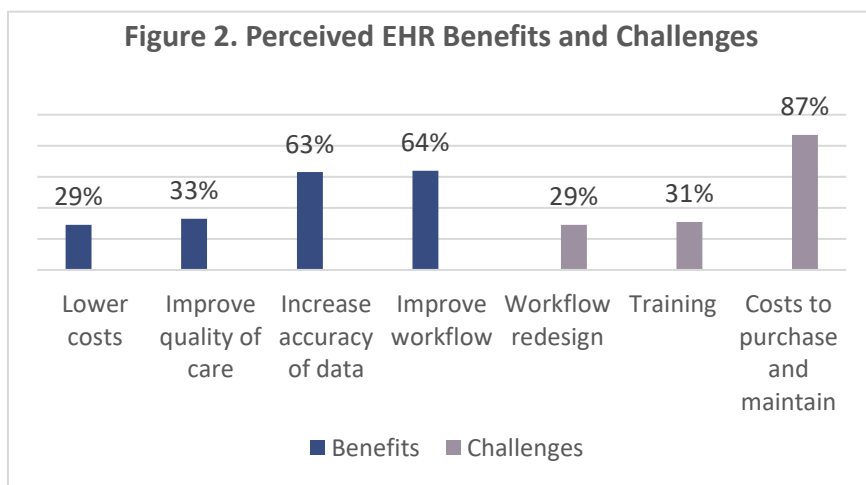### *Dental EHR adoption continues to grow.*

2005 thru 2016 adoption trend estimated based on year responders adopted an EHR

The compound annual growth rate among dentists is about 14 percent. Dental EHR adoption has increased by almost five percent annually since 2010 (Figure 1) and is on par with national estimates for dental EHR adoption (53 percent in Maryland as compared to 50-70 percent nationwide).[6, 7] EHR adoption is more prevalent among larger practices (four or more dentists) at 83 percent (n=24). Practices that have more than five dentists (n=9) all reported having an EHR. The adoption rate is also higher among younger dentists, reaching 80 percent for dentists between the age of 25 and 35.[8] The average age of adopters is about 49, while the average age of non-adopters is around 59. Specialists, accounting for 24 percent of dental practices in Maryland[9], are more likely to have adopted an EHR (Figure 2).[10] Specialty dentists, on
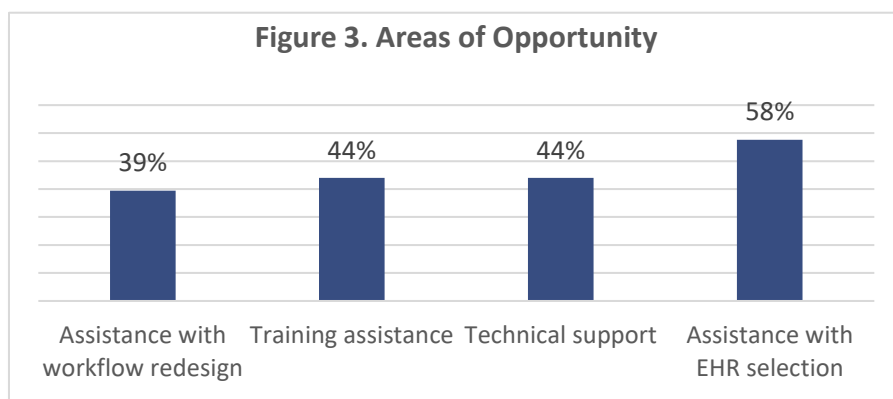
average, see about 1,000 more patients a year as compared to general dentists.[11, 12] About 80 percent of dental schools use EHRs in their curriculum.[13]

EHR adoption benefits are negatively impacted by cost.

Figure 2. Perceived EHR Benefits and Challenges

Category	Benefits	Challenges
Lower costs	29%	
Improve quality of care	33%	
Increase accuracy of data	63%	
Improve workflow	64%	
Workflow redesign		29%
Training		31%
Costs to purchase and maintain		87%

Costs associated with EHR adoption exceed the reported benefits by more than 23 percent (Figure 2). EHR costs can range from $10,000-$20,000, and if hardware is required the costs are generally at the higher end of the scale.[14] The costs to purchase certified and non-certified EHRs are comparable.[15] In general, the quality of patient information in the EHR improves when the practice participates in statewide electronic health information exchange (HIE). An HIE enables treating dentists to have more complete information available from other providers.[16] Having accurate information on hand during patient visits contributes to the overall benefit of an EHR.[17]
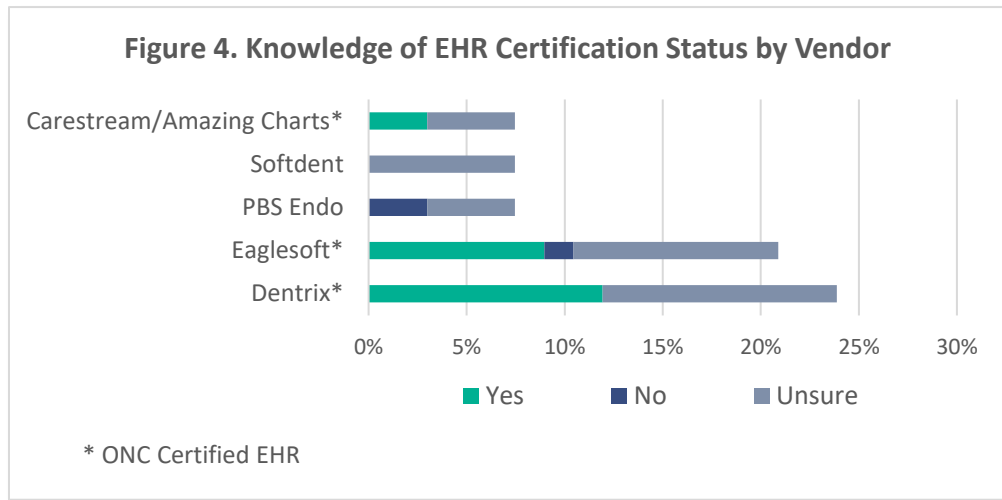
Most dentists seek support with EHR adoption.

