2018 CAQH INDEX®

A Report of Healthcare Industry Adoption of Electronic Business Transactions and Cost Savings

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2018 CAQH Index

A Report of Healthcare Industry Adoption of Electronic Business Transactions and Cost Savings

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CAQH, a non-profit alliance, is the leader in creating shared initiatives to streamline the business of healthcare. Through collaboration and innovation, CAQH accelerates the transformation of business processes, delivering value to providers, patients and health plans.

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Executive Summary

Administrative functions are a necessary component of the business of healthcare to ensure that consumers can access quality care and that providers are compensated for delivering that care. However, when the time and money spent on administrative functions is excessive, fewer resources are available for patient care.

In the United States, the healthcare industry has been working collaboratively for more than two decades to reduce the resources spent on administrative functions. Still, recent research estimates that administrative costs in the United States are more than twice that of other developed countries.[1] Other studies estimate that 10 percent of national health expenditures are due to administrative complexity that could be eliminated without harming consumers or care quality.[2]

This report, the sixth produced annually by CAQH, is the industry resource for benchmarking progress to reduce a portion of this administrative complexity. The CAQH Index® tracks adoption of HIPAA-mandated and other electronic administrative transactions for conducting routine business between healthcare providers and health plans in the medical and dental industries. These transactions include verifying a patient's insurance coverage, obtaining authorization for care, submitting a claim and supplemental medical information and sending and receiving payments. The CAQH Index also estimates the annual volume of these transactions, their cost and the time needed to complete them.[3]

By benchmarking progress, industry and government can more easily identify barriers that may be preventing stakeholders from realizing the full benefit of electronic administrative transactions. These insights can prompt new initiatives to address and reduce barriers.

After reporting modest progress over the past few years, the 2018 CAQH Index findings suggest more positive change is occurring in the industry overall. Healthcare industry stakeholders made progress on many fronts this year—in adoption of electronic transactions, reductions in the volume of manual transactions and reductions in the remaining savings opportunity. However, continued efforts are needed to significantly reduce the volume of expensive, time-consuming manual transactions and adapt to the changing administrative needs of the healthcare system.

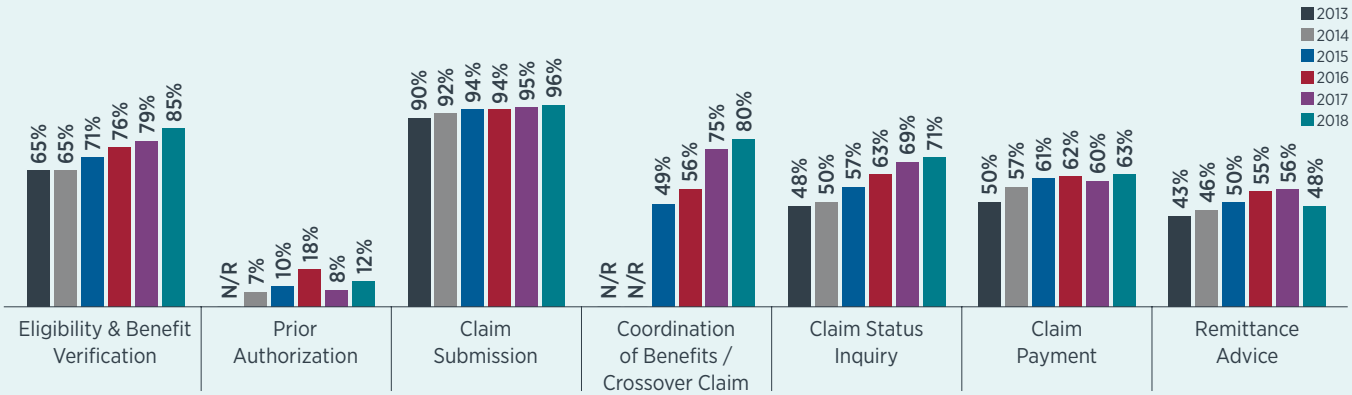
Adoption of Electronic Transactions Continued to Improve for Most Transactions: Substantial increases in adoption of several electronic transactions, as high as six percentage points by the medical industry and four percentage points by the dental industry, were observed this year. Medical industry adoption of electronic

1 Irene Papanicolas, PhD, Liana R. Woskie, MSc, and Ashish K. Jha, MD, MPH, "Health Care Spending in the United States and Other High-Income Countries," *JAMA*. 2018;319(10): 1024-1039. doi:10.1001/jama.2018.1150

2 Daniel P. O'Neill and David Scheinker, "Wasted Health Spending: Who's Picking Up The Tab?", *Health Affairs Blog*. (May 31, 2018) doi:10.1377/hblog20180530.245587

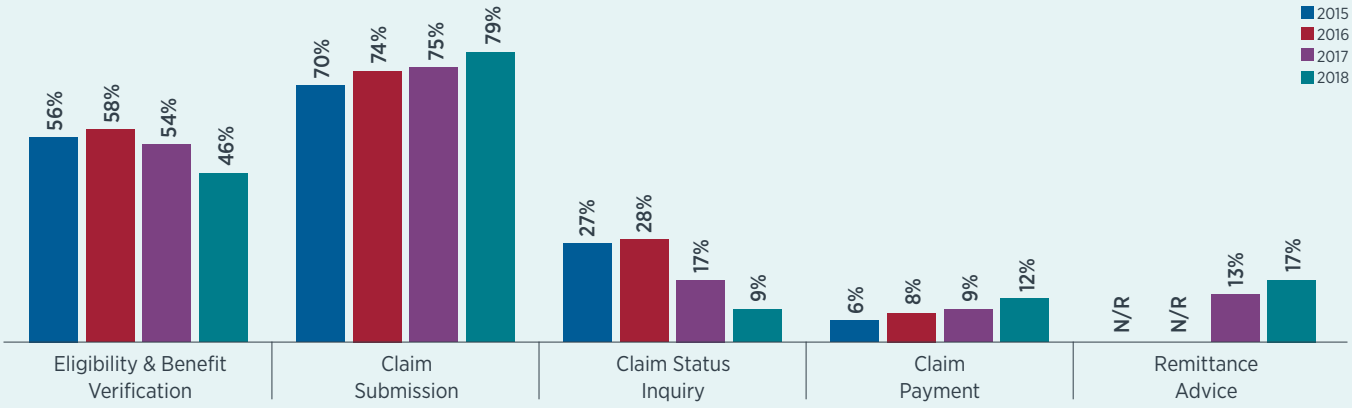
3 The CAQH Index cost and saving estimates only account for the labor time required to conduct the transactions. They do not reflect the time and cost associated with gathering information for the transactions. Systems costs are also excluded from the cost and savings estimates.

Figure 1: Adoption of Electronic Administrative Transactions, Medical, 2013 – 2018 CAQH Index



N/R = Not Reported

Figure 2: Adoption of Electronic Administrative Transactions, Dental, 2015 – 2018 CAQH Index



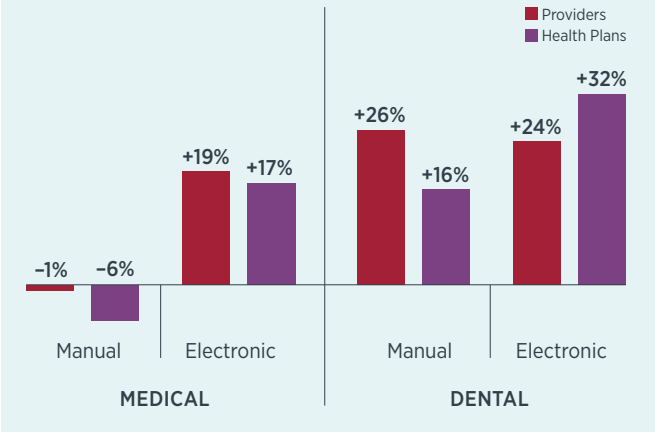
N/R = Not Reported

eligibility and benefit verification increased by six points and electronic coordination of benefits rose by five points (Figure 1). Dental industry adoption increased by four points for both electronic claim submission and electronic claim remittance advice (Figure 2). However, both industries also lost ground on some transactions, with eight percentage-point declines in adoption of electronic claim remittance advice by the medical industry and in adoption of electronic eligibility and benefit verification and claim status inquiry in the dental industry.

Dental Industry Sees Progress But Continues to Trail the Medical Industry: The dental industry made progress in adoption of electronic transactions, but continues to trail the medical industry significantly. Medical industry adoption of three electronic transactions is at or above 80 percent in this report (Figure 1). By comparison, the dental industry has only one transaction, claim submission, approaching the 80 percent adoption level for the electronic transaction (Figure 2). The dental industry has also experienced some progress towards adoption of electronic claim payment and electronic claim remittance advice. However, for eligibility and benefit verification and claim status inquiry, manual processing increased.

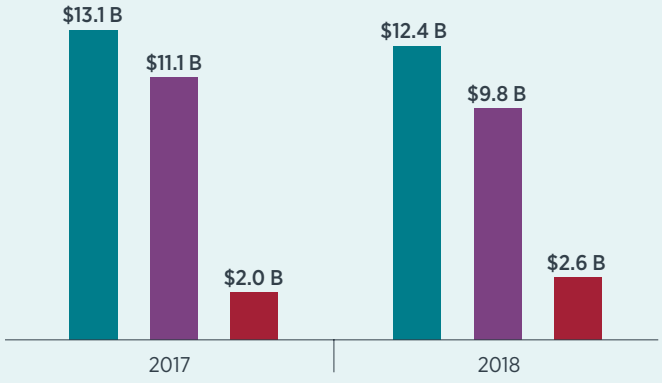
Volume of Transactions Increased Overall, While Manual Transactions Declined in the Medical Industry: While the overall volume of transactions in the medical industry increased by 18 percent in the past year, the volume of manual transactions declined, falling 6 percent for health plans and 1 percent for providers (Figure 3). Transaction volume also increased in the dental industry; however, these increases occurred for both electronic and manual transactions.

Figure 3: Year-over-Year Percent Change, Estimated National Volume of Manual and Electronic Transactions, 2017 – 2018 CAQH Index

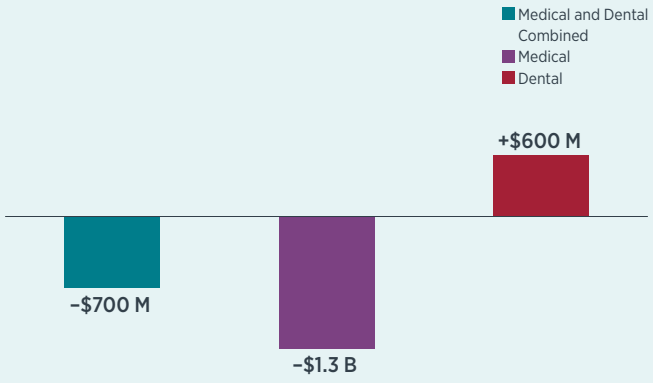


Savings Opportunity Declined For the First Time Since CAQH Index Tracking Began: The combined medical and dental industry savings opportunity declined by $700 million to $12.4 billion (Figure 4). However, this improvement was not shared by both industries. The savings opportunity increased by $600 million for the dental industry, to $2.6 billion (Figure 4). During a period of rising transaction volume (Figure 5), the medical industry shaved $1.3 billion from its savings opportunity, bringing it to $9.8 billion.

Figure 4: Industry Savings Opportunity and Year-Over-Year Change, 2017 – 2018 CAQH Index



INDUSTRY SAVINGS OPPORTUNITY



CHANGE IN INDUSTRY SAVINGS OPPORTUNITY

Overall, these findings are a positive sign that the healthcare industry is continuing to make progress in its transition from manual to electronic transactions. However, the 2018 CAQH Index estimates that the combined medical and dental industries could save an additional $12.4 billion annually with full adoption of electronic administrative transactions (Figure 4). For both industries, the greatest portion of the savings opportunity lies with providers—$8.5 billion for medical and $2.1 billion for dental providers.

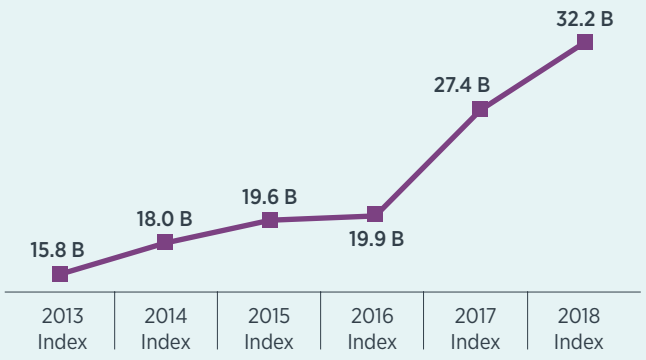
As transaction volume continues to rise in an increasingly complex healthcare environment, so does the need for collaboration by all industry stakeholders. Visionary leadership and increased collaboration are needed to ensure that processes and technology evolve in a timely, cost-effective manner to support and promote the use of electronic transactions. For example, as value-based payment models mature, it will be critical for administrative systems to advance to combine and transact administrative and clinical data elements.

Additionally, there is a need for more timely adoption of standards and operating rules by government, health plans and providers to keep pace with the evolving industry and for vendors to support the adoption of electronic transactions.

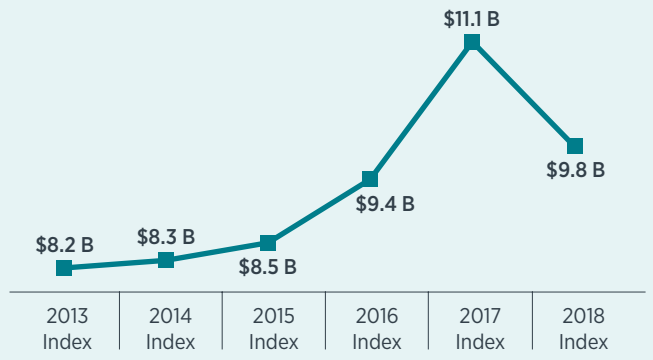
To maintain and improve upon the industry progress measured by the CAQH Index to date, commitment is needed by all stakeholders to not only adopt but also adapt electronic transactions to minimize the need for expensive, manual processes.

Figure 5: Estimated National Volume and Potential Savings Opportunity, Medical, 2013 – 2018 CAQH Index

ESTIMATED NATIONAL VOLUME



POTENTIAL SAVINGS OPPORTUNITY



The Administrative Workflow

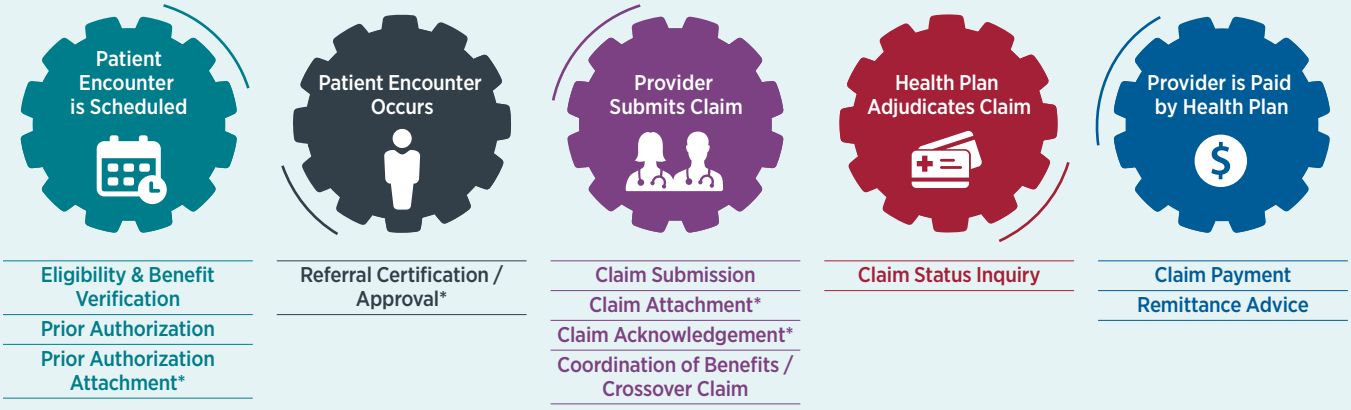
The CAQH Index provides detailed information about specific administrative transactions, including mode of transmission (fully electronic, partially electronic and manual), volume and the estimated cost and time to process each transaction for providers and health plans. Many providers and health plans rely on vendor systems and services, such as practice management systems and clearinghouse services, to process administrative transactions. As payment models continue to evolve, it is important to understand and monitor the complete workflow associated with administrative transactions and the cost and saving opportunities that exist throughout the process (Figure 6). By identifying pain points in the process, industry stakeholders can better target areas for improvement with concerted efforts to reduce the cost and time associated with specific tasks.

Knowing the full cost associated with the administrative workflow helps organizations measure efficiency and productivity. Table 1 provides the average cost per transaction and the associated cost savings opportunity for health plans, providers and the medical industry overall to move from manual to electronic transactions. The medical industry could save as much as $27.31 (including $14.64 for providers and $12.67 for plans) for a single patient encounter requiring all six of the transactions tracked by using a fully electronic workflow. The greatest per-transaction savings opportunities for both providers and health plans include claim status inquiry ($9.22 per transaction), prior authorization ($7.28 per transaction) and eligibility and benefit verification ($6.52 per transaction).

The volume of transactions is also important in identifying workflow pain points. As shown in Table 2, the highest-volume transaction is eligibility and benefit verification. In combination with the per-transaction cost savings opportunity, eligibility and benefit verification represents over 40 percent of the total savings potential for the medical industry and offers the highest savings opportunities for both plans and providers.

Industry stakeholders can use the CAQH Index to identify and prioritize opportunities in their administrative workflow for improvement by considering both the cost of a transaction and the number of those transactions conducted annually. This report includes detailed information on the trends in adoption, volume, cost and time for each transaction along the administrative workflow.

Figure 6: The Administrative Workflow



Note: This diagram illustrates the administrative workflow in its simplest form. In practice, some transactions may occur multiple times or in multiple steps and be triggered by other events.

*Due to a low volume of data collected, the 2018 CAQH Index was unable to calculate benchmarks.

Table 1: Average Cost per Transaction for Manual and Electronic Transactions and Savings Opportunity, Medical, 2018 Index[4]

Transaction	Method	Health Plan Cost	Provider Cost	Industry Cost	Health Plan Savings Opportunity	Provider Savings Opportunity	Industry Savings Opportunity
Eligibility & Benefit Verification	Manual	$4.00	$3.61	$7.61	$3.92	$2.60	**$6.52**
	Electronic	$0.08	$1.01	$1.09			
Prior Authorization	Manual	$3.50	$6.61	$10.11	$3.47	$3.81	**$7.28**
	Electronic	$0.03	$2.80	$2.83			
Claim Submission	Manual	$0.49	$2.37	$2.86	$0.40	$0.92	**$1.32**
	Electronic	$0.09	$1.45	$1.54			
Claim Status Inquiry	Manual	$4.03	$7.12	$11.15	$3.99	$5.23	**$9.22**
	Electronic	$0.04	$1.89	$1.93			
Claim Payment	Manual	$0.50	$2.11	$2.61	$0.41	$0.24	**$0.65**
	Electronic	$0.09	$1.87	$1.96			
Remittance Advice	Manual	$0.54	$2.99	$3.53	$0.48	$1.84	**$2.32**
	Electronic	$0.06	$1.15	$1.21			

4 The CAQH Index cost and saving estimates only account for the labor time required to conduct the transactions. They do not reflect the time and cost associated with gathering information for the transactions. Systems costs are also excluded from the cost and savings estimates.

Table 2: Estimated National Volume per Transaction and Savings Opportunity, Medical, 2018 Index[5]

Transaction	Method	Health Plan National Volume	Provider National Volume	Health Plan National Savings Opportunity	Provider National Savings Opportunity	Industry National Savings Opportunity
		(in millions)		(in millions $)		
Eligibility & Benefit Verification	Manual	163	1,299	$638	$3,379	$4,017
	Electronic	8,295	7,158			
Prior Authorization	Manual	40	73	$139	$278	$417
	Electronic	51	18			
Claim Submission	Manual	135	135	$53	$124	$177
	Electronic	3,062	3,062			
Claim Status Inquiry	Manual	82	442	$328	$2,312	$2,640
	Electronic	1,207	847			
Claim Payment	Manual	149	149	$61	$36	$97
	Electronic	257	257			
Remittance Advice	Manual	217	1,267	$103	$2,331	$2,434
	Electronic	2,307	1,257			
Six-Transaction Total	**Manual**	**785**	**3,365**	**$1,322**	**$8,459**	**$9,782**
	Electronic	**15,179**	**12,599**			

5 The CAQH Index cost and saving estimates only account for the labor time required to conduct the transactions. They do not reflect the time and cost associated with gathering information for the transactions. Systems costs are also excluded from the cost and savings estimates.

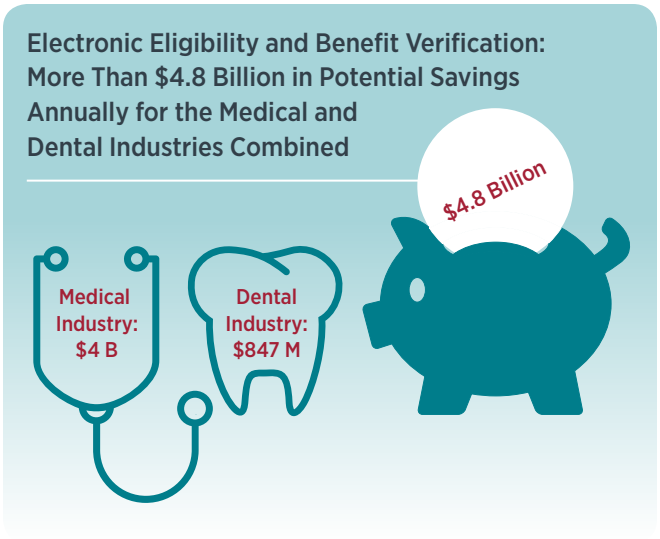
Findings

Eligibility and Benefit Verification

Eligibility and benefit verification represents the starting point in the administrative workflow, as it is most often the first administrative transaction associated with a patient encounter. This transaction confirms a patient's coverage status and provides patient-specific information about copayments, deductibles and coinsurance. The American Medical Association (AMA) encourages providers to verify patient eligibility one to two weeks prior to an appointment or at the time of scheduling.[6] The eligibility and benefit verification transaction establishes a common understanding between the health plan, provider and patient about benefit status and financial roles and obligations at a specific point in time.

Medical industry adoption of the electronic eligibility and benefit verification transaction has risen by 9 percentage points in three years. However, health plans contributing data to this report indicated that this increase in adoption of the electronic transaction has not corresponded to an equal reduction in the number of calls fielded by call centers. In the same period, the volume of this transaction has nearly doubled in the medical industry, with the number of manual transactions remaining relatively stable. Health plans and providers alike report that the increase in transaction volume is related to the increasing number, variation and complexity of health insurance benefit plans.

The dental industry has, by comparison, used this transaction with less frequency in the past. However,



this report indicates an uptick in the use of eligibility and benefit verifications by the dental industry.

As discussed later in this report, the dental industry also increased its use of claim status transactions. Increases in these two transactions may signal that the dental industry has intensified its focus on the revenue cycle.

ADOPTION

Medical industry adoption of electronic eligibility and benefit verification transactions increased by six percentage points to 85 percent. Use of partially electronic transactions declined by a nearly equal margin (five percentage points) to 13 percent. Use of manual processes declined slightly to represent only two percent of eligibility and benefit verifications.

6 "Revenue Cycle Management in Medical Practice," American Medical Association STEPS Forward, accessed December 27, 2018, https://www.stepsforward.org/Static/images/modules/20/downloadable/Revenue_cycle.pdf.

Figure 7: Adoption of Electronic Eligibility and Benefit Verification, 2016 – 2018 CAQH Index

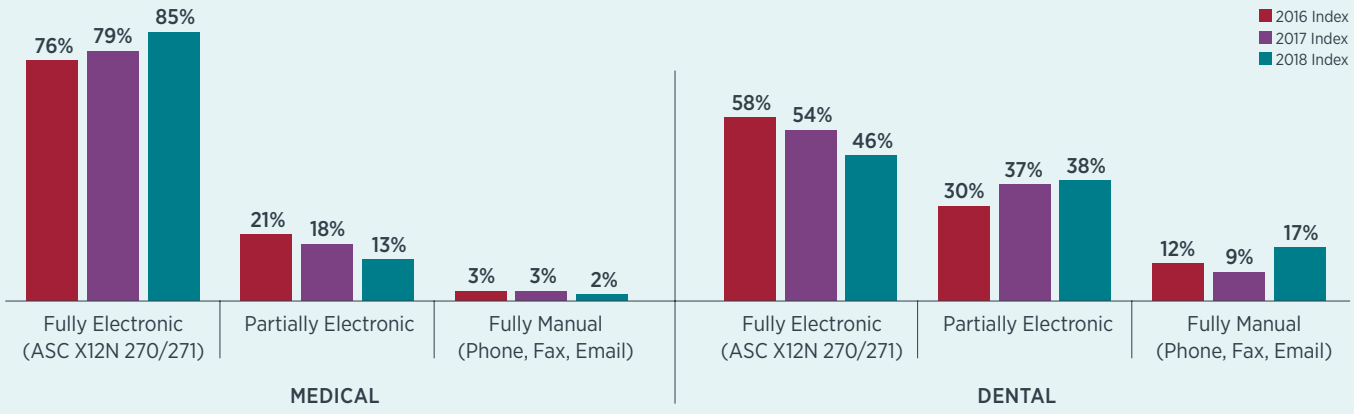
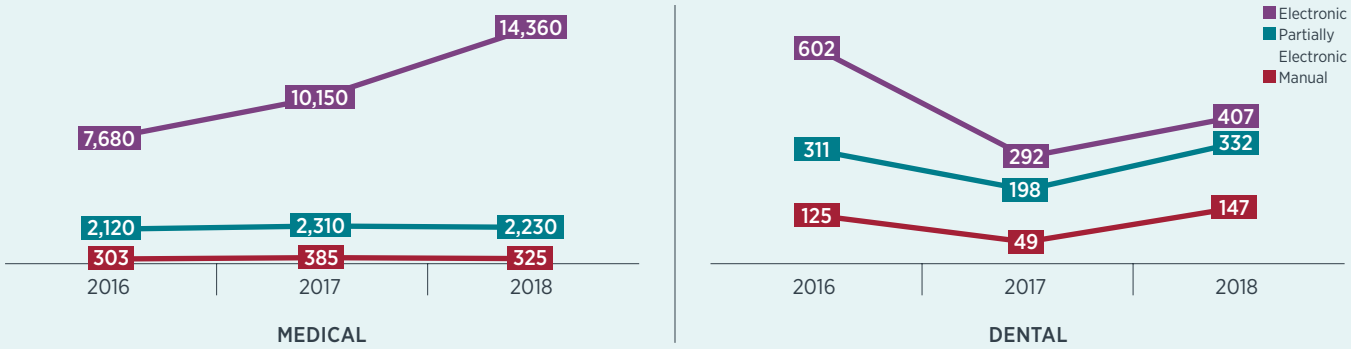


Figure 8: Estimated National Volume of Eligibility and Benefit Verifications, by Mode, 2016 – 2018 CAQH Index (in millions)



In the dental industry, however, adoption of electronic eligibility and benefit verification transactions declined by eight percentage points to 46 percent. Use of partially electronic transactions increased slightly and use of manual processes increased eight percentage points to 17 percent.

VOLUME

The medical industry continued to show significant increases in use of eligibility and benefit verifications. Volume rose by 32 percent as compared to the prior report and now exceeds that of all other transactions tracked for the medical industry combined—by roughly twofold. Meanwhile, the volume of dental industry eligibility and benefit verifications rose after a decline in the prior report.

Medical and dental health plan data contributed for this report showed that both industries conducted a higher number of these transactions per member. Medical industry volume rose from 18 per member annually to more than 25 per member annually. Dental industry volume increased from one per year to nearly two per member per year.

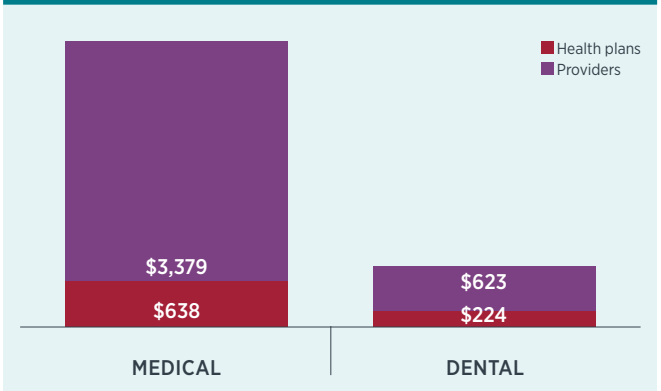
POTENTIAL SAVINGS

Cost

Even though adoption of the electronic eligibility and benefit verification transaction is relatively strong for the medical industry, the high volume of this transaction magnified the impact of the small proportion of manual transactions. These manual transactions equated to 1.46 billion phone calls between health plans and providers and an annual medical industry savings opportunity in excess of $4 billion. For health plans and providers in the medical industry, this transaction offers the greatest opportunity for savings. The potential savings opportunity for medical providers is $3.4 billion annually and $638 million annually for health plans.

Eligibility and benefit verification also represents the single-greatest annual savings opportunity for the dental industry ($847 million) and for dental health plans ($224 million). It is the second-greatest annual savings opportunity for dental providers ($623 million), a close second to claim status inquiry.