Figure 3. Areas of Opportunity

Category	Percent
Assistance with workflow redesign	39%
Training assistance	44%
Technical support	44%
Assistance with EHR selection	58%

Non-adopters – n=66

About 14 percent of dentists view assistance with EHR selection as more important than technical support and training assistance (Figure 3). Practice support needs vary among practices and assessments take into account technology functions that are likely to have the greatest impact on the practice and its patients.[18] Training and technical support are viewed similarly among dentists. On the other hand, about 60 percent of dentists do not view assistance with workflow redesign as a necessary support function. Among the non-adopters, most (58 percent) are not planning to adopt an EHR in the next 18 months.

Most dental EHRs are ONC certified.

Figure 4. Knowledge of EHR Certification Status by Vendor

Responder to the question – n=67

Two EHR vendors have the majority of market share in Maryland. More than half of the leading EHRs have met the technological capability, functionality, and security requirements established by the Office of the National Coordinator for Health Information Technology (ONC) (Figure 4).[19, 20] Use of a certified EHR is a requirement to participate in the federal EHR adoption incentive program. More than half of dentists (58 percent) that have implemented an EHR indicated they are not aware of their EHRs ONC certification status.

Conclusion

Dentists have made notable progress in adopting EHRs absent similar regulatory incentives as physicians. Large dental practices view EHRs as essential to generating efficiencies as compared to small practices that view EHRs as disruptive. Smaller practices usually lack the capacity to reengineer workflows, which requires a considerable amount of staff resources, and technical expertise. Dentistry is increasingly being viewed as a critical component of health care delivery. EHR adoption is an essential underpinning for dentists that seek to align oral health with medical health.

References

[1] EHR adoption among dentists is about 53 percent (2017), compared to 71 percent among physicians (2016). Maryland achieved universal adoption of EHRs among hospitals in 2015.

[2] American Dental Association, Health Policy Institute, *Dentist Profile Snapshot by State: 2016*. Available at: https://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/Files/HPIData_Profile_2016.xlsx?la=en

[3] According to Maryland Medicaid data, in 2017, 212 dentists were paid a Medicaid incentive for the adoption of an EHR, only 17 were paid an incentive for achieving meaningful use of their EHR.

[4] Between 2011 and 2015, after implementation of the Medicare and Medicaid EHR Incentive Programs, the national rate of EHR adoption among office-based physicians grew nearly 30 percent. More information on adoption rates nationally is available at: https://dashboard.healthit.gov/quickstats/quickstats.php.

[5] The State-Regulated Payor EHR Adoption Incentive Program paid nearly $7.5 million in incentive payments between 2011 and 2014. During that time, the EHR adoption rate among physicians increased by 32 percent. More information on the State-Regulated Payor EHR Adoption Incentive Program is available at: http://mhcc.maryland.gov/mhcc/pages/hit/hit/documents/HIT_EHR_Adoption_Incentives_StateRegPayors_Brf_022218.pdf.

[6] Acharya, A., Schroeder, D., Schwei, K., Chyou, P., (2015). Update on Electronic Dental Record and Clinical Computing Adoption Among Dental Practices in the United States, *Clinical Medicine & Research*. Available at: https://www.ncbi.nlm.nih.gov/pubmed/29229631.

[7] HIMSS, *Dental Informatics Insights*, 2015. Retrieved from: www.himss.org/news/dental-informatics-insights.

[8] Among surveyed practices with more than one provider, the provider with the first original licensing date was used. Ages were calculated using original date of licensure as available in the Maryland State Board of Dental Examiners licensing data.

[9] Kaiser Family Foundation, *Professionally Active Dentists by Specialty Field, 2017*. Available at: https://www.kff.org/other/state-indicator/dentists-by-specialty-field/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D.

[10] 61 percent of specialists reported having adopted an EHR compared to 51 percent of dentists in general and cosmetic concentrations.

[11] American Dental Association (ADA), *Characteristics of Private Dental Practices*. Available at: http://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/Files/HPIData_SDPC_2015.xlsx?la=en.

[12] American Dental Association (ADA), *Dental Statistics*. Available at: https://www.ada.org/en/science-research/health-policy-institute/dental-statistics/income-billing-and-other-dentistry-statistics.

[13] HIMSS, *Dental Informatics Insights*, 2015. Available at: http://www.himss.org/news/dental-informatics-insights.

[14] Amazing Charts summary available at: http://amazingcharts.com/company/press-room/2003-2008/amazing-charts-breaks-down-price-barrier-for-electronic-medical-record-systems/.

[15] More information on cost comparisons available at: https://www.softwareadvice.com/dental/#buyers-guide.

[16] Dental Economics, *Computerized Charting and the Electronic Health Record in Dentistry*, 2002. Available at: http://www.dentaleconomics.com/articles/print/volume-92/issue-4/features/computerized-charting-and-the-electronic-health-record-in-dentistry.html.

[17] *Ibid*.

[18] *Ibid.*

[19] More information about ONC Certification is available at: https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Certification.html.

[20] *Ibid.*