Figure 9: Electronic Eligibility and Benefit Verification: How Much More Can Be Saved With Full Adoption? (in millions)



Time

Eligibility and benefit verification transactions require the least amount of time among all the transactions tracked when conducted electronically (three minutes on average) and are among the most time-consuming transactions when conducted manually (10 minutes on average). Providers reported spending up to 23 minutes to conduct a manual transaction.

Electronic Eligibility and Benefit Verification Potential Average Time Savings (per transaction): 7 minutes

One small specialty practice reported that, in addition to extended hold times when call centers are busy, lengthy health plan call center welcome messages and difficulty communicating with call center representatives contribute significantly to the time to conduct manual eligibility and benefit verifications: "We are now in-network with some insurance companies that we were not before, and they are taking longer to answer phones and to also get us the information. Some of these companies have a very long message they have to tell us, and some of the employees are hard to understand, so we have to re-ask them what they said."

More Than a Decade of Electronic Eligibility and Benefit Status Operating Rules

More than a decade ago, CAQH CORE® Phase I and II Operating Rules specified the data content and response time requirements for eligibility and benefit verification transactions. These rules, for the first time, gave providers and health plans a uniform way to communicate about individual patient eligibility and the status of insurance benefits. Prior to these rules, stakeholders were limited to only yes/no interactions related to health plan eligibility when communicating electronically.

Over time, the rules have become embedded in physician workflows, and an array of specialists use the rules to get specific information pertaining to their specialty with 48 service-type codes (STCs).

Operating rules support standards, and in the case of CAQH CORE Phase I and II Operating Rules, the rules supported the development of the next version of the standard. During the development of the v5010 standards, specific requirements in the CORE Operating Rules were adopted by X12 into the v5010 standard. Once requirements are adopted in the standard, they are removed from the operating rules and, in an iterative process, the industry considers the next level of data content for operating rules.

For more information, visit www.caqhcore.org.

Prior Authorization

Prior authorization transactions involve engagement between a provider and a health plan to clarify, request and obtain approval for coverage of specific healthcare services for individual patients under particular circumstances. In many health plans, prior authorization is the pathway for accessing certain benefits, such as for hospital admissions, diagnostic tests, treatments and procedures.

Prior authorization has been the subject of intense debate and industry attention over the years, with stakeholders across the industry calling for action to simplify the process [7,8,9,10,11,12,13]. Although a national standard exists for prior authorization, adoption of this standard has trailed that of other transactions for which a standard is in place. There are various reasons for the lack of adoption of the electronic transaction for prior authorization.

The 2017 CAQH Index explored the role of vendor support for processing transactions electronically, finding that among the seven transactions benchmarked in that report, prior authorization was the least likely to be supported by practice management systems and clearinghouse services. Only 12 percent of the systems and services examined allowed providers to process prior authorization transactions electronically. Vendors report that they are developing systems to support electronic prior authorization transactions, but this is expected to be a protracted process given the lack of a federal attachment standard (see Related Transactions: Referral Certification and Prior Authorization / Pre-Certification Attachments on page 12) to support documentation of clinical information to support a prior authorization request.

Electronic Prior Authorization: $417 Million in Potential Annual Savings for the Medical Industry

Given the limited availability of vendor support systems, the lack of an attachment standard and varying health plan prior authorization requirements, many health plans use web portals to process prior authorizations. Although online portals offer health plans and providers a more automated solution, they require providers to navigate a different online system for each health plan with which the provider is contracted.

7 "Consensus Statement on Improving the Prior Authorization Process," American Medical Association website, accessed December 27, 2018, https://www.ama-assn.org/sites/default/files/media-browser/public/arc-public/prior-authorization-consensus-statement.pdf.

8 Susannah Luthi, "Senate panel eyes regulating insurance prior authorizations," Modern Healthcare, July 31, 2018, http://www.modernhealthcare.com/article/20180731/NEWS/180739979.

9 Joyce Frieden, "Healthcare Admin Costs Can Be Tamed, Senators Told," MedPage Today, July 31, 2018, https://www.medpagetoday.com/publichealthpolicy/healthpolicy/74340.

10 Rich Daly, "Members of Congress Identify Ways to Cut Administrative Costs," HFMA Compass E-Newsletter, July 31, 2018, https://www.hfma.org/Content.aspx?id=61486.

11 Greg Slobodkin, EHRs seen as challenge in reducing healthcare administrative costs," Health Data Management, August 1, 2018, https://www.healthdatamanagement.com/news/ehrs-seen-as-challenge-in-reducing-healthcare-administrative-costs.

12 "Reducing Health Care Costs: Decreasing Administrative Spending," U.S. Senate Committee on Health, Education Labor & Pensions website, accessed December 27, 2018, https://www.help.senate.gov/hearings/reducing-health-care-costs-decreasing-administrative-spending.

13 "Open Letter to Authors of the Consensus Statement on Improving the Prior Authorization Process," CAQH website, accessed December 27, 2018, https://www.caqh.org/sites/default/files/core/caqh-core-board-prior-auth-response.pdf.

Figure 10: Adoption of Electronic Prior Authorization, Medical, 2016 – 2018 CAQH Index

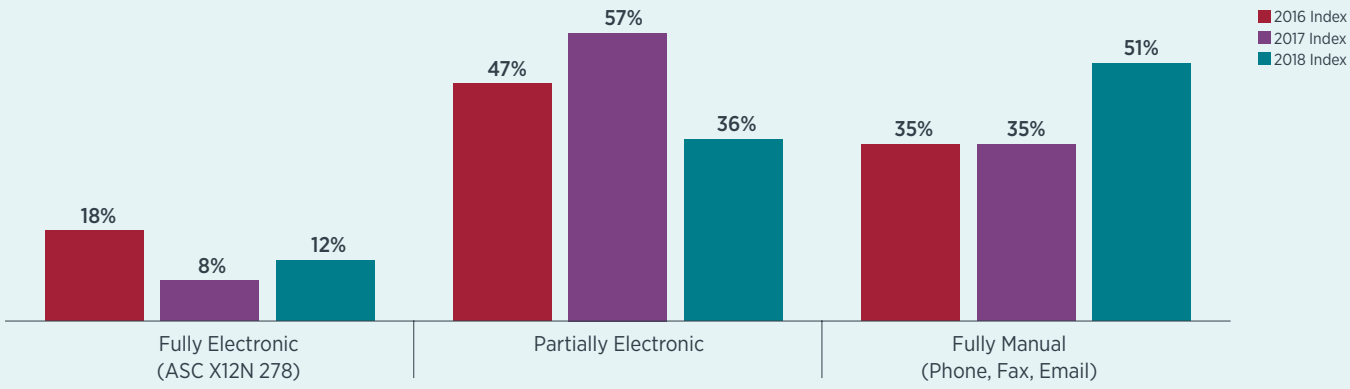


Figure 11: Estimated National Volume of Prior Authorizations, Medical, by Mode, 2016 – 2018 CAQH Index (in millions)

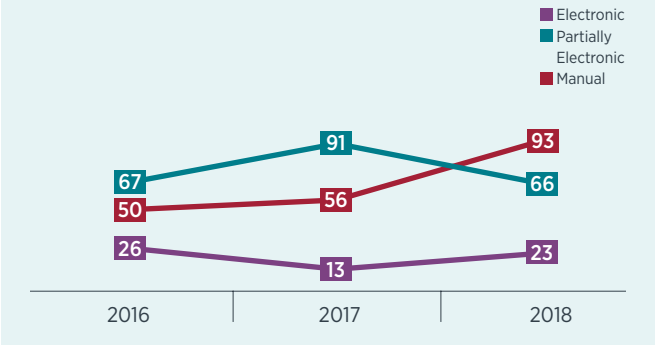
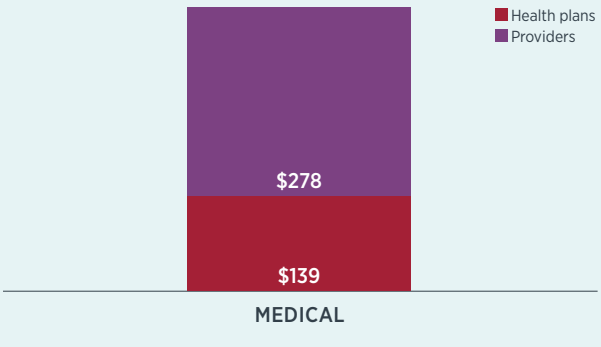


Figure 12: Electronic Prior Authorization: How Much More Can Be Saved With Full Adoption? (in millions)



State mandates requiring manual processes (e.g. phone, fax, email, etc.) can also have an impact on full end-to-end automation of the prior authorization process. For example, in Minnesota, when health plans do not certify a prior authorization request, they are required to notify providers by phone, fax, or secure email.[14] In both Colorado and Rhode Island, health plans are required to give providers an opportunity to speak directly by phone or in-person with a qualified medical professional before issuing an adverse determination.[15, 16]

ADOPTION

Adoption of electronic prior authorization transactions continues to significantly lag other transactions in the administrative workflow. In fact, the proportion of prior authorizations conducted manually increased to 51 percent in this report. Use of partially electronic transactions declined 21 percentage points to account for 36 percent of medical industry prior authorizations.

VOLUME

The CAQH Index estimates a 14 percent increase in the national volume of prior authorization transactions as compared to the 2017 report and a 27 percent increase as compared to the 2016 report. Although there has been consistent growth in the use of prior authorization, this transaction continues to have the lowest volume of all the transactions tracked. Health plans contributing data to this report conducted less than one (0.27) prior authorization per member per year.

POTENTIAL SAVINGS

Cost

The medical industry could save $417 million annually by transitioning to electronic prior authorization transactions. This savings amount includes $278 million in annual savings for providers and $139 million for health plans.

Prior authorization is a costly transaction by any method for healthcare providers. It is the second-most costly transaction when conducted manually at $6.61 each. Even when providers use the electronic transaction, prior authorization is the highest-cost transaction at $2.80 each. For health plans, the transition from manual to electronic reduces the cost of prior authorization from $3.50 to just three cents.

Time

On average, manual prior authorization transactions require 16 minutes of provider staff time, while electronic prior authorization transactions take 9 minutes to complete. However, providers report that their staff spends as much as 30 minutes to complete a manual prior authorization transaction and that an electronic transaction can require up to 25 minutes.

Electronic Prior Authorization Potential Average Time Savings (per transaction): 7 minutes

14 Minnesota Statutes, section 62M.05(c).
15 Colorado Revised Statutes, CRS 10-16-113.
16 Rhode Island General Laws, section 23-17.12.

RELATED TRANSACTIONS

Referral Certification and Prior Authorization / Pre-Certification Attachments

Referral certification transactions and attachments to prior authorization / pre-certification transactions make important contributions to patient care and are essential steps in the administrative workflow. Similar to prior authorization, referral certification confirms coverage for services to be delivered by a referred provider, such as a specialist. The referral certification process gives health plan reviewers an opportunity to ensure that specialist referrals align with standards of care. Referral certification is frequently a feature of health maintenance organizations and point of service plans.

Prior authorization and pre-certification attachments communicate clinical information about the patient to support the requested treatment. This supporting documentation connects administrative transactions to clinical decision-making and substantiates the need for a specific course of treatment or for the need to engage a specialist as part of the patient's care team. There is currently no federally adopted standard for prior authorization attachments.

Due to a low volume of contributed data, the 2018 CAQH Index does not report benchmarks for these transactions.

CAQH CORE Rule-Writing Process to Streamline Prior Authorization

CAQH CORE is currently developing operating rules to further improve the prior authorization process. Draft Phase V CAQH CORE Operating Rules for Prior Authorization expand on existing CAQH CORE Phase IV Operating Rules, which impact prior authorization through technical connectivity and system availability requirements, as well as response time requirements.

The draft Phase V rules focus on standardizing key components of the prior authorization process and on closing gaps in electronic data exchange. Specifically, the draft rules strengthen data supplied by providers and clarify the communication of next steps by the health plan. They also call for consistent use of codes to indicate errors or additional information needed and propose application of standard data field labels to webforms as a means of reducing variation and to ease provider submission burden.

CAQH CORE will continue to consider additional rules in 2019 to address prior authorization. Examples of topics under consideration include timeframe requirements for final determination and support for providers to determine whether a prior authorization is needed from a health plan.

For more information, visit www.caqhcore.org.

Claim Submission

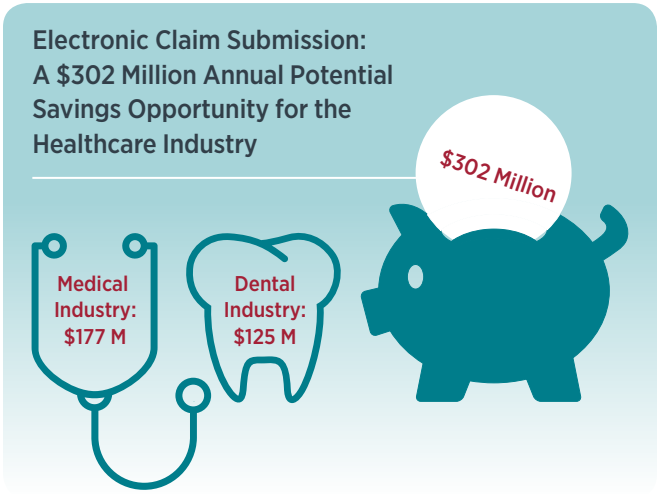
After a patient encounter occurs, the provider submits a claim to the health plan, typically through a clearinghouse. Claim submission continued to be the most widely adopted electronic transaction studied by the CAQH Index. While this is true for both the medical and dental industries, a persistent and sizable gap remains in the industries' electronic adoption levels.

The dental industry made substantial progress in its adoption of electronic claim submission, yet one in five dental claims was processed manually. In contrast, medical industry adoption of electronic claim submission inched up, reaching 96 percent. Given that 100 percent adoption is not thought to be feasible, this achievement suggests that the medical industry may be approaching a threshold that effectively represents full adoption of electronic claim submission.

Claims data has long been essential to health system and population health initiatives. It has been mined for insights on the prevalence of common diseases and to estimate the number of individuals who remain undiagnosed.[17] Data from claims is also essential to risk adjustment, performance measurement and value-based payment.[18]

17 Timothy M. Dall, Yiduo Zhang, Yaozhu J. Chen, William W. Quick, Wenya G. Yang and Jeanene Fogli, "The Economic Burden Of Diabetes," *Health Affairs*, 2010 29:2, 297-303, https://doi.org/10.1377/hlthaff.2009.0155.

18 "All Together Now: Applying the Lessons of Fee-for-Service to Streamline Adoption of Value-Based Payments," CAQH website, accessed December 27, 2018, https://www.caqh.org/sites/default/files/core/value-based%20payments/core-value-based-payments-report.pdf.



ADOPTION

Both the medical and dental industries increased their adoption of electronic claim submission. For both industries, claim submission is the transaction with the highest level of electronic adoption among all the transactions studied. Medical industry adoption of electronic claim submissions rose to 96 percent from 95 percent. Adoption of the electronic transaction increased by four percentage points for the dental industry, to 79 percent.

VOLUME

The volume of medical industry claim submissions increased by 4 percent, while dental industry claim submission volume rose by 13 percent. For the medical

Figure 13: Adoption of Electronic Claim Submission, 2016 – 2018 CAQH Index

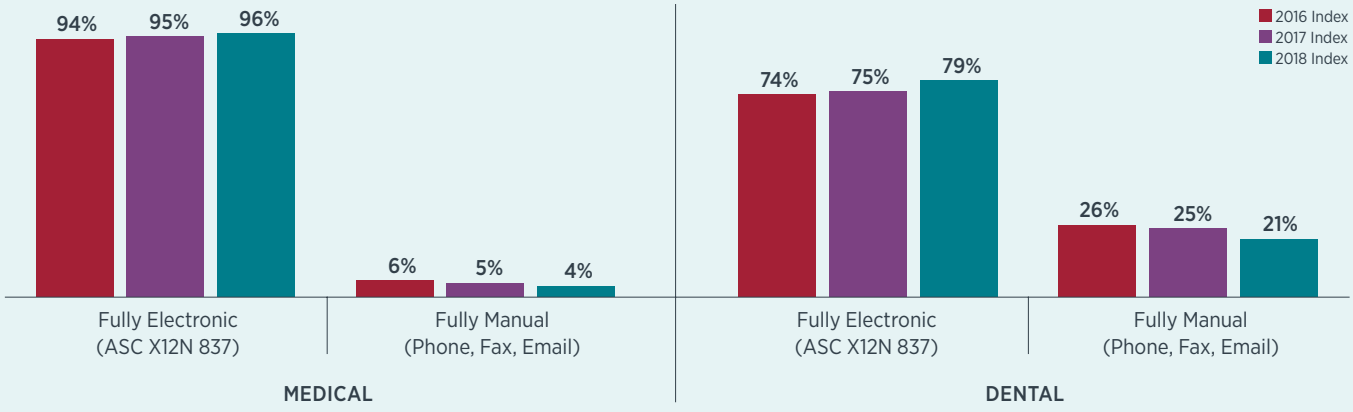
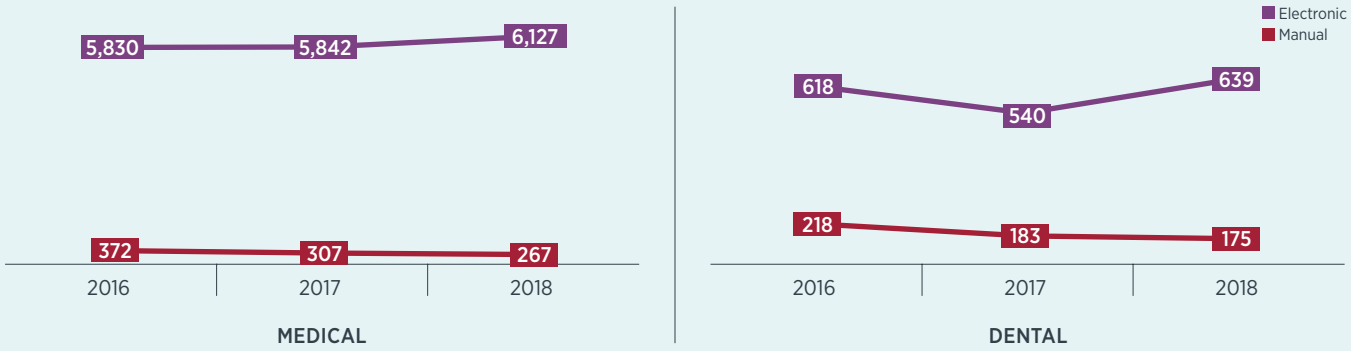


Figure 14: Estimated National Volume of Claim Submissions, by Mode, 2016 – 2018 CAQH Index (in millions)



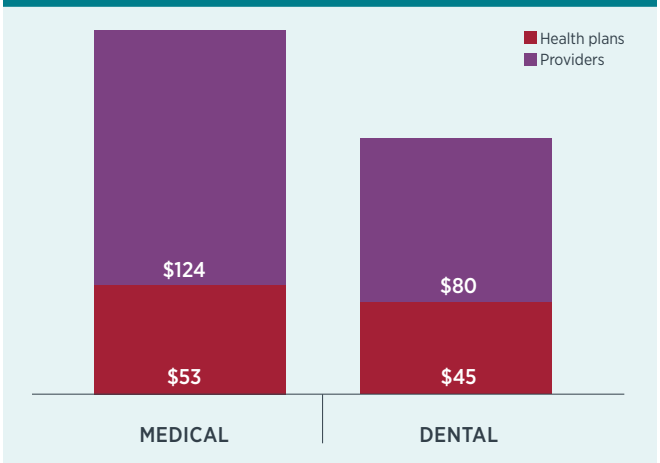
and dental plans that contributed data to the CAQH Index, the volume of claim submissions per member remained relatively stable. However, the medical industry reported nearly six times as many claim submissions per member per year (9.71) as were reported by the dental industry (1.67).

POTENTIAL SAVINGS

Cost

While adoption of electronic claim submission is high for both the medical and dental industries relative to other transactions studied, savings opportunities still exist. By fully adopting electronic claim submission, the medical industry could save as much as $177 million annually while the dental industry could save as much as $125 million annually. The savings opportunity is greater for providers versus health plans, with a savings opportunity of $124 million for medical providers and $80 million for dental providers.

Figure 15: Electronic Claim Submission: How Much More Can Be Saved With Full Adoption? (in millions)



Time

Healthcare providers spent an average of four minutes submitting a manual claim and as little as one minute on a manual transaction. For the electronic transaction, providers spent three minutes on average and under a minute on an electronic transaction. The difference in the average amount of time to complete a manual versus an electronic claim submission is among the shortest of the transactions measured.

Electronic Claim Submission Potential Average Time Savings (per transaction): 1 minute

RELATED TRANSACTION

Claim Attachments

Claim attachments are a vital bridge linking clinical and administrative data. They give health plans supplementary medical information such as certificates of medical necessity, discharge summaries, lab results and operative reports to support payment of a claim.[19]

In the absence of a federal standard for claim attachment transactions, a range of challenges has created administrative burden for stakeholders. Claim attachment is currently a time-intensive, ambiguous process. Stakeholders have little certainty about when attachments are needed or what documentation is

19 "Electronic Claim Attachments," Centers for Medicare & Medicaid Services website, accessed December 27, 2018, https://www.cms.gov/Medicare/Billing/ElectronicBillingEDITrans/ClaimsAttachments.html.

required.[20] To date, most claim attachments have been sent to the health plan by mail, fax and portal, with little use of electronic data interchange (EDI). However, stakeholders indicate that a standard for structured data would support the move to auto-adjudication and drive investments in technology to support automation of this transaction.[21]

Due to a low volume of contributed data, the 2018 CAQH Index does not report a benchmark for this transaction.[22]

20 "CAQH CORE Attachments Effort Goal," CAQH CORE website, accessed December 27, 2018, https://www.caqh.org/sites/default/files/core/attachments-overview.pdf.

21 ibid.

22 Some information for Claim Attachments can be found in the 2017 CAQH Index report. The electronic adoption rate was 6% and the estimated national volume was 204 million. The per transaction industry savings opportunity was $2.15 with an estimated industry savings opportunity of $206 million.

CAQH CORE Prepared to Proceed on Attachments

A federal attachments standard is anticipated from the U.S. Department of Health and Human Services (HHS). As the HHS-designated author of operating rules for HIPAA-mandated transactions[23], CAQH CORE is prepared to proceed with rule-writing for claim attachments beginning in 2019.

CAQH CORE has conducted extensive research to prepare for the rule-writing process. In partnership with the CAQH Index, CORE has helped to document the current state of electronic attachment adoption. It has also assessed business needs, data content and format requirements, technical infrastructure parameters and priorities through interviews with over 300 participants.

For more information, visit www.caqhcore.org.

23 https://www.caqh.org/sites/default/files/core/hhs-response-to-ncvhs-12122009.pdf.

Coordination of Benefits / Crossover Claim

Coordination of benefits, or crossover claims, are a type of claim submission that requests payment be sent to a secondary health plan by a primary plan. Coordination of benefit claims arise when a health plan member has more than one form of coverage. Though these circumstances are rare, applying to only 2 percent[24] to 5 percent[25] of health plan members, the result is a shared responsibility for reimbursement and a need to coordinate the benefits of a mutual member. This transaction occurs after the patient encounter, in conjunction with claim submission.

When the initial claim submission from the provider does not accurately request payment from multiple health plans, the need to coordinate benefits with another insurer may be identified during adjudication by the primary health plan.

ADOPTION

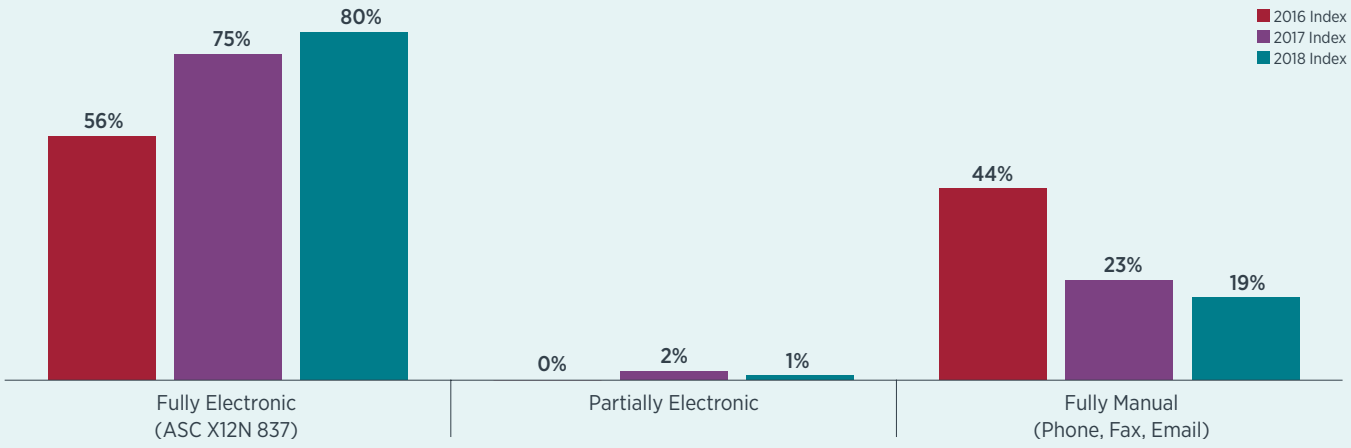
Medical industry adoption of electronic coordination of benefit transactions increased by five points, to 80 percent. The rise was accompanied by a four-point decline, to 19 percent, in use of manual transactions. Use of partially electronic transactions continued to be nearly undetectable.

NOTE: Due to a low volume of contributed data for this transaction, the CAQH Index can calculate and report only partial benchmarks.

24 "Maximize savings with an enterprise payment integrity strategy," Optum website, accessed December 27, 2018, https://www.optum.com/content/dam/optum/resources/brochures/Payment_Integrity_Best_Practices_20WP482014.pdf.

25 "Health Plan Strategies on Coordination of Benefits: Saving Money Through Efficiency and Collaboration," CAQH website, accessed December 27, 2018, https://www.caqh.org/sites/default/files/solutions/cob-smart/cob-webinar-sept-2015-exec-summary_0_0.pdf.

Figure 16: Adoption of Electronic Coordination of Benefits, Medical, 2016 – 2018 CAQH Index

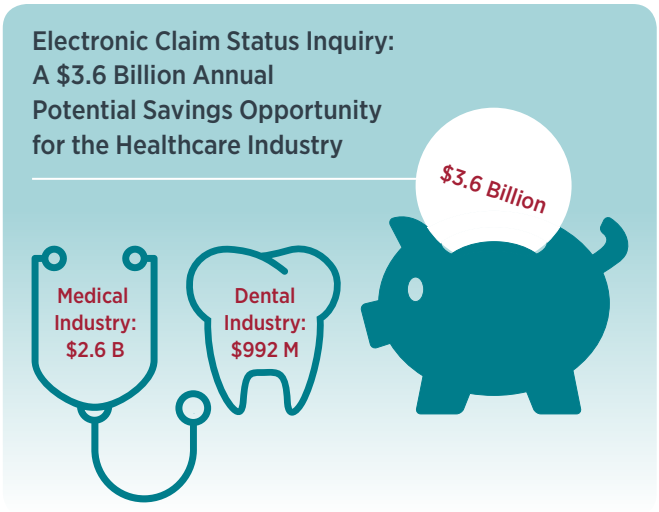


Claim Status Inquiry

Electronic claim status inquiry has been a useful fee-for-service (FFS) revenue cycle tool. These transactions have helped providers and their vendors follow claims as they progress through adjudication and have given them an opportunity to intercede when issues arise that could delay or prevent approval of a claim.[26] This electronic transaction has also become widely accessible—79 percent of practice management systems and clearinghouse solutions studied for the 2017 CAQH Index supported use of this electronic transaction. Despite growing adoption and support for this transaction, the per-transaction savings opportunity is among the highest reported. The need to address corrections for payment and the lack of acknowledgments may result in elongated efforts to inquire about the status of a claim, adding to the cost to conduct this transaction.

The combination of utility and accessibility has historically driven electronic claim status volume to moderately high levels. However, the volume of medical claim status transactions declined in this report. In interviews, providers indicated that claim status is being checked only after a minimum of 30 days. This change may be reflective of an effort by health plans to more quickly adjudicate claims and process reimbursements. Medical health plans, especially, have worked to pay claims more frequently. One of many other reasons for declining volumes of claim status inquiries may be a transition to value-based payments processed separately from claims.

26 Jacqueline LaPointe, "Hospitals Wait 16 More Days for Late Payments from Claim Denials," RevCycleIntelligence, May 7, 2018, https://revcycleintelligence.com/news/hospitals-wait-16-more-days-for-late-payments-from-claim-denials.



Meanwhile, the dental industry increased its use of claim status inquiries. As noted earlier in this report, upticks in dental volume of the eligibility and benefit verification and claim status transactions suggest that a focus on revenue cycle management strategies may be becoming more common in the dental industry.

ADOPTION

Medical industry adoption of the electronic claim status inquiry transaction increased to 71 percent, with an accompanying decline in partially electronic transactions. However, in the dental industry use of the manual claim status inquiries transaction climbed from 15 percent to 33 percent. Adoption of the electronic transaction declined, falling eight points.

Figure 17: Adoption of Electronic Claim Status Inquiry, 2016 – 2018 CAQH Index

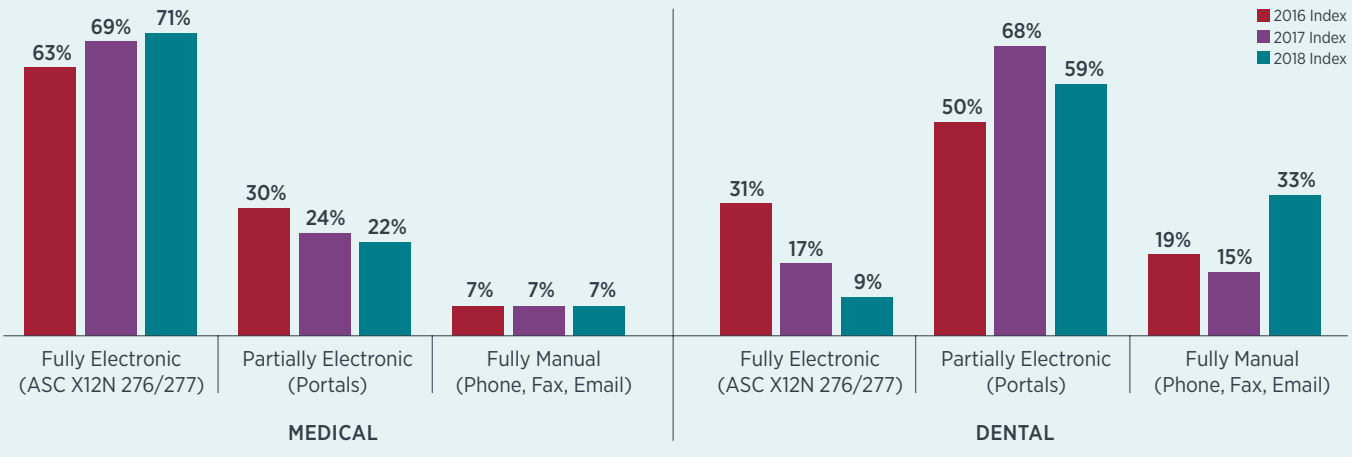
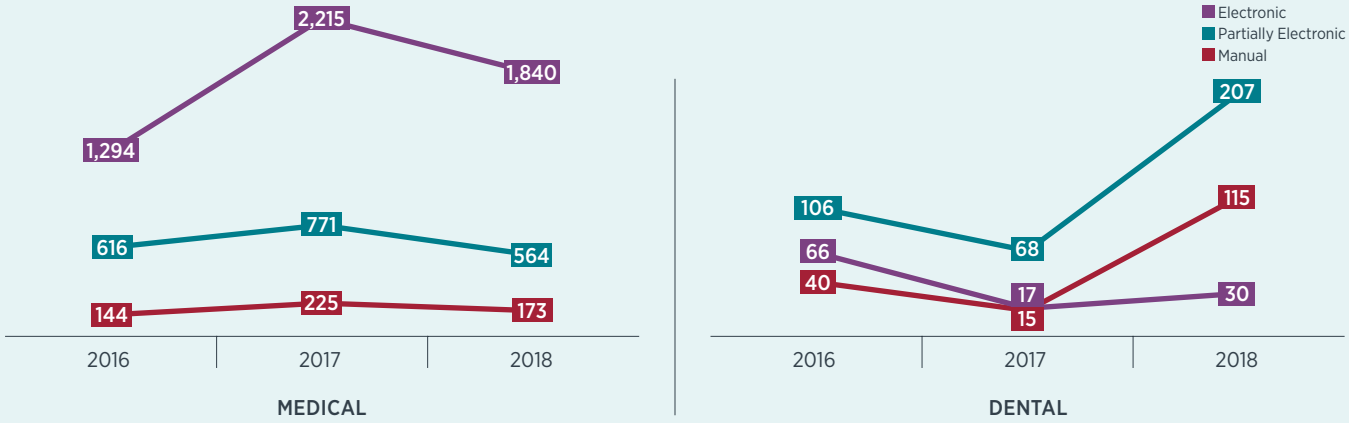


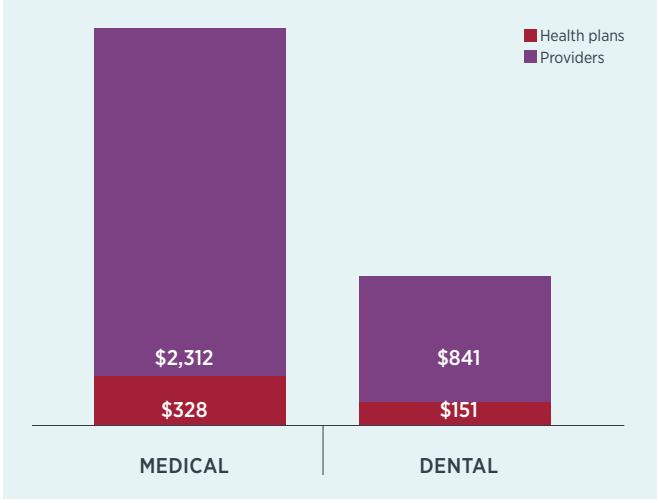
Figure 18: Estimated National Volume of Claim Status Inquiries, by Mode, 2016 – 2018 CAQH Index (in millions)



VOLUME

The volume of claim status transactions declined in the medical industry, falling 20 percent over the prior report. Conversely, claim status volume increased for the dental industry. On a per-member basis, the medical industry conducted fewer claim status inquiries, four per member per year as compared to six in the prior report.

Figure 19: Electronic Claim Status Inquiry: How Much More Can Be Saved With Full Adoption? (in millions)



POTENTIAL SAVINGS

Cost

Manual claim status inquiries are the costliest of all transactions tracked by the CAQH Index. With full adoption of electronic claim status inquiry transactions, the annual savings potential for the medical industry is as much as $2.6 billion and for the dental industry as much as $992 million annually.

Time

On average, manual claim status inquiries consumed 14 minutes of provider staff time, whereas the electronic transaction required only five minutes. Some providers reported that staff members spent as much as 30 minutes when conducting claim status inquiries manually and as much as 11 minutes when conducting electronic transactions. The average potential time savings for electronic claim status inquiry transactions is 9 minutes.

Electronic Claim Status Inquiry Potential Average Time Savings (per transaction): 9 minutes

CORE Operating Rules and Claim Status Inquiry

Phase II CAQH CORE Operating Rules, which address claim status and eligibility, were adopted by HHS in 2011. The claim status-related rules focus on infrastructure requirements. For example, they establish minimum system availability requirements and response times for batch and real-time inquiries.

Although HHS did not adopt CAQH CORE rule requirements related to acknowledgements, in its Final Rule HHS noted, "We are addressing the important role acknowledgements play in EDI by strongly encouraging the industry to implement the acknowledgement requirements in the CAQH CORE rules we are adopting herein."

Although acknowledgements are not required under HIPAA, CAQH CORE rule requirements and certification assessments go above and beyond HIPAA requirements in their inclusion of acknowledgments.

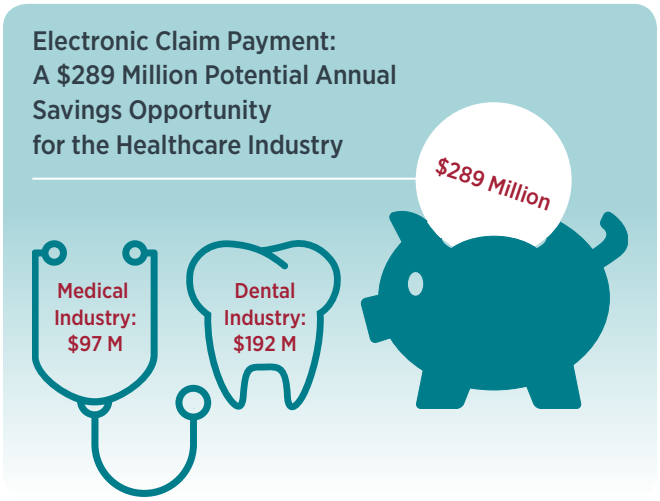
For more information, visit www.caqhcore.org.

Claim Payment

Payment is one of the last steps in the administrative workflow. Electronic claim payment, or electronic funds transfer (EFT) via ACH[27], moves money electronically from one account to another, taking the place of paper checks. Across all industries, the ACH Network moves 25 billion electronic financial transactions valued at $43 trillion each year[28], including payroll for more than 80 percent of U.S. workers.[29]

The healthcare industry, however, has been slow to embrace electronic claim payment. This electronic transaction was supported by 85 percent of the practice management systems and clearinghouse solutions studied for the 2017 CAQH Index. However, 37 percent of medical claim payments and 88 percent of dental claim payments continue to be paid by paper checks sent through the mail.

Numerous factors, including gaps in communication and misconceptions, contribute to slow adoption of electronic claim payment. For example, although many health plans have actively encouraged providers to sign up for EFT, others have been less proactive in communicating the availability of EFT as a method of claim payment. Also, some healthcare providers have voiced concern over the security of electronic funds transfer.



Beyond the cost and time savings tracked by the CAQH Index, NACHA[30] indicates that electronic claim payment results in faster payments than paper checks. When claim payments are electronic, funds are received and available for use the next business day after the health plan initiates payment.[31] On average, EFT via ACH delivers funds seven days faster than paper checks, avoiding delays associated with mailing time, deposit and funds clearance.[32]

27 The ACH Network is a batch processing system used by financial institutions to move money and information from one bank account to another.

28 "ACH Network: How it Works," NACHA website, accessed December 27, 2018, https://www.nacha.org/ach-network.

29 "Beyond Simple and Safe: Opportunities to Expand the Use of Direct Deposit Via ACH For Payroll," NACHA website, accessed December 27, 2018, https://www.nacha.org/system/files/resources/NACHA_Javelin_Direct_Deposit_Survey_Report_2015.pdf.

30 NACHA, The Electronic Payments Association, develops rules and standards across a range of payment systems, including the healthcare Electronic Funds Transfer standard, ACH Network private-sector operating rules for ACH payments and more.

31 "Understanding the Healthcare Electronic Funds Transfer (EFT) Standard," NACHA website, accessed December 27, 2018, https://healthcare.nacha.org/sites/healthcare.nacha.org/files/files/NACHA%20HC%20Fact%20Sheet%20-%20Revised.pdf.

32 "EFT and ERA Overview for Healthcare Providers," CAQH website, accessed January 2, 2019, https://www.caqh.org/sites/default/files/solutions/eft-era-overview-provider-presentation.pdf.

Figure 20: Adoption of Electronic Claim Payment, 2016 – 2018 CAQH Index

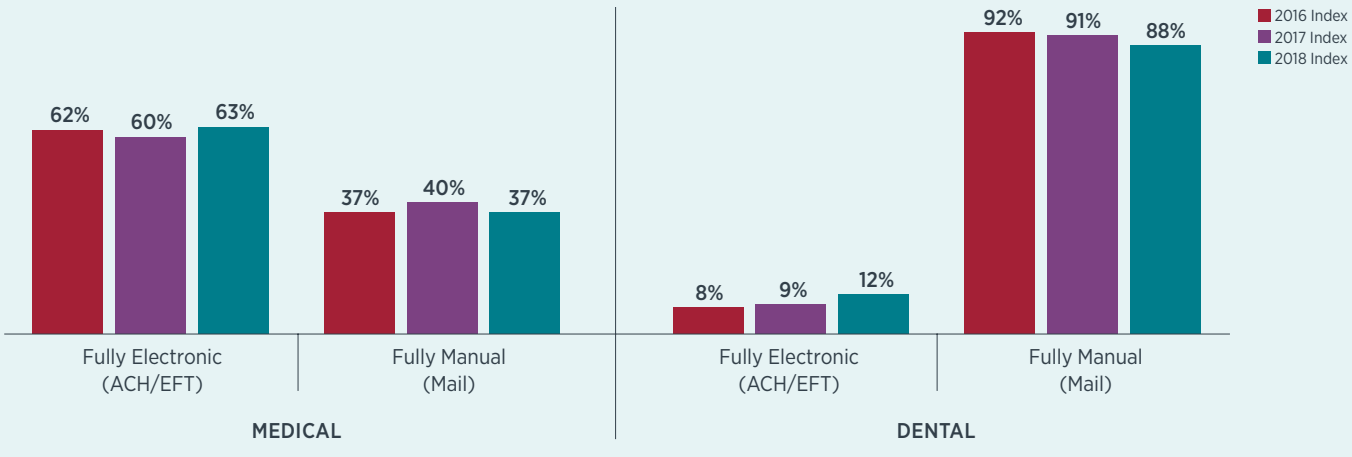
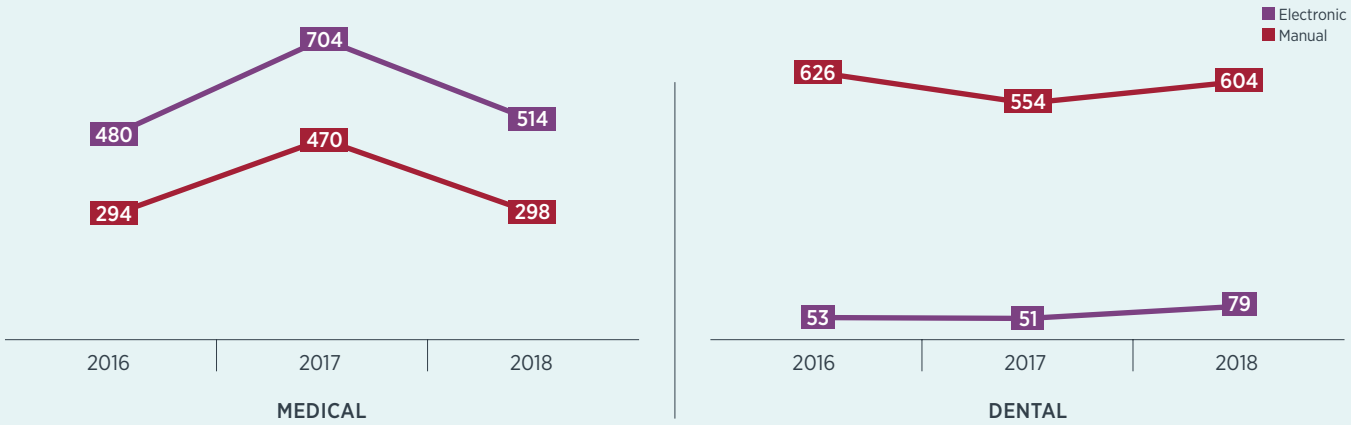


Figure 21: Estimated National Volume of Claim Payments, by Mode, 2016 – 2018 CAQH Index (in millions)



ADOPTION

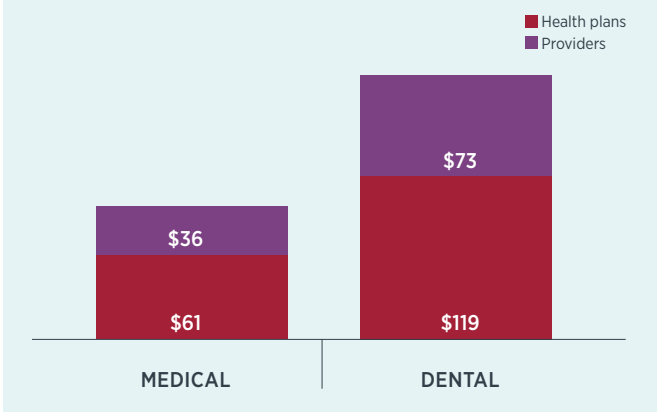
Medical industry adoption of electronic claim payment increased slightly, rising 3 percentage points to 63 percent. More than one in three (37 percent) claim payments from health plans to providers in the medical industry continue to be made by paper check. Extending a trend, the dental industry continued to increase its adoption of electronic claim payment transactions. However, at only 12 percent it significantly lags the medical industry in adoption of electronic claim payment.

VOLUME

Volume of claim payment transactions declined by 31 percent for the medical industry. On a per-member basis, the number fell from two to slightly more than one (1.21). As the volume of value-based payment contracts increase in the industry, one reason the volume of this transaction may be declining is that payments previously processed separately may be moving to bundled payments.

In the dental industry, however, volume increased by 13 percent and the per-member volume remained stable at about one per member annually.

Figure 22: Electronic Claim Payment: How Much More Can Be Saved With Full Adoption? (in millions)



POTENTIAL SAVINGS

Cost

By switching to electronic claim payments, the medical industry could save an additional $97 million annually, including a savings potential of as much as $61 million for health plans and $36 million for providers. The dental industry could save an additional $192 million, including $119 million for health plans and $73 million for providers. Among the transactions studied, claim payment represents the lowest annual savings opportunity for the medical industry ($97 million) and the second-lowest annual savings opportunity for the dental industry ($192 million).

Time

Healthcare providers reported that each manual claim payment transaction consumed five minutes, on average. Electronic transactions required slightly less provider staff time, four minutes on average per transaction.

Electronic Claim Payment Potential Average Time Savings (per transaction): 1 minute

Uniformity in EFT and ERA Through CAQH CORE Operating Rules

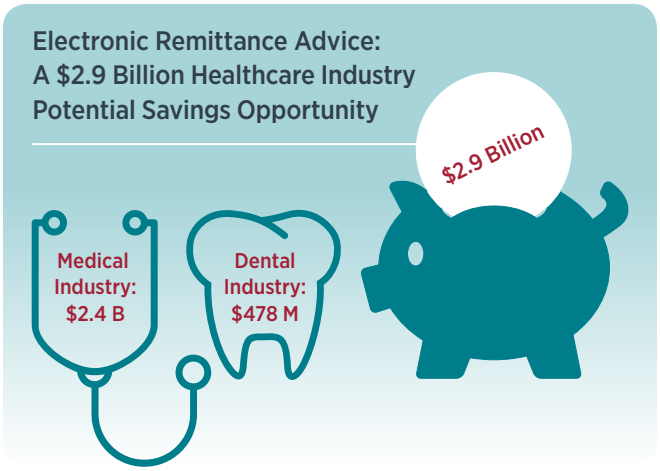
Phase III CAQH CORE EFT and ERA Operating Rules were adopted by HHS in 2013 and addressed a longstanding provider barrier to adoption of electronic funds transfer and electronic remittance advice. The rules outline maximum sets of standard data elements to be collected by a health plan or its agent during provider enrollment in EFT and/or ERA. The rules also outline a flow and format for electronic collection of the data elements (and paper-based forms) and the inclusion and placement of the trace number segment (TRN), among other requirements.

For more information, visit www.caqhcore.org.

Remittance Advice

Electronic remittance advice (ERA) and electronic claim payment, also referred to as electronic funds transfer (EFT), work in tandem to enable automated reconciliation and communication of reimbursement. An ERA is an electronic explanation of payments made to the provider by the health plan. It includes information about the patient, the service or procedure performed, the provider and any claims adjustments.

The CAQH Index continued to find increased use of health plan portals for transmittal of remittance advice. The volume of remittance advice transactions also continued to increase in this report. Health plans report that the combination of increased volume and portal use is the result of duplicate postings of remittance advice on a health plan portal and through the standard electronic transaction to ensure that a provider can access the information through multiple channels as needed.



ADOPTION

Remittance advice is the only transaction tracked for which adoption of the electronic transaction declined in the medical industry. Use of partially electronic transactions increased by seven percentage points to 43 percent, as adoption of the electronic transaction declined by eight percentage points to 48 percent. Use of manual processes also increased slightly to 9 percent. Dental industry adoption of electronic claim remittance increased by four percentage points to 17 percent, but the vast majority of claim remittance transactions (80 percent) are transmitted manually.

VOLUME

The volume of remittance advice transactions climbed for both the medical and dental industries. For the medical industry, the volume of remittance advice transactions increased by 39 percent. For the dental industry, remittance advice volume increased by 12 percent.

Medical industry volume of remittance advice transactions nearly doubled on a per-member basis, rising from four per member to 7.53 per member annually. Meanwhile, dental industry volume was relatively stable, rising from 1.1 per member to 1.25 per member annually.

Figure 23: Adoption of Electronic Remittance Advice, 2016 – 2018 CAQH Index

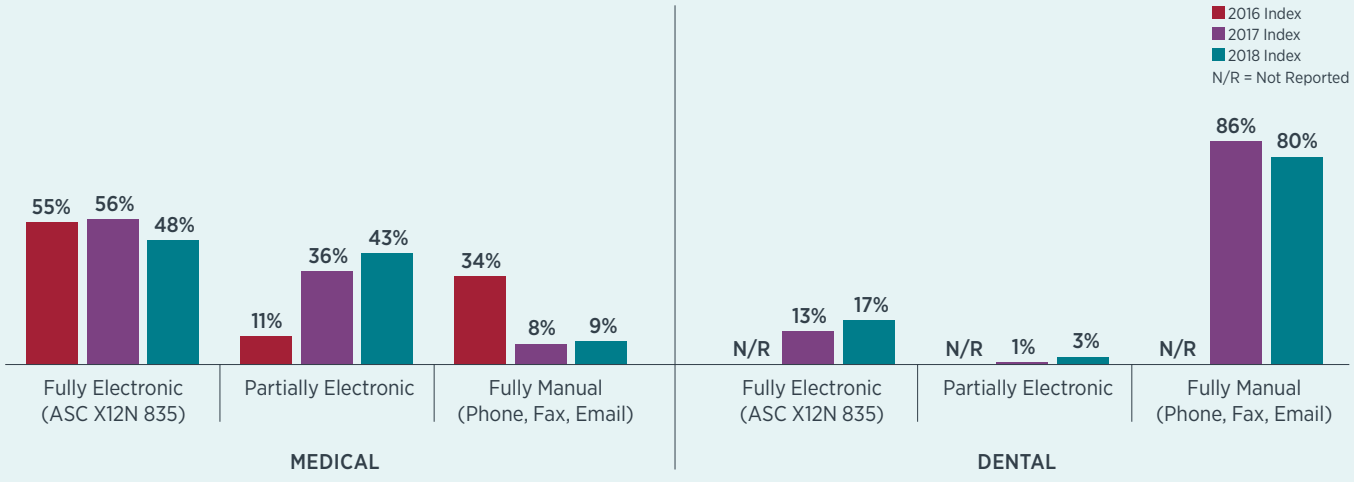
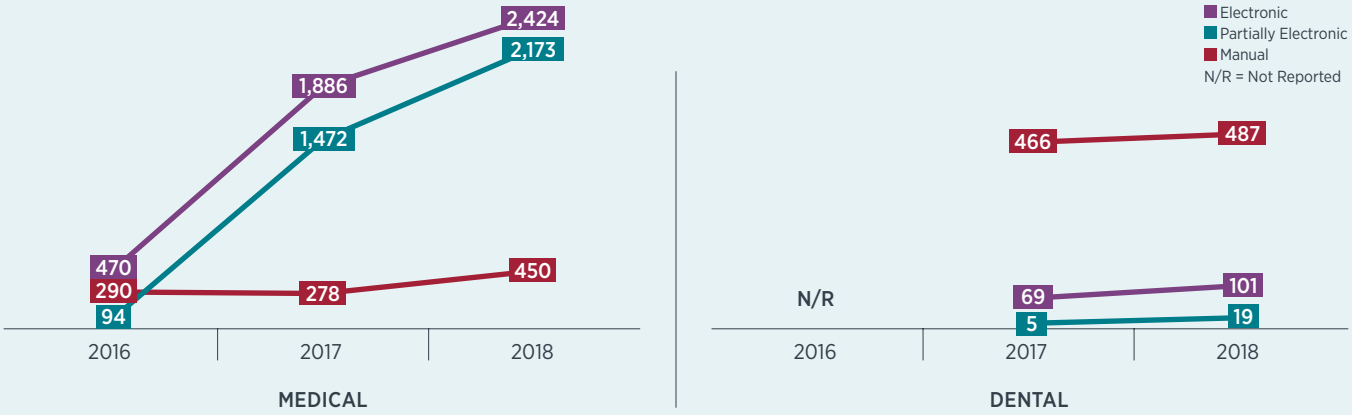


Figure 24: Estimated National Volume of Remittance Advice Transactions, by Mode, 2016 – 2018 CAQH Index (in millions)

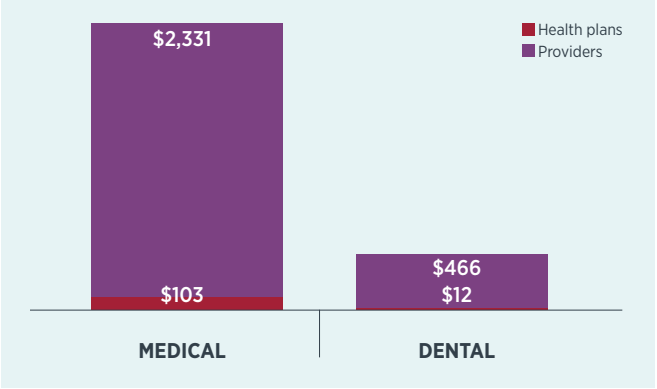


POTENTIAL SAVINGS

Cost

The combined medical and dental industries could save an additional $2.9 billion annually by increasing adoption of electronic remittance advice transactions. This level of savings includes $2.4 billion for the medical industry and $478 million for the dental industry.

Figure 25: Electronic Remittance Advice: How Much More Can Be Saved With Full Adoption? (in millions)



For the medical industry, the annual savings opportunity declined from $3.3 billion in the last report to $2.4 billion annually in this report, the largest decrease among the transactions tracked. For both industries, the health plan share of the potential savings opportunity is a small fraction of the total. Healthcare providers reported lower costs for this transaction in this report. The provider cost of a manual remittance advice transaction fell to $2.99 per transaction, as compared to $4.82 per transaction in the prior report, bringing the industry savings opportunity down considerably.

Time

Healthcare providers reported that, on average, the electronic claim remittance advice transaction required half as much time as the manual transaction—only three minutes as compared to six minutes for the manual transaction. In the prior report, the manual transaction required 13 minutes. This seven-minute year-over-year difference in the amount of time required is the largest shift among the transactions tracked. The potential average time savings for the electronic transaction compared to manual is three minutes.

Electronic Remittance Advice Potential Average Time Savings (per transaction): 3 minutes

RELATED TRANSACTIONS

Enrollment / Disenrollment and Premium Payment / Explanation

The enrollment / disenrollment transaction is a line of communication between health plans, employers, brokers and health insurance exchanges. It facilitates changes to an enrollment dataset when individuals enroll or terminate coverage, or when a change is

needed to an ongoing enrollment. The CAQH Index tracks the federal standard ASC X12N 834 electronic transaction, as well as manual transactions sent on paper by U.S. mail or fax, spreadsheets or custom files and portal or website data entry.

Premium payments authorize financial institutions to make a premium payment. Similar to the remittance advice supporting a claim payment, premium payments have a companion explanation of payment to help the health plan associate payment with individual coverage. Explanations of payment may accompany the payment or may be sent separately. The CAQH Index tracks premium payments and explanations to health plans from employers and brokers (HIPAA federal standard ASC X12N 820) and health insurance exchanges (a modified version of the HIPAA 820). In addition, the Index tracks premium payments sent as a printed check through the U.S. mail, as a spreadsheet or custom file and portal or website data entry.

Due to a low volume of contributed data, the CAQH Index does not report benchmarks for these transactions.

CORE Code Combinations: Limits for Reasons and Remarks

Phase III CAQH CORE EFT and ERA Operating Rules established a common language for health plans to communicate claim payment information on remittance advices. Adopted by HHS in 2013, the rules gave health plans a uniform and limited set of codes to explain why a claim may have been adjusted or denied. These codes, Claim Adjustment Reason Codes (CARCs), Remittance Advice Remark Codes (RARCs), and Claim Adjustment Group Codes (CAGCs) and an underlying set of defined business scenarios are collectively known as the *CORE Code Combinations*. CARC and RARC lists are authored and maintained by committees designated by HHS. These committees meet and publish updates three times per year.

CAQH CORE plays a role in the ongoing maintenance of *CORE Code Combinations*, with a task group responsible for reviewing and approving adjustments based on updates from the code committees or industry submissions.

For more information, visit www.caqhcore.org.

Industry Call to Action

The 2018 CAQH Index finds that healthcare industry administrative transaction costs have begun to decline, even as overall transaction volume increased. Yet challenges remain, such as the need for greater electronic adoption of existing transactions and for standards and operating rules to align with the evolving market transition to value-based payment.

As discussed throughout the report, opportunities exist related to specific transactions as well as segments. Providers continue to see greater savings opportunities in comparison to health plans and the dental industry continues to lag the medical industry in terms of adoption. While the Index currently does not report by health plan line of business, Medicaid plans lag in operating rule certification suggesting that they may also lag in the adoption of electronic transactions (Figure 26).

Growing in parallel with transaction volume is industry complexity. As these trends persist, the industry will benefit from standards, operating rules, infrastructure and functionality that can accommodate both the increase in volume and the growing complexity associated with varying plan and payment models designed to increase the value and quality of healthcare for consumers. There is a need for all stakeholders to support initiatives that lay the groundwork for the future.

To support continued adoption of electronic transactions and promote efforts to address evolving market needs, CAQH offers the following actions for the industry:

Focus Efforts to Address Cost-Saving Opportunities: Several transactions offer the greatest potential for savings and should be the subject of attention. These transactions include eligibility and benefit verification, claim status, remittance advice and prior authorization. The medical industry could save an additional $4 billion on eligibility and benefit verifications and $2.6 billion on claim status transactions by fully adopting electronic transactions and certifying use of the CAQH CORE Phase I and II Operating Rules. With adoption of ERA transactions and certification of CAQH CORE Phase III Operating Rules the medical industry could save an additional $2.4 billion. Moving to electronic transactions for prior authorization would save the medical industry at least $7.28 per transaction; however, attachment standards, operating rules and continued efforts by health plans, providers and vendors are needed to capitalize on this cost savings opportunity.

Figure 26: Summary of Market Statistics Related to Administrative Transactions

CAQH CORE				CAQH Index				
CAQH CORE Operating Rules	Percent of Insured Population Covered by a CORE-Certified Health Plan			Transactions	Industry National Savings Opportunity (in millions)	Percent of Vendors Supporting EDI (2017 CAQH Index)	2018 Index Electronic Adoption Level	Estimated National Volume (in billions)
	Commercial	Medicare Advantage	Medicaid					
Phase I	78%	75%	44%	Eligibility and Benefit Verification	$4,017	76%	85%	16,915
Phase II	78%	75%	44%	Claim Status	$2,640	79%	71%	2,578
Phase III	37%	38%	24%	Claim Payment	$97	85%	63%	812
				Remittance Advice	$2,434	74%	48%	5,047
Phase IV	4%	18%	1%	Claim Submission	$177	91%	96%	6,394
				Prior Authorization	$417	12%	12%	181

Note: Please refer to Table 1 and Data Analyses in the Methodology and Data Tables Section for details on how costs and volume were calculated.

Focused attention should be directed to encourage adoption of electronic transactions by healthcare providers and the dental industry. The CAQH Index has found that these industry stakeholders have the greatest opportunity to realize administrative savings from the adoption of electronic transactions. To address the adoption gap for providers, it is necessary to gain a full appreciation for the barriers that prevent various types of providers from utilizing specific electronic transactions. To address the gap for the dental industry, effort should be made to share best practices between the medical and dental industries and develop case studies that reflect an understanding of the unique needs of the dental industry. Engagement of the vendor community is needed to address the unique needs of the dental industry.

Accelerate Standards and Operating Rule Development: As the healthcare industry evolves, administrative processes need to adapt to address changing market needs to minimize the use of expensive, time consuming manual processes. For example, value-based payment arrangements often have more complex data sharing requirements than was anticipated with existing standards and operating rules. As a result, these arrangements between health plans and providers frequently lead to manual processing or partially electronic portals to transact information.

A recent report by CAQH CORE[33] described the unique administrative challenges associated with value-based payment and provided recommendations to help reduce variation and complexity. CAQH CORE will convene a value-based payment advisory group in January 2019 that will expand upon this work by further exploring industry needs and devising solutions.

As recommended by the National Committee on Vital and Health Statistics (NCVHS) in its Draft Predictability Roadmap[34], the industry needs to accelerate the adoption, testing and implementation of new and updated standards and operating rules to support business and technology innovation. In the NCVHS Subcommittee on Standards meeting held in December 2018, leaders in the industry gathered to identify challenges associated with updating, adopting and implementing healthcare administrative standards and operating rules. Stakeholders recognized the need to work together to facilitate and enhance the transparency and pace of the standards development process. Feedback provided during this meeting will inform development of final recommendations for submission to HHS in early 2019.

In alignment with other industry efforts, the CAQH CORE Board-adopted priorities for 2019 include goals to increase the pace and impact of rule development through the use of lean/agile methodologies, pilot testing and measurement of return on investment. Accelerated adoption of standards and operating rules by HHS is also needed, such as the forthcoming attachment standard, to support the transition from manual to electronic transactions.

Encourage Timely Vendor Adoption of Standards and Operating Rules: There is an opportunity for vendor systems to support the adoption of electronic transactions through more timely and comprehensive deployment of new and updated standards and operating rules. In particular, gaps exist in vendor support for prior authorization, attachments and the dental industry generally. The vendor community can accelerate the adoption and support the ongoing use of electronic transactions by prioritizing the development of solutions to address the gaps and cost savings opportunities identified in this report.

Pursue a More Expansive Exploration of Administrative Operations: To address the primary savings opportunities identified in this report, a more refined understanding of the barriers to electronic adoption of administrative transactions by healthcare providers and the dental industry is needed by all stakeholders. Numerous barriers—cost, resistance to change, lack of vendor support and others—have been suggested as possible contributors to this gap. Additional research,

33 "All Together Now: Applying the Lessons of Fee-for-Service to Streamline Adoption of Value-Based Payments," CAQH website, accessed December 27, 2018, https://www.caqh.org/sites/default/files/core/value-based%20payments/core-value-based-payments-report.pdf.

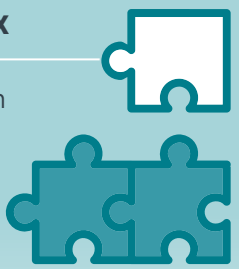
34 "Improving Health Care System Efficiency by Accelerating the Update, Adoption, and Use of Administrative Standards and Operating Rules: A Brief History and Draft Recommendations," National Committee on Vital and Health Statistics website, accessed December 27, 2018, https://ncvhs.hhs.gov/wp-content/uploads/2018/10/NCVHS-Predictability-Roadmap-Narrative-Report-September-2018.pdf.

including a more diverse sample of plan and provider participants for the CAQH Index, is needed to understand these and other barriers in both industries.

To identify and quantify cost-saving opportunities related to evolving market needs for electronic administrative transactions, more detailed research is also needed to understand a broader range of functions and costs associated with the administrative workflow. Efforts are underway to evaluate additional areas of exploration to augment the CAQH Index.

Improving efficiency of the healthcare administrative workflow requires long-term commitment by all stakeholders. The strategies proposed here address the greatest opportunities and needs, and identify areas for top performers to help peers overcome barriers to automation.

How You Can Help Improve the CAQH Index



The CAQH Index collects data on administrative healthcare transactions. In the 2018 Index, data submissions supported calculation of benchmarks for seven of the 13 HIPAA transactions. For a review of the transactions tracked and benchmarked in this report, please refer to Table 3 in the Methodology and Data Tables section.

All health plans, healthcare providers and vendors are encouraged to contribute data to the CAQH Index. For more information, please email explorations@caqh.org.

Methodology and Data Tables

Introduction

The CAQH Index is the industry source for tracking health plan and provider adoption of electronic administrative transactions. It also estimates the industry cost savings opportunity, an amount that declines as adoption and efficiency grows.

The Index relies on data submitted through a voluntary, survey-based process. For the 2018 Index, the sixth annual report, data was submitted from medical health plans and dental health plans covering nearly half of the insured U.S. population in the year studied based on enrollment reported in AIS's Directory of Health Plans[35] and NADP's Dental Health Plan Profiles.[36] This is the fourth report to include dental health plan data.

Recruitment

Health plan and provider data contributors were encouraged to participate in the study using a number of methods, including direct outreach (e.g., email/telephone), through speaking engagements at industry conferences, in webinars, advertisements, postings on the CAQH website and social media. CAQH managed recruitment of health plan data contributors and partnered with NORC at the University of Chicago (NORC), which led provider recruitment, data collection and analysis.

NORC developed a recruitment plan to maximize engagement with potential participants including various provider types and specialties. Provider participants included those who participated in the Index previously, additional contacts from CAQH and health system administrators that responded to email or telephone outreach after up to three attempted contacts. Honorariums were offered to increase response and encourage participants to complete the survey. All provider participants were also offered a benchmark report comparing their data to the aggregate data.

CAQH worked with CAQH member organizations, Advisory Council members and industry stakeholder groups to recruit medical and dental health plans. Year after year, many of the large national and regional health plans have participated. Some smaller health plans also contribute data; however, these plans have not participated every year. Health plan data contribution is voluntary and there are no financial incentives provided for participation.

Data Collection

Surveys were fielded to providers and health plans from June to September 2018. Providers who agreed to participate received a fillable PDF form questionnaire from NORC and a set of frequently asked questions by email. An in-depth interview was conducted with providers following completion of the survey using a semi-structured protocol developed to gain a better understanding of their business practices for processing administrative transactions. CAQH managed the health plan survey data collection process using an Excel-based data collection template. Provider survey data is representative of 2018 calendar year at the time of data collection, and health plan survey data is representative of the 2017 calendar year, January 1 to December 31.

Table 3 presents an overview of the electronic administrative transactions studied in the 2018 report and a description of each transaction. Provider participant surveys requested data on eight transactions, and health plans were asked for data on all thirteen transactions.

35 AIS Health Data, a Division of Managed Markets Insight and Technology, LLC, AIS's Directory of Health plans: 2017, (2018).

36 National Association of Dental Health Plans Dental Health Plan Profiles, 2015.

Table 3: Overview of Electronic Administrative Transactions Studied in the 2018 Index

Transaction	HIPAA Standard	Description
Eligibility & Benefit Verification†	ASC X12N 270/271	An inquiry from a provider to a health plan, or from one health plan to another, to obtain eligibility, coverage, or benefits associated with the health or benefit health plan, and a response from the health plan to a provider.
Prior Authorization	ASC X12N 278	A request from a provider to a health plan to obtain an authorization for health care, or a response from a health plan for an authorization.
Prior Authorization Attachment	No standard adopted by HHS*	Additional information submitted with a prior authorization or pre-certification request, such as medical records to explain the need for a particular procedure or service.
Referral Certification / Approval	ASC X12N 278	Referral certification is a request from a provider to a health plan for permission to refer a patient to another provider.
Claim Submission	ASC X12N 837	A request to obtain payment or transmission of encounter information for the purpose of reporting health care.
Coordination of Benefits / Crossover Claim	ASC X12N 837	COB/crossover claims are a subset of all claim submissions above. These are claims sent to secondary payers with an attached or included explanation of payment information from the primary payer.
Claim Attachment	No standard adopted by HHS*	Additional information submitted with claims or claim appeals, such as medical records to support the claim.
Claim Status Inquiry†	ASC X12N 276/277	An inquiry from a provider to a health plan to determine the status of a health care claim or a response from the health plan.
Claim Payment†	NACHA Corporate Credit or Deposit Entry with Addenda Record (CCD+)	The transmission of payment, information about the transfer of funds, or payment processing information from a health plan to a provider.
Enrollment / Disenrollment (Employer/HIX/Broker)	ASC X12N 834 005010X220 (health plan sponsor) 005010X307 (HIX)	Enrollment/disenrollment transactions can be initial enrollments; full file replacement (enrollment changes or to true-up enrollment); or additions, changes, and terminations of enrollment.
Premium Payment / Explanation (Employer/HIX/Broker)	ASC X12N 820 005010X218 (employer) 005010X306 (HIX)	The premium payment transaction can be sent to a bank to move money only; sent to a bank to move money with detailed remittance info; or sent directly to the payee with remittance information only.
Remittance Advice†	ASC X12N 835	The transmission of remittance advice, including final adjudication and reasons for adjustments, from a health plan to a provider.
Acknowledgements		Assesses the use of transaction acknowledgements for: • Claim Acknowledgement for 837 (277CA) • Eligibility and Benefit Verification (999 Functional Acknowledgement for 270) • Claim Status Inquiry (999 Functional Acknowledgement for 276) • COB/Crossover Claim (999 Functional Acknowledgement for 837) • Referral Certification (999 Functional Acknowledgement for 278)

† Both HIPAA standards and operating rules are federally mandated.

* ASC X12N 275 and HL7 CDA are both industry recognized standards for electronic attachments.

Table 4: Basic Characteristics of CAQH Index Data Contributors, 2014 – 2018 CAQH Index

	2014 Index	2015 Index	2016 Index	2017 Index	2018 Index
MEDICAL					
Health Plan Members (total in millions)	112	118	140	155	160
Proportion of Total Enrollment (%)	42	45	46	51	49
Number of Claims Received (total in billions)	1	1	2	2	2
Number of Transactions (total in billions)	4	4	5	6	8
DENTAL					
Health Plan Members (total in millions)	N/A	93	112	117	106
Proportion of Total Enrollment (%)	N/A	44	46	48	44
Number of Claims Received (total in millions)	N/A	158	173	182	177
Number of Transactions (total in millions)	N/A	439	564	650	731

N/A=Not applicable

Data collected from medical plans represented 160 million lives, or approximately 49 percent of covered lives in the U.S. Data submissions from medical plans represented nearly 1.6 billion claims and over 7.8 billion total transactions (Table 4). All medical industry data is based on medical/surgical and related healthcare claims and inquiries. The CAQH Index data does not include retail pharmacy transactions. Data collected from dental plans represented 106 million lives, or approximately 44 percent of covered dental lives in the U.S. Dental data submissions represented over 730 million transactions.

Data Analyses

All analyses were conducted in the aggregate to ensure individual participants are not identifiable. Benchmarks were calculated and reported for each transaction for which three or more health plans submitted data. The following four benchmarks are reported for each transaction where possible:

- Adoption Rate—The degree to which health plans complete transactions using fully electronic, partially electronic, or manual methods, as estimated and reported by the participating health plans.
- Cost Per Transaction—The labor costs (e.g., salaries, wages, personnel benefits and related overhead costs) associated with electronic and manual transactions, as estimated, and reported by the participating health plans and providers.
- Healthcare Industry Potential Savings: Cost—The potential cost savings are estimated at a national level using the enrollment levels, transaction volumes and cost-per-transaction estimates from the participating health plans and the cost estimates from the providers. The detailed weighting methodology is described below.
- Provider Potential Savings: Time—The time is estimated using the average time required to conduct manual and electronic transactions, as reported by providers.

For the 2018 Index, seven medical and five dental transactions are benchmarked and reported for Adoption, Cost Per Transaction, Potential Savings, Cost and Time (Table 5).

Table 5: Overview of 2018 CAQH Index Data and Benchmarks, Per Transaction

Transaction	Adoption		Cost per Transaction	National Potential Cost Savings		Time per Transaction for Providers	First Index Report Year Studied	
	MEDICAL	DENTAL		MEDICAL	DENTAL		MEDICAL	DENTAL
Eligibility & Benefit Verification	♦	♦	♦	♦	♦	♦	2013	2015
Prior Authorization	♦	No Benchmark Reported (Insufficient Data)	♦	♦		♦	2013	
Prior Authorization Attachment	No Benchmark Reported (Insufficient Data)						2013	
Referral Certification / Approval	No Benchmark Reported (Insufficient Data)	No Benchmark Reported (Insufficient Data)				♦	2015	2017
Claim Submission	♦	♦	♦	♦	♦	♦	2013	2015
Coordination of Benefits / Crossover Claim	♦						2015	
Claim Attachment	No Benchmark Reported (Insufficient Data)	No Benchmark Reported (Insufficient Data)					2014	2016
Claim Status Inquiry	♦	♦	♦	♦	♦	♦	2013	2015
Claim Payment	♦	♦	♦	♦	♦	♦	2013	2015
Enrollment / Disenrollment (Employer/HIX/Broker)	No Benchmark Reported (Insufficient Data)						2015	
Premium Payment (Employer/HIX/Broker)	No Benchmark Reported (Insufficient Data)						2015	
Remittance Advice	♦	♦	♦	♦	♦	♦	2013	2016
Acknowledgements	No Benchmark Reported (Insufficient Data)	No Benchmark Reported (Insufficient Data)					2017	

ADOPTION RATE

Adoption rates were calculated using data submitted by health plans. Transaction adoption rates reported by medical and dental plans were classified into one of three categories, referred to as a "mode" in this report:

- Fully Electronic—Automated transactions conducted using the adopted HIPAA standard.
- Partially Electronic—Web portals and interactive voice response (IVR) systems.
- Fully Manual—Transactions requiring end-to-end human interaction, such as telephone, fax and mail.

For each transaction, the annual adoption rates were computed by mode as a proportion of the total volume reported by health plans. The annual percentage-point change is presented for transactions with multiple years of available data and was calculated as the arithmetic difference between percentages reported in the current (e.g., 2018 Index) and the prior year report (e.g., the 2017 Index).

COST PER TRANSACTION

Cost per transaction was computed for each transaction using weighted averages based on volume of enrollment for health plans and volume of transactions for providers. Transaction costs are counted as either a manual or electronic cost. Partially electronic transactions are counted differently for health plans and providers. For health plans, a partially electronic transaction is counted as an electronic transaction. For providers, a partially electronic transaction may require manual interaction and is considered to be similar in cost to a fully manual transaction.

For health plans, the cost per transaction is a weighted average based on the data submitted by contributors reporting a valid result using the proportion of their enrollment. The calculation requires both the reporting of a valid transaction volume and transaction cost by a data contributor to be included in the weighted average cost.

For providers, weighted average costs per transaction by method were calculated by NORC based on transaction volume and average staff salaries to estimate the potential cost savings for each transaction as the difference between the cost of electronic and manual transactions. Similarly, the time-per-transaction estimates were computed using the minimum, maximum and average time for each transaction and average staff salaries with weighted averages based on the volume of transactions for providers by transaction type and mode.

The NORC methodology follows a three-step process.

1. First, a loaded salary per minute by transaction mode is created by dividing the salary by the number of minutes in a work year then multiplying by a specified loading factor.
2. Second, the loaded cost per transaction mode by respondent created in step one is multiplied by the number of minutes per transaction by mode.
3. Third, the weighted cost per transaction by mode is created by weighting the proportion of transactions by a provider compared to the total number of transactions from all reporting providers to create an overall estimated cost. The weights were capped to limit the influence of any one provider on the overall estimate.

HEALTHCARE INDUSTRY POTENTIAL SAVINGS: COST

For each transaction, the potential national savings opportunity was estimated using the enrollment levels, volume and cost estimates from the contributing health plans and the cost per transaction from providers. For each transaction, there are costs associated with sending and receiving the transaction. For example, when a claim is faxed to a health plan, resources are consumed when the provider sends and when the health plan receives the claim. As such, cost savings are estimated with consideration for labor for both sending and receiving transactions.

- Estimated National Volume—For each transaction, the total volume of transactions occurring in the U.S. healthcare industry is estimated based on the proportion of covered lives represented by contributing health plans. The total volume of covered lives is captured from the AIS's Directory of Health Plans[37] for medical plans and NADP's Dental Health Plan

37 AIS Health Data, a Division of Managed Markets Insight and Technology, LLC, AIS's Directory of Health plans: 2017, (2018).

Profiles for dental plans.[38] The proportion represented by transaction may vary depending on the data contributor's ability to report on each transaction type. The extrapolated national volumes of each transaction are calculated by method as follows for both health plans and providers:

$$\text{Extrapolated Volume (for each modality)} = \frac{\text{Volume Reported by Health Plans}}{\text{Percent of Enrollment Represented}}$$

- Estimated National Cost—To estimate the potential savings associated with full adoption of electronic transactions, costs are estimated by multiplying the estimated national volume of manual transactions (calculated above) by the Cost per Transaction difference between the electronic and manual transactions, by transaction type.

PROVIDER POTENTIAL SAVINGS: TIME

The potential time savings was estimated using the average time required by providers to conduct manual and electronic transactions as well as the average staff salaries. Table 7 in the Data Tables section presents the average times spent by providers conducting manual and electronic transactions along with the potential savings of completing tasks electronically as opposed to manually.

Limitations

Over-counting or under-counting may exist.

- Some transactions, such as prior authorizations and claim submissions, may have been initiated manually by a provider and converted to an electronic transaction by a practice management system vendor or clearinghouse before being submitted to the health plan. These would ultimately be reported to the Index as part of the health plan data submission as fully electronic transactions.

- When healthcare providers contact a health plan call center, the representative may technically respond to multiple inquiries in a single phone call without the ability to log the distinct transactions, resulting in under-reporting to the Index.

No direct relationships should be inferred between or among the volumes of transactions.

- Few health plan systems can easily distinguish claim submissions that are requests for payment from encounter reports or claim submissions that are only transmissions of encounter information. As a result, some claim submissions reported to the Index may not be requests for payment.

- Claim submissions may be reported to the Index for which there is no corresponding payment from the health plan after adjudication, such as when a patient is meeting the annual deductible. In these cases, the patient encounter may cause a range of administrative transactions to be reported to the Index for which there is ultimately no corresponding claim payment transaction.

- Some practice management systems make periodic eligibility and benefit verification requests that are not connected to patient encounters. As a result, some of the eligibility and benefit transactions reported to the Index may never result in a claim submission or a claim payment.

The CAQH Index uniquely tracks only direct costs.

- The costs and savings reported account only for the labor time required to conduct transactions. They do not reflect the time and cost associated with gathering information for the transactions. Systems costs are also excluded from the cost and savings estimates.

Sample variation may impact year-over-year transaction cost trends.

- Provider costs to conduct specific transactions reflect a snapshot in time for the specific group of providers participating in the Index in a given year. Sampling factors such as salary, the learning curve for a new employee to process electronic transactions, and the mix of provider specialty type may impact trended data.

38 National Association of Dental Health Plans Dental Health Plan Profiles, 2015.

Data Tables

Figure 27: Use of Electronic Administrative Transactions by Modality, Medical, 2016 – 2018 CAQH Index

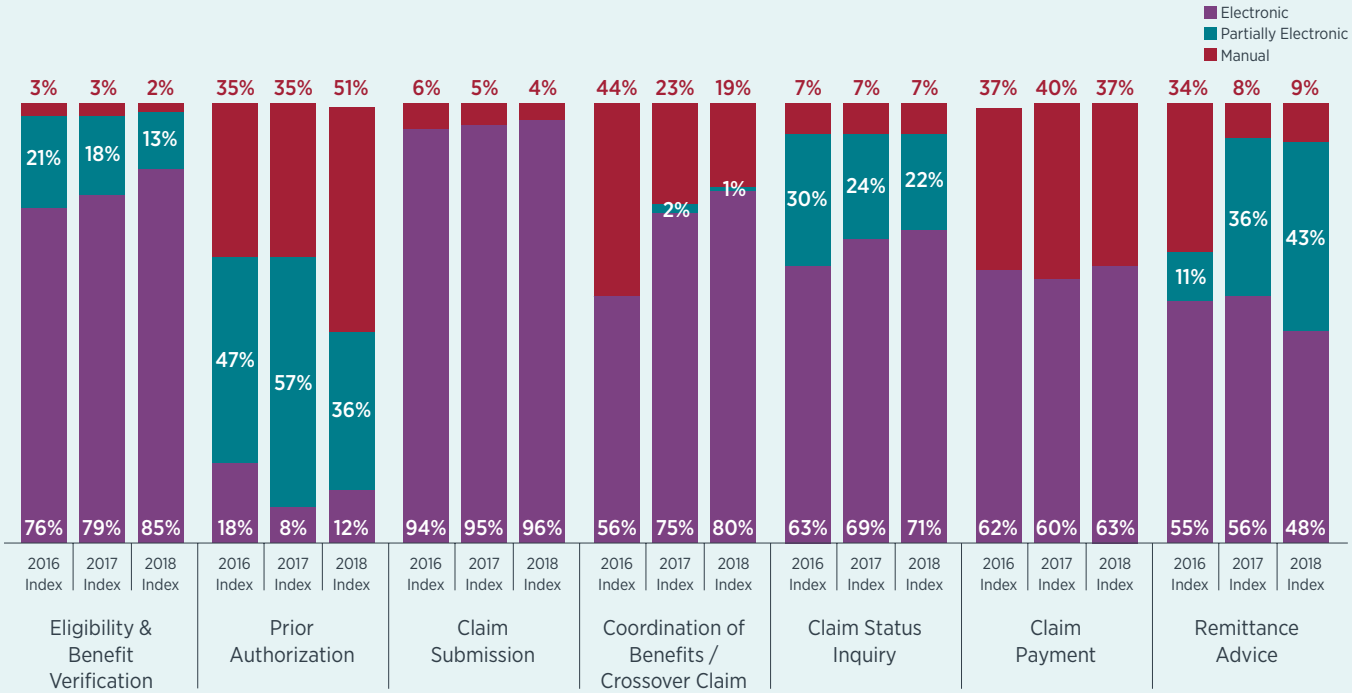
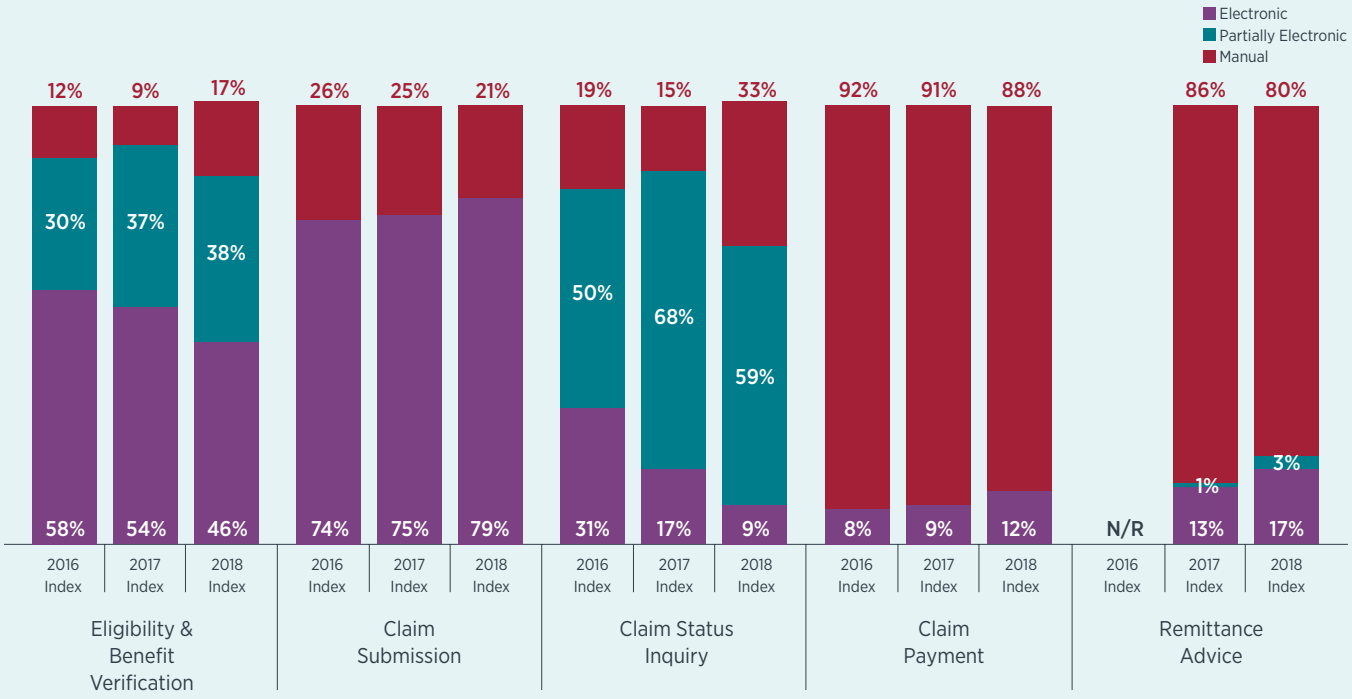


Figure 28: Use of Electronic Administrative Transactions by Modality, Dental, 2016 – 2018 CAQH Index



N/R = Not Reported

Table 6: Annual Volume of Administrative Transactions Reported by Medical and Dental Health Plans, 2017 – 2018 CAQH Index

Transaction	Number of Transactions (in millions)				Number of Transactions (per Member)			
	2017 INDEX		2018 INDEX		2017 INDEX		2018 INDEX	
	Medical	Dental	Medical	Dental	Medical	Dental	Medical	Dental
Eligibility & Benefit Verification	2,917	129	4,103	193	18	1	26	2
Prior Authorization	37	N/R	42	N/R	0		<0.1	N/R
Claim Submission	1,568	182	1,551	177	10	2	10	2
Claim Status Inquiry	719	24	625	77	6	<1	4	1
Claim Payment	261	146	193	149	2	1	1	1
Remittance Advice	474	129	1,203	132	4	1	8	1
Total Transactions	**6,047**	**610**	**7,823**	**728**	**42**	**6**	**49**	**7**

N/R=Not reported

Table 7: Average, Minimum, and Maximum Time Spent by Providers Conducting Manual and Electronic Transactions, 2018 Index

Transaction	Method	Average Time Providers Spend per Transaction (minutes)	Min Time Providers Spend per Transaction (minutes)	Max Time Providers Spend per Transaction (minutes)	Potential Average Time Saving (minutes)
Eligibility & Benefit Verification	Manual	10	1	23	7
	Electronic	3	1	9	
Prior Authorization	Manual	16	3	30	7
	Electronic	9	<1	25	
Claim Submission	Manual	4	1	15	1
	Electronic	3	<1	10	
Claim Status Inquiry	Manual	14	1	30	9
	Electronic	5	<1	11	
Claim Payment	Manual	5	1	10	1
	Electronic	4	<1	10	
Remittance Advice	Manual	6	1	15	3
	Electronic	3	<1	15	
Total Potential Time Savings for the Six Transactions					**30**

Acknowledgements

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- All contributing health plan and provider organizations for completing data submissions and follow-up interviews.
- NORC at University of Chicago for supporting the provider data collection and reporting efforts.
- Index Advisory Council (listed below) for continued support and guidance of the Index research activities and reports.

Organization	2018 Advisory Council Member
Aetna	Amy Neves
America's Health Insurance Plans (AHIP)	Tom Meyers
Anthem	Katy Blomeke Ryan Reddick
Blue Cross Blue Shield of Michigan	John Bialowicz
Cigna	Paul Keyes
Florida Blue	Tab Harris Elizabeth Templeton
JE Consulting	Jay Eisenstock
Medical Group Management Association (MGMA)	Robert Tennant
Milliman, Inc.	Andrew Naugle
Nachimson Advisors, LLC	Stanley Nachimson
NORC at University of Chicago	Kennon Copeland
THINK-Health and Health Populi	Jane Sarasohn-Kahn
United Healthcare	Diana Lisi

NOTE: To ensure data privacy, CAQH does not make the list of health plan or provider data contributors available.

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